

Corpus/Phylogenetic Study on Primate Sensory Receptors (2010)
Dataset: Olfactory Research Papers (1,945)

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- Abate, P., Spear And, N. E., & Molina, J. C. (2001). Fetal and infantile alcohol-mediated associative learning in the rat. *Alcoholism, Clinical and Experimental Research*, 25(7), 989-998.
- Abate, P., Pepino, M. Y., Spear, N. E., & Molina, J. C. (2004). Fetal learning with ethanol: correlations between maternal hypothermia during pregnancy and neonatal responsiveness to chemosensory cues of the drug. *Alcoholism, Clinical and Experimental Research*, 28(5), 805-815.
- Abate, P., Varlinskaya, E. I., Cheslock, S. J., Spear, N. E., & Molina, J. C. (2002). Neonatal activation of alcohol-related prenatal memories: impact on the first suckling response. *Alcoholism, Clinical and Experimental Research*, 26(10), 1512-1522.
doi:10.1097/01.ALC.0000034668.93601.8F
- Abbott, S. B. G., & Pilowsky, P. M. (2009). Galanin microinjection into rostral ventrolateral medulla of the rat is hypotensive and attenuates sympathetic chemoreflex. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 296(4), R1019-1026.
doi:10.1152/ajpregu.90885.2008
- Ablimit, A., Aoki, T., Matsuzaki, T., Suzuki, T., Hagiwara, H., Takami, S., & Takata, K. (2008). Immunolocalization of water channel aquaporins in the vomeronasal organ of the rat: expression of AQP4 in neuronal sensory cells. *Chemical Senses*, 33(5), 481-488.
doi:10.1093/chemse/bjn015
- Acker, H., & O'Regan, R. G. (1979). Autonomic nervous influences upon total flow, local flow, tissue PO₂ and chemosensory activity of the cat carotid body [proceedings]. *The Journal of Physiology*, 295, 95P-96P.
- Acker, H., & O'Regan, R. G. (1981). The effects of stimulation of autonomic nerves on carotid body blood flow in the cat. *The Journal of Physiology*, 315, 99-110.
- Ackland, G. L., Kasymov, V., & Gourine, A. V. (2007). Physiological and pathophysiological roles of extracellular ATP in chemosensory control of breathing. *Biochemical Society Transactions*, 35(Pt 5), 1264-1268. doi:10.1042/BST0351264
- Adachi, R., Osada, H., & Shingai, R. (2008). Phase-dependent preference of thermosensation and chemosensation during simultaneous presentation assay in *Caenorhabditis elegans*. *BMC Neuroscience*, 9, 106. doi:10.1186/1471-2202-9-106
- Adachi, R., Wakabayashi, T., Oda, N., & Shingai, R. (2008). Modulation of *Caenorhabditis elegans* chemotaxis by cultivation and assay temperatures. *Neuroscience Research*, 60(3), 300-306.
doi:10.1016/j.neures.2007.11.010
- Ajie, B. C., Estes, S., Lynch, M., & Phillips, P. C. (2005). Behavioral degradation under mutation accumulation in *Caenorhabditis elegans*. *Genetics*, 170(2), 655-660.
doi:10.1534/genetics.104.040014
- Akabas, M. H. (1990). Mechanisms of chemosensory transduction in taste cells. *International Review of Neurobiology*, 32, 241-279.
- Akiba, Y., & Kaunitz, J. D. (2009). Luminal chemosensing and upper gastrointestinal mucosal defenses. *The American Journal of Clinical Nutrition*, 90(3), 826S-831S.
doi:10.3945/ajcn.2009.27462U
- del Alamo, D., Terriente, J., & Díaz-Benjumea, F. J. (2002). Spitz/EGFr signalling via the Ras/MAPK pathway mediates the induction of bract cells in *Drosophila* legs. *Development (Cambridge, England)*, 129(8), 1975-1982.
- Albert, P. J. (2003). Electrophysiological responses to sucrose from a gustatory sensillum on the larval

- maxillary palp of the spruce budworm, *Choristoneura fumiferana* (Clem.) (Lepidoptera: Tortricidae). *Journal of Insect Physiology*, 49(8), 733-738.
- Alcayaga, C., Varas, R., Valdés, V., Cerpa, V., Arroyo, J., Iturriaga, R., & Alcayaga, J. (2007). ATP- and ACh-induced responses in isolated cat petrosal ganglion neurons. *Brain Research*, 1131(1), 60-67. doi:10.1016/j.brainres.2006.11.012
- Alcayaga, J., Barrios, M., Bustos, F., Miranda, G., Molina, M. J., & Iturriaga, R. (1999). Modulatory effect of nitric oxide on acetylcholine-induced activation of cat petrosal ganglion neurons in vitro. *Brain Research*, 825(1-2), 194-198.
- Alcayaga, J., & Eyzaguirre, C. (1990). Electrophysiological evidence for the reconstitution of chemosensory units in co-cultures of carotid body and nodose ganglion neurons. *Brain Research*, 534(1-2), 324-328.
- Alcayaga, J., Iturriaga, R., Ramirez, J., Read, R., Quezada, C., & Salinas, P. (1997). Cat carotid body chemosensory responses to non-hypoxic stimuli are inhibited by sodium nitroprusside in situ and in vitro. *Brain Research*, 767(2), 384-387.
- Alcayaga, J., Iturriaga, R., & Zapata, P. (1986). Carotid body chemoreceptor excitation produced by carotid occlusion. *Acta Physiologica Et Pharmacologica Latinoamericana: Organo De La Asociación Latinoamericana De Ciencias Fisiológicas Y De La Asociación Latinoamericana De Farmacología*, 36(3), 199-215.
- Alcayaga, J., Iturriaga, R., & Zapata, P. (1988). Flow-dependent chemosensory activity in the carotid body superfused in vitro. *Brain Research*, 455(1), 31-37.
- Alcayaga, J., Iturriaga, R., & Zapata, P. (1996). Coherence of chemosensory discharges in cats' carotid nerves. Cooperative inputs or redundant afferences? *Advances in Experimental Medicine and Biology*, 410, 349-356.
- Alcayaga, J., Iturriaga, R., & Zapata, P. (1997). Time structure, temporal correlation and coherence of chemosensory impulses propagated through both carotid nerves in cats. *Biological Research*, 30(3), 125-133.
- Alcayaga, J., Sanhueza, Y., & Zapata, P. (1993). Thermal dependence of chemosensory activity in the carotid body superfused in vitro. *Brain Research*, 600(1), 103-111.
- Alcayaga, J., Varas, R., Arroyo, J., Iturriaga, R., & Zapata, P. (1999). Dopamine modulates carotid nerve responses induced by acetylcholine on the cat petrosal ganglion in vitro. *Brain Research*, 831(1-2), 97-103.
- Alcedo, J., & Kenyon, C. (2004). Regulation of *C. elegans* longevity by specific gustatory and olfactory neurons. *Neuron*, 41(1), 45-55.
- Alioto, T. S., & Ngai, J. (2006). The repertoire of olfactory C family G protein-coupled receptors in zebrafish: candidate chemosensory receptors for amino acids. *BMC Genomics*, 7, 309. doi:10.1186/1471-2164-7-309
- Alkon, D. L., Akaike, T., & Harrigan, J. (1978). Interaction of chemosensory, visual, and statocyst pathways in *Hermisenda crassicornis*. *The Journal of General Physiology*, 71(2), 177-194.
- Almáida-Pagán, P. F., Rubio, V. C., Mendiola, P., De Costa, J., & Madrid, J. A. (2006). Macronutrient selection through post-ingestive signals in sharpsnout seabream fed gelatine capsules and challenged with protein dilution. *Physiology & Behavior*, 88(4-5), 550-558. doi:10.1016/j.physbeh.2006.05.027
- Almáida-Pagán, P. F., Seco-Rovira, V., Hernández, M. D., Madrid, J. A., De Costa, J., & Mendiola, P. (2008). Energy intake and macronutrient selection in sharpsnout seabream (*Diplodus puntazzo*) challenged with fat dilution and fat deprivation using encapsulated diets. *Physiology & Behavior*, 93(3), 474-480. doi:10.1016/j.physbeh.2007.10.006
- Alvarez-Buylla, R., & Roces de Alvarez-Buylla, E. (1994). Changes in blood glucose concentration in the carotid body-sinus modify brain glucose retention. *Brain Research*, 654(1), 167-170.
- Amdam, G. V., & Seehuus, S. (2006). Order, disorder, death: lessons from a superorganism. *Advances*

- in Cancer Research*, 95, 31-60. doi:10.1016/S0065-230X(06)95002-7
- Amo, L., López, P., & Martín, J. (2004). Thermal dependence of chemical assessment of predation risk affects the ability of wall lizards, *Podarcis muralis*, to avoid unsafe refuges. *Physiology & Behavior*, 82(5), 913-918. doi:10.1016/j.physbeh.2004.07.013
- Amrine, J. W., & Lewis, R. E. (1978). The topography of the exoskeleton of *Cediopsylla simplex* (Baker 1895) (Siphonaptera: Pulicidae). I. The head and its appendages. *The Journal of Parasitology*, 64(2), 343-358.
- An, J. H., & Blackwell, T. K. (2003). SKN-1 links *C. elegans* mesendodermal specification to a conserved oxidative stress response. *Genes & Development*, 17(15), 1882-1893. doi:10.1101/gad.1107803
- Anand, K. J., Coskun, V., Thiruvikraman, K. V., Nemeroff, C. B., & Plotsky, P. M. (1999). Long-term behavioral effects of repetitive pain in neonatal rat pups. *Physiology & Behavior*, 66(4), 627-637.
- Anand, S., Losee-Olson, S., Turek, F. W., & Horton, T. H. (2002). Differential regulation of luteinizing hormone and follicle-stimulating hormone in male siberian hamsters by exposure to females and photoperiod. *Endocrinology*, 143(6), 2178-2188.
- Anand, S., Turek, F. W., & Horton, T. H. (2004). Chemosensory stimulation of luteinizing hormone secretion in male Siberian hamsters (*Phodopus sungorus*). *Biology of Reproduction*, 70(4), 1033-1040. doi:10.1095/biolreprod.103.019380
- Anderson, P. A. V., & Bouchard, C. (2009). The regulation of cnidocyte discharge. *Toxicon: Official Journal of the International Society on Toxinology*, 54(8), 1046-1053. doi:10.1016/j.toxicon.2009.02.023
- Anderson, P. A. V., Thompson, L. F., & Moneypenny, C. G. (2004). Evidence for a common pattern of peptidergic innervation of cnidocytes. *The Biological Bulletin*, 207(2), 141-146.
- Andrew, L. K., & Blackshaw, L. A. (2001). Colonic mechanoreceptor inputs to rat lumbo-sacral dorsal horn neurones: distribution, thresholds and chemosensory modulation. *Neurogastroenterology and Motility: The Official Journal of the European Gastrointestinal Motility Society*, 13(4), 333-337.
- Andronikou, S., Shirahata, M., Mokashi, A., & Lahiri, S. (1988). Carotid body chemoreceptor and ventilatory responses to sustained hypoxia and hypercapnia in the cat. *Respiration Physiology*, 72(3), 361-374.
- Angeli, S., Ceron, F., Scaloni, A., Monti, M., Monteforti, G., Minnocci, A., Petacchi, R., et al. (1999). Purification, structural characterization, cloning and immunocytochemical localization of chemoreception proteins from *Schistocerca gregaria*. *European Journal of Biochemistry / FEBS*, 262(3), 745-754.
- Angioy, A. M., Crnjar, R., Liscia, A., Porcu, A., Cancedda, A., & Pietra, P. (1983). Chronic electrode for long-term electrophysiological recording from insect chemosensilla. *Bollettino Della Società Italiana Di Biologia Sperimentale*, 59(10), 1447-1452.
- Angioy, A. M., Liscia, A., Pietra, P., & Stoffolano, J. G. (1982). The labellar and tarsal chemosensilla in *Anopheles maculipennis atroparvus* Van Thiel: electrophysiological and morphological observation. *Bollettino Della Società Italiana Di Biologia Sperimentale*, 58(20), 1330-1336.
- Anholt, R. R. (1988). Functional reconstitution of the olfactory membrane: incorporation of the olfactory adenylate cyclase in liposomes. *Biochemistry*, 27(17), 6464-6468.
- Anholt, R. R. (1989). Molecular physiology of olfaction. *The American Journal of Physiology*, 257(6 Pt 1), C1043-1054.
- Anholt, R. R. (1993). Molecular neurobiology of olfaction. *Critical Reviews in Neurobiology*, 7(1), 1-22.
- Anholt, R. R., Aebi, U., & Snyder, S. H. (1986). A partially purified preparation of isolated chemosensory cilia from the olfactory epithelium of the bullfrog, *Rana catesbeiana*. *The*

- Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 6(7), 1962-1969.
- Anholt, R. R., Fanara, J. J., Fedorowicz, G. M., Ganguly, I., Kulkarni, N. H., Mackay, T. F., & Rollmann, S. M. (2001). Functional genomics of odor-guided behavior in *Drosophila melanogaster*. *Chemical Senses*, 26(2), 215-221.
- Anholt, R. R., & Mackay, T. F. (2001). The genetic architecture of odor-guided behavior in *Drosophila melanogaster*. *Behavior Genetics*, 31(1), 17-27.
- Anholt, R. R., Petro, A. E., & Rivers, A. M. (1990). Identification of a group of novel membrane proteins unique to chemosensory cilia of olfactory receptor cells. *Biochemistry*, 29(13), 3366-3373.
- Anholt, R. R., & Rivers, A. M. (1990). Olfactory transduction: cross-talk between second-messenger systems. *Biochemistry*, 29(17), 4049-4054.
- Anholt, R. R. H., & Williams, T. I. (2010). The soluble proteome of the *Drosophila* antenna. *Chemical Senses*, 35(1), 21-30. doi:10.1093/chemse/bjp073
- Arias, C., & Chotro, M. G. (2005). Increased palatability of ethanol after prenatal ethanol exposure is mediated by the opioid system. *Pharmacology, Biochemistry, and Behavior*, 82(3), 434-442. doi:10.1016/j.pbb.2005.09.015
- Arias, C., & Gabriela Chotro, M. (2006). Interactions between prenatal ethanol exposure and postnatal learning about ethanol in rat pups. *Alcohol (Fayetteville, N.Y.)*, 40(1), 51-59. doi:10.1016/j.alcohol.2006.10.002
- Armbruster, P., White, S., Dzundza, J., Crawford, J., & Zhao, X. (2009). Identification of genes encoding atypical odorant-binding proteins in *Aedes albopictus* (Diptera: Culicidae). *Journal of Medical Entomology*, 46(2), 271-280.
- Armour, J. A. (2008). Potential clinical relevance of the 'little brain' on the mammalian heart. *Experimental Physiology*, 93(2), 165-176. doi:10.1113/expphysiol.2007.041178
- Arnold, H. M., Robinson, S. R., Spear, N. E., & Smotherman, W. P. (1993). Conditioned opioid activity in the rat fetus. *Behavioral Neuroscience*, 107(6), 963-969.
- Arora, K., Rodrigues, V., Joshi, S., Shanbhag, S., & Siddiqi, O. (1987). A gene affecting the specificity of the chemosensory neurons of *Drosophila*. *Nature*, 330(6143), 62-63. doi:10.1038/330062a0
- Arora, R. C., Cardinal, R., Smith, F. M., Ardell, J. L., Dell'Italia, L. J., & Armour, J. A. (2003). Intrinsic cardiac nervous system in tachycardia induced heart failure. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 285(5), R1212-1223. doi:10.1152/ajpregu.00131.2003
- Artis, D., Wang, M. L., Keilbaugh, S. A., He, W., Brenes, M., Swain, G. P., Knight, P. A., et al. (2004). RELMbeta/FIZZ2 is a goblet cell-specific immune-effector molecule in the gastrointestinal tract. *Proceedings of the National Academy of Sciences of the United States of America*, 101(37), 13596-13600. doi:10.1073/pnas.0404034101
- Arts, J. H. E., de Heer, C., & Woutersen, R. A. (2006). Local effects in the respiratory tract: relevance of subjectively measured irritation for setting occupational exposure limits. *International Archives of Occupational and Environmental Health*, 79(4), 283-298. doi:10.1007/s00420-005-0044-9
- Arundell, M., Patel, B. A., Straub, V., Allen, M. C., Janse, C., O'Hare, D., Parker, K., et al. (2006). Effects of age on feeding behavior and chemosensory processing in the pond snail, *Lymnaea stagnalis*. *Neurobiology of Aging*, 27(12), 1880-1891. doi:10.1016/j.neurobiolaging.2005.09.040
- Arvidsson, J., Fundin, B. T., & Pfaller, K. (1995). Innervation of the hard palate in the rat studied by anterograde transport of horseradish peroxidase conjugates. *The Journal of Comparative Neurology*, 351(4), 489-498. doi:10.1002/cne.903510402
- Asa, C. S., Seal, U. S., Plotka, E. D., Letellier, M. A., & Mech, L. D. (1986). Effect of anosmia on reproduction in male and female wolves (*Canis lupus*). *Behavioral and Neural Biology*, 46(3), 272-284.

- Ashton, F. T., Bhopale, V. M., Holt, D., Smith, G., & Schad, G. A. (1998). Developmental switching in the parasitic nematode *Strongyloides stercoralis* is controlled by the ASF and ASI amphidial neurons. *The Journal of Parasitology*, *84*(4), 691-695.
- Ashton, F. T., Li, J., & Schad, G. A. (1999). Chemo- and thermosensory neurons: structure and function in animal parasitic nematodes. *Veterinary Parasitology*, *84*(3-4), 297-316.
- Asmus, S. E., & Newman, S. W. (1993). Tyrosine hydroxylase neurons in the male hamster chemosensory pathway contain androgen receptors and are influenced by gonadal hormones. *The Journal of Comparative Neurology*, *331*(4), 445-457. doi:10.1002/cne.903310402
- Aste, N., Honda, S., & Harada, N. (2003). Forebrain Fos responses to reproductively related chemosensory cues in aromatase knockout mice. *Brain Research Bulletin*, *60*(3), 191-200.
- Aujard, F. (1997). Effect of vomeronasal organ removal on male socio-sexual responses to female in a prosimian primate (*Microcebus murinus*). *Physiology & Behavior*, *62*(5), 1003-1008.
- Aujard, F., & Némoy-Bertholet, F. (2004). Response to urinary volatiles and chemosensory function decline with age in a prosimian primate. *Physiology & Behavior*, *81*(4), 639-644. doi:10.1016/j.physbeh.2004.03.003
- Aujard, F., Schilling, A., & Perret, M. (2005). Gonadotropin-releasing hormone (GnRH) immunoreactive neurons in male mouse lemurs following removal of the vomeronasal organ. *Brain Research*, *1043*(1-2), 247-250. doi:10.1016/j.brainres.2005.02.056
- Avenet, P., & Lindemann, B. (1987). Action potentials in epithelial taste receptor cells induced by mucosal calcium. *The Journal of Membrane Biology*, *95*(3), 265-269.
- Averbeck, B. B., & Seo, M. (2008). The statistical neuroanatomy of frontal networks in the macaque. *PLoS Computational Biology*, *4*(4), e1000050. doi:10.1371/journal.pcbi.1000050
- Awasaki, T., & Kimura, K. (1997). *pox-neuro* is required for development of chemosensory bristles in *Drosophila*. *Journal of Neurobiology*, *32*(7), 707-721.
- Ayer, R. K., & Carlson, J. (1991). *acj6*: a gene affecting olfactory physiology and behavior in *Drosophila*. *Proceedings of the National Academy of Sciences of the United States of America*, *88*(12), 5467-5471.
- Ayer, R. K., & Carlson, J. (1992). Olfactory physiology in the *Drosophila* antenna and maxillary palp: *acj6* distinguishes two classes of odorant pathways. *Journal of Neurobiology*, *23*(8), 965-982. doi:10.1002/neu.480230804
- Bachmanov, A. A., Reed, D. R., Tordoff, M. G., Price, R. A., & Beauchamp, G. K. (2001). Nutrient preference and diet-induced adiposity in C57BL/6ByJ and 129P3/J mice. *Physiology & Behavior*, *72*(4), 603-613.
- Bachmanov, A. A., Kiefer, S. W., Molina, J. C., Tordoff, M. G., Duffy, V. B., Bartoshuk, L. M., & Mennella, J. A. (2003). Chemosensory factors influencing alcohol perception, preferences, and consumption. *Alcoholism, Clinical and Experimental Research*, *27*(2), 220-231. doi:10.1097/01.ALC.0000051021.99641.19
- Bai, L., Goldman, A. L., & Carlson, J. R. (2009). Positive and negative regulation of odor receptor gene choice in *Drosophila* by *acj6*. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *29*(41), 12940-12947. doi:10.1523/JNEUROSCI.3525-09.2009
- Bairam, A., Basson, H., Marchal, F., Cottet-Emard, J. M., Pequignot, J. M., Hascoet, J. M., & Lahiri, S. (1996). Effects of hypoxia on carotid body dopamine content and release in developing rabbits. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *80*(1), 20-24.
- Bairam, A., De Grandpré, P., Dauphin, C., & Marchal, F. (1996). Carotid chemosensory response to caffeine in developing cats. *Advances in Experimental Medicine and Biology*, *410*, 79-82.
- Bairam, A., De Grandpré, P., Dauphin, C., & Marchal, F. (1997). Effects of caffeine on carotid sinus nerve chemosensory discharge in kittens and cats. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *82*(2), 413-418.
- Bairam, A., Hannhart, B., Choné, C., & Marchal, F. (1993). Effects of dopamine on the carotid

- chemosensory response to hypoxia in newborn kittens. *Respiration Physiology*, 94(3), 297-307.
- Bairam, A., Hannhart, B., Choné, C., & Marchal, F. (1994). Effect of dopamine on carotid chemoreceptor activity in newborn kittens. *Biology of the Neonate*, 65(3-4), 140-144.
- Bairam, A., Hannhart, B., & Marchal, F. (1994). Effects of haemorrhagic hypotension on carotid chemosensory discharge in the kitten. *Acta Paediatrica (Oslo, Norway: 1992)*, 83(3), 236-240.
- Bairam, A., Joseph, V., Lajeunesse, Y., & Kinkead, R. (2006). Developmental pattern of M1 and M2 muscarinic gene expression and receptor levels in cat carotid body, petrosal and superior cervical ganglion. *Neuroscience*, 139(2), 711-721. doi:10.1016/j.neuroscience.2005.12.030
- Bairam, A., & Marchal, F. (2003). Carotid sinus nerve chemosensory response to dopamine and acetylcholine in catecholamine depleted cats. *Respiratory Physiology & Neurobiology*, 134(1), 1-12.
- Bairam, A., Marchal, F., Crance, J. P., Vert, P., & Lahiri, S. (1993). Effects of doxapram on carotid chemoreceptor activity in newborn kittens. *Biology of the Neonate*, 64(1), 26-35.
- Bairam, A., Marchal, F., Hannhart, B., Crance, J. P., & Lahiri, S. (1993). Carotid chemosensory response to doxapram in the newborn kitten. *Advances in Experimental Medicine and Biology*, 337, 381-385.
- Bairam, A., & Carroll, J. L. (2005). Neurotransmitters in carotid body development. *Respiratory Physiology & Neurobiology*, 149(1-3), 217-232. doi:10.1016/j.resp.2005.04.017
- Bairam, A., & Lajeunesse, Y. (2003). Concomitant effect of acetylcholine and dopamine on carotid chemosensory activity in catecholamine depleted cats. *Advances in Experimental Medicine and Biology*, 536, 337-343.
- Bakker, J., Baum, M. J., & Slob, A. K. (1996). Neonatal inhibition of brain estrogen synthesis alters adult neural Fos responses to mating and pheromonal stimulation in the male rat. *Neuroscience*, 74(1), 251-260.
- Bakker, J., Van Ophemert, J., & Slob, A. K. (1996). Sexual differentiation of odor and partner preference in the rat. *Physiology & Behavior*, 60(2), 489-494.
- Balakrishnan, R., & Rodrigues, V. (1991). The shaker and shaking-B genes specify elements in the processing of gustatory information in *Drosophila melanogaster*. *The Journal of Experimental Biology*, 157, 161-181.
- Balbir, A., Lee, H., Okumura, M., Biswal, S., Fitzgerald, R. S., & Shirahata, M. (2007). A search for genes that may confer divergent morphology and function in the carotid body between two strains of mice. *American Journal of Physiology. Lung Cellular and Molecular Physiology*, 292(3), L704-715. doi:10.1152/ajplung.00383.2006
- Ballantyne, B., & Snellings, W. M. (2007). Triethylene glycol HO(CH₂CH₂O)₃H. *Journal of Applied Toxicology: JAT*, 27(3), 291-299. doi:10.1002/jat.1220
- Ballantyne, B., Snellings, W. M., & Norris, J. C. (2006). Respiratory peripheral chemosensory irritation, acute and repeated exposure toxicity studies with aerosols of triethylene glycol. *Journal of Applied Toxicology: JAT*, 26(5), 387-396. doi:10.1002/jat.1160
- Ballard, C. L., & Wood, R. I. (2007). Partner preference in male hamsters: steroids, sexual experience and chemosensory cues. *Physiology & Behavior*, 91(1), 1-8. doi:10.1016/j.physbeh.2007.01.005
- Ban, L., Scaloni, A., Brandazza, A., Angeli, S., Zhang, L., Yan, Y., & Pelosi, P. (2003). Chemosensory proteins of *Locusta migratoria*. *Insect Molecular Biology*, 12(2), 125-134.
- Ban, L., Zhang, L., Yan, Y., & Pelosi, P. (2002). Binding properties of a locust's chemosensory protein. *Biochemical and Biophysical Research Communications*, 293(1), 50-54. doi:10.1016/S0006-291X(02)00185-7
- Baran, R., Aronoff, R., & Garriga, G. (1999). The *C. elegans* homeodomain gene *unc-42* regulates chemosensory and glutamate receptor expression. *Development (Cambridge, England)*, 126(10), 2241-2251.
- Baraniuk, J. N., & Kim, D. (2007). Nasonasal reflexes, the nasal cycle, and sneeze. *Current Allergy*

and *Asthma Reports*, 7(2), 105-111.

- Barbosa, D., Font, E., Desfilis, E., & Carretero, M. A. (2006). Chemically mediated species recognition in closely related *Podarcis* wall lizards. *Journal of Chemical Ecology*, 32(7), 1587-1598. doi:10.1007/s10886-006-9072-5
- Bargmann, C. I. (1998). Neurobiology of the *Caenorhabditis elegans* genome. *Science (New York, N.Y.)*, 282(5396), 2028-2033.
- Bargmann, C. I., Hartwig, E., & Horvitz, H. R. (1993). Odorant-selective genes and neurons mediate olfaction in *C. elegans*. *Cell*, 74(3), 515-527.
- Bargmann, C. I., & Horvitz, H. R. (1991a). Control of larval development by chemosensory neurons in *Caenorhabditis elegans*. *Science (New York, N.Y.)*, 251(4998), 1243-1246.
- Bargmann, C. I., & Horvitz, H. R. (1991b). Chemosensory neurons with overlapping functions direct chemotaxis to multiple chemicals in *C. elegans*. *Neuron*, 7(5), 729-742.
- Bargmann, C. I., & Kaplan, J. M. (1998). Signal transduction in the *Caenorhabditis elegans* nervous system. *Annual Review of Neuroscience*, 21, 279-308. doi:10.1146/annurev.neuro.21.1.279
- Bargmann, C. I., Thomas, J. H., & Horvitz, H. R. (1990). Chemosensory cell function in the behavior and development of *Caenorhabditis elegans*. *Cold Spring Harbor Symposia on Quantitative Biology*, 55, 529-538.
- Bargmann, C. I. (2006a). Chemosensation in *C. elegans*. *WormBook: The Online Review of C. Elegans Biology*, 1-29. doi:10.1895/wormbook.1.123.1
- Bargmann, C. I. (2006b). Comparative chemosensation from receptors to ecology. *Nature*, 444(7117), 295-301. doi:10.1038/nature05402
- Barimo, J. F., & Walsh, P. J. (2006). Use of urea as a chemosensory cloaking molecule by a bony fish. *The Journal of Experimental Biology*, 209(Pt 21), 4254-4261. doi:10.1242/jeb.02533
- Barnard, P., Andronikou, S., Pokorski, M., Smatresk, N., Mokashi, A., & Lahiri, S. (1987). Time-dependent effect of hypoxia on carotid body chemosensory function. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 63(2), 685-691.
- Baron, M., & Eyzaguirre, C. (1977). Effects of temperature on some membrane characteristics of carotid body cells. *The American Journal of Physiology*, 233(1), C35-46.
- Bastiani, C., & Mendel, J. (2006). Heterotrimeric G proteins in *C. elegans*. *WormBook: The Online Review of C. Elegans Biology*, 1-25. doi:10.1895/wormbook.1.75.1
- Battu, G., Hoier, E. F., & Hajnal, A. (2003). The *C. elegans* G-protein-coupled receptor SRA-13 inhibits RAS/MAPK signalling during olfaction and vulval development. *Development (Cambridge, England)*, 130(12), 2567-2577.
- Bauer Huang, S. L., Saheki, Y., VanHoven, M. K., Torayama, I., Ishihara, T., Katsura, I., van der Linden, A., et al. (2007). Left-right olfactory asymmetry results from antagonistic functions of voltage-activated calcium channels and the Raw repeat protein OLRN-1 in *C. elegans*. *Neural Development*, 2, 24. doi:10.1186/1749-8104-2-24
- Beatty, W. W., & Costello, K. B. (1983). Olfactory bulbectomy and play fighting in juvenile rats. *Physiology & Behavior*, 30(4), 525-528.
- Beauchamp, G. K., Martin, I. G., Wysocki, C. J., & Wellington, J. L. (1982). Chemoinvestigatory and sexual behavior of male guinea pigs following vomeronasal organ removal. *Physiology & Behavior*, 29(2), 329-336.
- Beauchamp, G. K., Yamazaki, K., & Boyse, E. A. (1985). The chemosensory recognition of genetic individuality. *Scientific American*, 253(1), 86-92.
- Beauchamp, G. K., Yamazaki, K., Wysocki, C. J., Slotnick, B. M., Thomas, L., & Boyse, E. A. (1985). Chemosensory recognition of mouse major histocompatibility types by another species. *Proceedings of the National Academy of Sciences of the United States of America*, 82(12), 4186-4188.
- Behrens, M., Bartelt, J., Reichling, C., Winnig, M., Kuhn, C., & Meyerhof, W. (2006). Members of

- RTP and REEP gene families influence functional bitter taste receptor expression. *The Journal of Biological Chemistry*, 281(29), 20650-20659. doi:10.1074/jbc.M513637200
- Bell, H. J., Inoue, T., Shum, K., Luk, C., & Syed, N. I. (2007). Peripheral oxygen-sensing cells directly modulate the output of an identified respiratory central pattern generating neuron. *The European Journal of Neuroscience*, 25(12), 3537-3550. doi:10.1111/j.1460-9568.2007.05607.x
- Bell, H. J., Inoue, T., & Syed, N. I. (2008). A peripheral oxygen sensor provides direct activation of an identified respiratory CPG neuron in *Lymnaea*. *Advances in Experimental Medicine and Biology*, 605, 25-29. doi:10.1007/978-0-387-73693-8_4
- Bell, H. J., & Syed, N. I. (2009). Hypoxia-induced modulation of the respiratory CPG. *Frontiers in Bioscience: A Journal and Virtual Library*, 14, 3825-3835.
- Belmonte, C., Gallego, R., & Morales, A. (1988). Membrane properties of primary sensory neurones of the cat after peripheral reinnervation. *The Journal of Physiology*, 405, 219-232.
- Belousova, T. A., & Flerova, G. I. (1980). [Regulation of signals in the chemosensory systems of fish]. *Fiziologicheskii Zhurnal SSSR Imeni I. M. Sechenova*, 66(5), 680-686.
- Beltramino, C., & Taleisnik, S. (1985). Ventral preammillary nuclei mediate pheromonal-induced LH release stimuli in the rat. *Neuroendocrinology*, 41(2), 119-124.
- Beltz, B. S., Kordas, K., Lee, M. M., Long, J. B., Benton, J. L., & Sandeman, D. C. (2003). Ecological, evolutionary, and functional correlates of sensilla number and glomerular density in the olfactory system of decapod crustaceans. *The Journal of Comparative Neurology*, 455(2), 260-269. doi:10.1002/cne.10474
- Benton, J., & Beltz, B. (2001). Effects of serotonin depletion on local interneurons in the developing olfactory pathway of lobsters. *Journal of Neurobiology*, 46(3), 193-205.
- Benton, R. (2008). Chemical sensing in *Drosophila*. *Current Opinion in Neurobiology*, 18(4), 357-363. doi:10.1016/j.conb.2008.08.012
- Benton, R., Sachse, S., Michnick, S. W., & Vosshall, L. B. (2006). Atypical membrane topology and heteromeric function of *Drosophila* odorant receptors in vivo. *PLoS Biology*, 4(2), e20. doi:10.1371/journal.pbio.0040020
- Benton, R., Vannice, K. S., Gomez-Diaz, C., & Vosshall, L. B. (2009). Variant ionotropic glutamate receptors as chemosensory receptors in *Drosophila*. *Cell*, 136(1), 149-162. doi:10.1016/j.cell.2008.12.001
- Bergamasco, C., & Bazzicalupo, P. (2006). Chemical sensitivity in *Caenorhabditis elegans*. *Cellular and Molecular Life Sciences: CMLS*, 63(13), 1510-1522. doi:10.1007/s00018-006-6114-7
- Bernays, E. A., & Chapman, R. F. (2001). Electrophysiological responses of taste cells to nutrient mixtures in the polyphagous caterpillar of *Grammia geneura*. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 187(3), 205-213.
- Berthoud, H. R., Lynn, P. A., & Blackshaw, L. A. (2001). Vagal and spinal mechanosensors in the rat stomach and colon have multiple receptive fields. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 280(5), R1371-1381.
- Bertrand, P. P., & Bornstein, J. C. (2002). ATP as a putative sensory mediator: activation of intrinsic sensory neurons of the myenteric plexus via P2X receptors. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 22(12), 4767-4775.
- Bessac, B. F., Sivula, M., von Hehn, C. A., Escalera, J., Cohn, L., & Jordt, S. (2008). TRPA1 is a major oxidant sensor in murine airway sensory neurons. *The Journal of Clinical Investigation*, 118(5), 1899-1910. doi:10.1172/JCI34192
- Bettini, E., Porta, A. R., Dahmen, N., Wang, H., & Margolis, F. L. (1994). Expressed sequence tags (EST) identify genes preferentially expressed in catfish chemosensory tissues. *Brain Research. Molecular Brain Research*, 23(4), 285-291.
- Beynon, R. J., & Hurst, J. L. (2004). Urinary proteins and the modulation of chemical scents in mice and rats. *Peptides*, 25(9), 1553-1563. doi:10.1016/j.peptides.2003.12.025

- Bezençon, C., le Coutre, J., & Damak, S. (2007). Taste-signaling proteins are coexpressed in solitary intestinal epithelial cells. *Chemical Senses*, 32(1), 41-49. doi:10.1093/chemse/bjl034
- Bénédet, F., Leroy, T., Gauthier, N., Thibaudeau, C., Thibout, E., & Renault, S. (2002). Gustatory sensilla sensitive to protein kairomones trigger host acceptance by an endoparasitoid. *Proceedings. Biological Sciences / The Royal Society*, 269(1503), 1879-1886. doi:10.1098/rspb.2002.2077
- Bhatnagar, K. P., & Meisami, E. (1998). Vomeronasal organ in bats and primates: extremes of structural variability and its phylogenetic implications. *Microscopy Research and Technique*, 43(6), 465-475. doi:10.1002/(SICI)1097-0029(19981215)43:6<465::AID-JEMT1>3.0.CO;2-1
- Bhutta, M. F. (2007). Sex and the nose: human pheromonal responses. *Journal of the Royal Society of Medicine*, 100(6), 268-274. doi:10.1258/jrsm.100.6.268
- Biagini, G. A., Suller, M. T., Finlay, B. J., & Lloyd, D. (1997). Oxygen uptake and antioxidant responses of the free-living diplomonad *Hexamita* sp. *The Journal of Eukaryotic Microbiology*, 44(5), 447-453.
- Bianchi, L., Kwok, S., Driscoll, M., & Sesti, F. (2003). A potassium channel-MiRP complex controls neurosensory function in *Caenorhabditis elegans*. *The Journal of Biological Chemistry*, 278(14), 12415-12424. doi:10.1074/jbc.M212788200
- Bicker, G. (2001). Sources and targets of nitric oxide signalling in insect nervous systems. *Cell and Tissue Research*, 303(2), 137-146.
- Biessmann, H., Nguyen, Q. K., Le, D., & Walter, M. F. (2005). Microarray-based survey of a subset of putative olfactory genes in the mosquito *Anopheles gambiae*. *Insect Molecular Biology*, 14(6), 575-589. doi:10.1111/j.1365-2583.2005.00590.x
- Bigiani, A. (2001). Mouse taste cells with glialike membrane properties. *Journal of Neurophysiology*, 85(4), 1552-1560.
- Bigiani, A., Sbarbati, A., Osculati, F., & Pietra, P. (1998). Electrophysiological characterization of a putative supporting cell isolated from the frog taste disk. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 18(14), 5136-5150.
- Bigiani, A. R., & Roper, S. D. (1991). Mediation of responses to calcium in taste cells by modulation of a potassium conductance. *Science (New York, N.Y.)*, 252(5002), 126-128.
- Bigiani, A., Cristiani, R., Fieni, F., Ghiaroni, V., Bagnoli, P., & Pietra, P. (2002). Postnatal development of membrane excitability in taste cells of the mouse vallate papilla. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 22(2), 493-504.
- Bingham, P. M. (2009). Deprivation and dysphagia in premature infants. *Journal of Child Neurology*, 24(6), 743-749. doi:10.1177/0883073808329530
- Binns, K. E., & Brennan, P. A. (2005). Changes in electrophysiological activity in the accessory olfactory bulb and medial amygdala associated with mate recognition in mice. *The European Journal of Neuroscience*, 21(9), 2529-2537. doi:10.1111/j.1460-9568.2005.04090.x
- Birnby, D. A., Link, E. M., Vowels, J. J., Tian, H., Colacurcio, P. L., & Thomas, J. H. (2000). A transmembrane guanylyl cyclase (DAF-11) and Hsp90 (DAF-21) regulate a common set of chemosensory behaviors in *Caenorhabditis elegans*. *Genetics*, 155(1), 85-104.
- Bishop, C. D., & Brandhorst, B. P. (2007). Development of nitric oxide synthase-defined neurons in the sea urchin larval ciliary band and evidence for a chemosensory function during metamorphosis. *Developmental Anatomists*, 236(6), 1535-1546. doi:10.1002/dvdy.21161
- Blackburn, N., & Fenchel, T. (1999). Modelling of microscale patch encounter by chemotactic protozoa. *Protist*, 150(3), 337-343.
- Blacque, O. E., Li, C., Inglis, P. N., Esmail, M. A., Ou, G., Mah, A. K., Baillie, D. L., et al. (2006). The WD repeat-containing protein IFTA-1 is required for retrograde intraflagellar transport. *Molecular Biology of the Cell*, 17(12), 5053-5062. doi:10.1091/mbc.E06-06-0571
- Blass, E. M. (1997). Interactions between contact and chemosensory mechanisms in pain modulation in

- 10-day-old rats. *Behavioral Neuroscience*, *111*(1), 147-154.
- Blechinger, S. R., Kusch, R. C., Haugo, K., Matz, C., Chivers, D. P., & Krone, P. H. (2007). Brief embryonic cadmium exposure induces a stress response and cell death in the developing olfactory system followed by long-term olfactory deficits in juvenile zebrafish. *Toxicology and Applied Pharmacology*, *224*(1), 72-80. doi:10.1016/j.taap.2007.06.025
- Blevins, J. E., Dixon, K. D., Hernandez, E. J., Barrett, J. A., & Gietzen, D. W. (2000). Effects of threonine injections in the lateral hypothalamus on intake of amino acid imbalanced diets in rats. *Brain Research*, *879*(1-2), 65-72.
- Bobkov, Y. V., & Ache, B. W. (2007). Block by amiloride derivatives of odor-evoked discharge in lobster olfactory receptor neurons through action on a presumptive TRP channel. *Chemical Senses*, *32*(2), 149-159. doi:10.1093/chemse/bjl041
- Boehm, U. (2006). The vomeronasal system in mice: from the nose to the hypothalamus- and back! *Seminars in Cell & Developmental Biology*, *17*(4), 471-479. doi:10.1016/j.semcdb.2006.04.013
- Boehm, U., Zou, Z., & Buck, L. B. (2005). Feedback loops link odor and pheromone signaling with reproduction. *Cell*, *123*(4), 683-695. doi:10.1016/j.cell.2005.09.027
- Boekhoff, I., Braunewell, K. H., Andreini, I., Breer, H., & Gundelfinger, E. (1997). The calcium-binding protein VILIP in olfactory neurons: regulation of second messenger signaling. *European Journal of Cell Biology*, *72*(2), 151-158.
- Bohbot, J., Pitts, R. J., Kwon, H., Rützler, M., Robertson, H. M., & Zwiebel, L. J. (2007). Molecular characterization of the *Aedes aegypti* odorant receptor gene family. *Insect Molecular Biology*, *16*(5), 525-537. doi:10.1111/j.1365-2583.2007.00748.x
- Bohbot, J., Sobrio, F., Lucas, P., & Nagnan-Le Meillour, P. (1998). Functional characterization of a new class of odorant-binding proteins in the moth *Mamestra brassicae*. *Biochemical and Biophysical Research Communications*, *253*(2), 489-494. doi:10.1006/bbrc.1998.9806
- Bohbot, J., & Vogt, R. G. (2005). Antennal expressed genes of the yellow fever mosquito (*Aedes aegypti* L.); characterization of odorant-binding protein 10 and takeout. *Insect Biochemistry and Molecular Biology*, *35*(9), 961-979. doi:10.1016/j.ibmb.2005.03.010
- Boll, W., & Noll, M. (2002). The *Drosophila* Pox neuro gene: control of male courtship behavior and fertility as revealed by a complete dissection of all enhancers. *Development (Cambridge, England)*, *129*(24), 5667-5681.
- Bongianni, F., Fontana, G. A., Mutolo, D., & Pantaleo, T. (1996). Effects of central chemical drive on poststimulatory respiratory depression of laryngeal origin in the adult cat. *Brain Research Bulletin*, *39*(5), 267-273.
- Borison, H. L., Borison, R., & McCarthy, L. E. (1984). Role of the area postrema in vomiting and related functions. *Federation Proceedings*, *43*(15), 2955-2958.
- Boudinot, E., Champagnat, J., & Foutz, A. S. (2008). M(1)/M(3) and M(2)/M(4) muscarinic receptor double-knockout mice present distinct respiratory phenotypes. *Respiratory Physiology & Neurobiology*, *161*(1), 54-61. doi:10.1016/j.resp.2007.12.001
- Boudinot, E., Tremblay, P., Champagnat, J., & Foutz, A. S. (2002). Respiratory function in mice lacking or overexpressing the prion protein. *Neuroscience Letters*, *323*(2), 89-92.
- Boudinot, E., Yamada, M., Wess, J., Champagnat, J., & Foutz, A. S. (2004). Ventilatory pattern and chemosensitivity in M1 and M3 muscarinic receptor knockout mice. *Respiratory Physiology & Neurobiology*, *139*(3), 237-245. doi:10.1016/j.resp.2003.10.006
- Boudko, D. Y., Switzer-Dunlap, M., & Hadfield, M. G. (1999). Cellular and subcellular structure of anterior sensory pathways in *Phestilla sibogae* (Gastropoda, Nudibranchia). *The Journal of Comparative Neurology*, *403*(1), 39-52.
- Bowen, M. F., & Davis, E. E. (1989). The effects of allatectomy and juvenile hormone replacement on the development of host-seeking behaviour and lactic acid receptor sensitivity in the mosquito *Aedes aegypti*. *Medical and Veterinary Entomology*, *3*(1), 53-60.

- Boyle, P. R. (1975). Fine structure of the subradular organ of *Lepidochitona cinereus* (L), (Mollusca, Polyplacophora). *Cell and Tissue Research*, 162(3), 411-417.
- Boyse, E. A., Beauchamp, G. K., Yamazaki, K., Bard, J., & Thomas, L. (1982). Chemosensory communication. A new aspect of the major histocompatibility complex and other genes in the mouse. *Oncodevelopmental Biology and Medicine: The Journal of the International Society for Oncodevelopmental Biology and Medicine*, 4(1-2), 101-116.
- Brandstätter, R., & Kotrschal, K. (1989). Life history of roach, *Rutilus rutilus* (Cyprinidae, Teleostei). A qualitative and quantitative study on the development of sensory brain areas. *Brain, Behavior and Evolution*, 34(1), 35-42.
- Brandstätter, R., & Kotrschal, K. (1990). Brain growth patterns in four European cyprinid fish species (Cyprinidae, Teleostei): roach (*Rutilus rutilus*), bream (*Abramis brama*), common carp (*Cyprinus carpio*) and sabre carp (*Pelecus cultratus*). *Brain, Behavior and Evolution*, 35(4), 195-211.
- Braubach, O. R., Wood, H., Gadbois, S., Fine, A., & Croll, R. P. (2009). Olfactory conditioning in the zebrafish (*Danio rerio*). *Behavioural Brain Research*, 198(1), 190-198. doi:10.1016/j.bbr.2008.10.044
- Braun, C. B. (1996). The sensory biology of the living jawless fishes: a phylogenetic assessment. *Brain, Behavior and Evolution*, 48(5), 262-276.
- Braun, C. B. (1998). Schreiner organs: a new craniate chemosensory modality in hagfishes. *The Journal of Comparative Neurology*, 392(2), 135-163.
- Bray, S., & Amrein, H. (2003). A putative *Drosophila* pheromone receptor expressed in male-specific taste neurons is required for efficient courtship. *Neuron*, 39(6), 1019-1029.
- Breer, H. (2003). Sense of smell: recognition and transduction of olfactory signals. *Biochemical Society Transactions*, 31(Pt 1), 113-116. doi:10.1042/
- Breer, H., Fleischer, J., & Strotmann, J. (2006). The sense of smell: multiple olfactory subsystems. *Cellular and Molecular Life Sciences: CMLS*, 63(13), 1465-1475. doi:10.1007/s00018-006-6108-5
- Breer, H., Wanner, I., & Strotmann, J. (1996). Molecular genetics of mammalian olfaction. *Behavior Genetics*, 26(3), 209-219.
- Brennan, P. A. (2001). The vomeronasal system. *Cellular and Molecular Life Sciences: CMLS*, 58(4), 546-555.
- Brennan, P. A. (2004). The nose knows who's who: chemosensory individuality and mate recognition in mice. *Hormones and Behavior*, 46(3), 231-240. doi:10.1016/j.yhbeh.2004.01.010
- Brennan, P. A. (2009). Outstanding issues surrounding vomeronasal mechanisms of pregnancy block and individual recognition in mice. *Behavioural Brain Research*, 200(2), 287-294. doi:10.1016/j.bbr.2008.10.045
- Brennan, P. A., & Kendrick, K. M. (2006). Mammalian social odours: attraction and individual recognition. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 361(1476), 2061-2078. doi:10.1098/rstb.2006.1931
- Brennan, P. A., & Keverne, E. B. (2004). Something in the air? New insights into mammalian pheromones. *Current Biology: CB*, 14(2), R81-89.
- Brennan, P. A., & Zufall, F. (2006). Pheromonal communication in vertebrates. *Nature*, 444(7117), 308-315. doi:10.1038/nature05404
- Bressler, S. C., & Baum, M. J. (1996). Sex comparison of neuronal Fos immunoreactivity in the rat vomeronasal projection circuit after chemosensory stimulation. *Neuroscience*, 71(4), 1063-1072.
- Bret-Dibat, J. L., Creminon, C., Couraud, J. Y., Kelley, K. W., Dantzer, R., & Kent, S. (1997). Systemic capsaicin pretreatment fails to block the decrease in food-motivated behavior induced by lipopolysaccharide and interleukin-1beta. *Brain Research Bulletin*, 42(6), 443-449.

- Briand, L., Swasdipan, N., Nespoulous, C., Bézirard, V., Blon, F., Huet, J., Ebert, P., et al. (2002). Characterization of a chemosensory protein (ASP3c) from honeybee (*Apis mellifera* L.) as a brood pheromone carrier. *European Journal of Biochemistry / FEBS*, 269(18), 4586-4596.
- Brierley, S. M., Carter, R., Jones, W., Xu, L., Robinson, D. R., Hicks, G. A., Gebhart, G. F., et al. (2005). Differential chemosensory function and receptor expression of splanchnic and pelvic colonic afferents in mice. *The Journal of Physiology*, 567(Pt 1), 267-281. doi:10.1113/jphysiol.2005.089714
- Brierley, S. M., Hughes, P. A., Page, A. J., Kwan, K. Y., Martin, C. M., O'Donnell, T. A., Cooper, N. J., et al. (2009). The ion channel TRPA1 is required for normal mechanosensation and is modulated by algescic stimuli. *Gastroenterology*, 137(6), 2084-2095.e3. doi:10.1053/j.gastro.2009.07.048
- Brigaud, I., Montagné, N., Monsempes, C., François, M., & Jacquin-Joly, E. (2009). Identification of an atypical insect olfactory receptor subtype highly conserved within noctuids. *The FEBS Journal*, 276(22), 6537-6547. doi:10.1111/j.1742-4658.2009.07351.x
- Briski, K. P., Cherian, A. K., Genabai, N. K., & Vavaiya, K. V. (2009). In situ coexpression of glucose and monocarboxylate transporter mRNAs in metabolic-sensitive caudal dorsal vagal complex catecholaminergic neurons: transcriptional reactivity to insulin-induced hypoglycemia and caudal hindbrain glucose or lactate repletion during insulin-induced hypoglycemia. *Neuroscience*, 164(3), 1152-1160. doi:10.1016/j.neuroscience.2009.08.074
- Brockmann, A., Groh, C., & Fröhlich, B. (2003). Wax perception in honeybees: contact is not necessary. *Die Naturwissenschaften*, 90(9), 424-427. doi:10.1007/s00114-003-0442-3
- Brouette-Lahlou, I., Godinot, F., & Vernet-Maury, E. (1999). The mother rat's vomeronasal organ is involved in detection of dodecyl propionate, the pup's preputial gland pheromone. *Physiology & Behavior*, 66(3), 427-436.
- Brown, R. E., Singh, P. B., & Roser, B. (1987). The major histocompatibility complex and the chemosensory recognition of individuality in rats. *Physiology & Behavior*, 40(1), 65-73.
- Brown, S. T., Johnson, R. P., Senaratne, R., & Fearon, I. M. (2004). Amyloid beta peptides mediate physiological remodelling of the acute O₂ sensitivity of adrenomedullary chromaffin cells following chronic hypoxia. *Cardiovascular Research*, 64(3), 536-543. doi:10.1016/j.cardiores.2004.08.002
- Brownell, P. H. (1998). Glomerular cytoarchitectures in chemosensory systems of arachnids. *Annals of the New York Academy of Sciences*, 855, 502-507.
- Bruch, R. C., & Kalinoski, D. L. (1987). Interaction of GTP-binding regulatory proteins with chemosensory receptors. *The Journal of Biological Chemistry*, 262(5), 2401-2404.
- Bruinsma, K., & Taren, D. L. (1999). Chocolate: food or drug? *Journal of the American Dietetic Association*, 99(10), 1249-1256. doi:10.1016/S0002-8223(99)00307-7
- Brumley, M. R., & Robinson, S. R. (2004). Facial wiping in the rat fetus: variation of chemosensory stimulus parameters. *Developmental Psychobiology*, 44(4), 219-229. doi:10.1002/dev.20005
- de Bruyne, M., & Warr, C. G. (2006). Molecular and cellular organization of insect chemosensory neurons. *BioEssays: News and Reviews in Molecular, Cellular and Developmental Biology*, 28(1), 23-34. doi:10.1002/bies.20338
- Bryer, P. J., Mirza, R. S., & Chivers, D. P. (2001). Chemosensory assessment of predation risk by slimy sculpins (*Cottus cognatus*): responses to alarm, disturbance, and predator cues. *Journal of Chemical Ecology*, 27(3), 533-546.
- Buchner, E., & Rodrigues, V. (1983). Autoradiographic localization of [3H]choline uptake in the brain of *Drosophila melanogaster*. *Neuroscience Letters*, 42(1), 25-31.
- Buck, L. B. (1995). Unraveling chemosensory diversity. *Cell*, 83(3), 349-352.
- Buerk, D. G., Chugh, D. K., Osanai, S., Mokashi, A., & Lahiri, S. (1997). Dopamine increases in cat carotid body during excitation by carbon monoxide: implications for a chromophore theory of

- chemoreception. *Journal of the Autonomic Nervous System*, 67(3), 130-136.
- Buerk, D. G., Iturriaga, R., & Lahiri, S. (1994). Testing the metabolic hypothesis of O₂ chemoreception in the cat carotid body in vitro. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 76(3), 1317-1323.
- Buerk, D. G., Osanai, S., Mokashi, A., & Lahiri, S. (1998). Dopamine, sensory discharge, and stimulus interaction with CO₂ and O₂ in cat carotid body. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 85(5), 1719-1726.
- Bulygin, I. A. (1983). A consideration of the general principles of organization of sympathetic ganglia. *Journal of the Autonomic Nervous System*, 8(4), 303-330.
- Buniel, M., Wisnoskey, B., Glazebrook, P. A., Schilling, W. P., & Kunze, D. L. (2004). Distribution of TRPC channels in a visceral sensory pathway. *Novartis Foundation Symposium*, 258, 236-243; discussion 243-247, 263-266.
- Buniel, M. C. F., Schilling, W. P., & Kunze, D. L. (2003). Distribution of transient receptor potential channels in the rat carotid chemosensory pathway. *The Journal of Comparative Neurology*, 464(3), 404-413. doi:10.1002/cne.10798
- Buresch, K. C., Boal, J. G., Knowles, J., Debose, J., Nichols, A., Erwin, A., Painter, S. D., et al. (2003). Contact chemosensory cues in egg bundles elicit male-male agonistic conflicts in the squid *Loligo pealeii*. *Journal of Chemical Ecology*, 29(3), 547-560.
- Burghardt, G. M., Layne, D. G., & Konigsberg, L. (2000). The genetics of dietary experience in a restricted natural population. *Psychological Science: A Journal of the American Psychological Society / APS*, 11(1), 69-72.
- Burne, T. H. J., & Rogers, L. J. (2002). Chemosensory input and lateralization of brain function in the domestic chick. *Behavioural Brain Research*, 133(2), 293-300.
- Butcher, R. A., Ragains, J. R., Kim, E., & Clardy, J. (2008). A potent dauer pheromone component in *Caenorhabditis elegans* that acts synergistically with other components. *Proceedings of the National Academy of Sciences of the United States of America*, 105(38), 14288-14292. doi:10.1073/pnas.0806676105
- Buttigieg, J., & Nurse, C. A. (2004). Detection of hypoxia-evoked ATP release from chemoreceptor cells of the rat carotid body. *Biochemical and Biophysical Research Communications*, 322(1), 82-87. doi:10.1016/j.bbrc.2004.07.081
- Caceres, A. I., Brackmann, M., Elia, M. D., Bessac, B. F., del Camino, D., D'Amours, M., Witek, J. S., et al. (2009). A sensory neuronal ion channel essential for airway inflammation and hyperreactivity in asthma. *Proceedings of the National Academy of Sciences of the United States of America*, 106(22), 9099-9104. doi:10.1073/pnas.0900591106
- Callan, W. T., & Sanderson, S. L. (2003). Feeding mechanisms in carp: crossflow filtration, palatal protrusions and flow reversals. *The Journal of Experimental Biology*, 206(Pt 5), 883-892.
- Calvello, M., Brandazza, A., Navarrini, A., Dani, F. R., Turillazzi, S., Felicioli, A., & Pelosi, P. (2005). Expression of odorant-binding proteins and chemosensory proteins in some Hymenoptera. *Insect Biochemistry and Molecular Biology*, 35(4), 297-307. doi:10.1016/j.ibmb.2005.01.002
- Calvello, M., Guerra, N., Brandazza, A., D'Ambrosio, C., Scaloni, A., Dani, F. R., Turillazzi, S., et al. (2003). Soluble proteins of chemical communication in the social wasp *Polistes dominulus*. *Cellular and Molecular Life Sciences: CMLS*, 60(9), 1933-1943. doi:10.1007/s00018-003-3186-5
- Cameron, S. A. (2004). Phylogeny and biology of neotropical orchid bees (Euglossini). *Annual Review of Entomology*, 49, 377-404. doi:10.1146/annurev.ento.49.072103.115855
- Camoletto, P., Colesanti, A., Ozon, S., Sobel, A., & Fasolo, A. (2001). Expression of stathmin and SCG10 proteins in the olfactory neurogenesis during development and after lesion in the adulthood. *Brain Research Bulletin*, 54(1), 19-28.
- Campanacci, V., Krieger, J., et al. (2001). Revisiting the specificity of *Mamestra brassicae* and

- Antheraea polyphemus pheromone-binding proteins with a fluorescence binding assay. *The Journal of Biological Chemistry*, 276(23), 20078-20084. doi:10.1074/jbc.M100713200
- Campanacci, V., Mosbah, A., Bornet, O., Wechselberger, R., Jacquin-Joly, E., Cambillau, C., Darbon, H., & Tegoni, M. (2001). Chemosensory protein from the moth Mamestra brassicae. Expression and secondary structure from 1H and 15N NMR. *European Journal of Biochemistry / FEBS*, 268(17), 4731-4739.
- Campanacci, V., Spinelli, S., Lartigue, A., Lewandowski, C., Brown, K., Tegoni, M., & Cambillau, C. (2001). Recombinant chemosensory protein (CSP2) from the moth Mamestra brassicae: crystallization and preliminary crystallographic study. *Acta Crystallographica. Section D, Biological Crystallography*, 57(Pt 1), 137-139.
- Campanacci, V., Lartigue, A., Hällberg, B. M., Jones, T. A., Giudici-Orticoni, M., Tegoni, M., & Cambillau, C. (2003). Moth chemosensory protein exhibits drastic conformational changes and cooperativity on ligand binding. *Proceedings of the National Academy of Sciences of the United States of America*, 100(9), 5069-5074. doi:10.1073/pnas.0836654100
- Campanucci, V. A., & Nurse, C. A. (2005). Biophysical characterization of whole-cell currents in O2-sensitive neurons from the rat glossopharyngeal nerve. *Neuroscience*, 132(2), 437-451. doi:10.1016/j.neuroscience.2004.11.058
- Campanucci, V. A., & Nurse, C. A. (2007). Autonomic innervation of the carotid body: role in efferent inhibition. *Respiratory Physiology & Neurobiology*, 157(1), 83-92. doi:10.1016/j.resp.2007.01.020
- del Campo, M. L., & Miles, C. I. (2003). Chemosensory tuning to a host recognition cue in the facultative specialist larvae of the moth Manduca sexta. *The Journal of Experimental Biology*, 206(Pt 22), 3979-3990.
- Cao, Y., Zhao, F., Kolli, T., Hivley, R., & Herness, S. (2009). GABA expression in the mammalian taste bud functions as a route of inhibitory cell-to-cell communication. *Proceedings of the National Academy of Sciences of the United States of America*, 106(10), 4006-4011. doi:10.1073/pnas.0808672106
- Capello, L., Roppolo, D., Jungo, V. P., Feinstein, P., & Rodriguez, I. (2009). A common gene exclusion mechanism used by two chemosensory systems. *The European Journal of Neuroscience*, 29(4), 671-678. doi:10.1111/j.1460-9568.2009.06630.x
- Carazo, P., Font, E., & Alfthan, B. (2007). Chemosensory assessment of sperm competition levels and the evolution of internal spermatophore guarding. *Proceedings. Biological Sciences / The Royal Society*, 274(1607), 261-267. doi:10.1098/rspb.2006.3714
- Cardenas, H., & Zapata, P. (1980). Dual effects of dopamine upon chemosensory responses to cyanide. *Neuroscience Letters*, 18(3), 317-322.
- Cardenas, H., & Zapata, P. (1981). Dopamine-induced ventilatory depression in the rat, mediated by carotid nerve afferents. *Neuroscience Letters*, 24(1), 29-33.
- Cardenas, H., & Zapata, P. (1983). Ventilatory reflexes originated from carotid and extracarotid chemoreceptors in rats. *The American Journal of Physiology*, 244(1), R119-125.
- Carlson, J. (1993). Molecular genetics of Drosophila olfaction. *Ciba Foundation Symposium*, 179, 150-161; discussion 162-166.
- Caron, S. J. C., Prober, D., Choy, M., & Schier, A. F. (2008). In vivo birthdating by BAPTISM reveals that trigeminal sensory neuron diversity depends on early neurogenesis. *Development (Cambridge, England)*, 135(19), 3259-3269. doi:10.1242/dev.023200
- Carr, W. E., Ache, B. W., & Gleeson, R. A. (1987). Chemoreceptors of crustaceans: similarities to receptors for neuroactive substances in internal tissues. *Environmental Health Perspectives*, 71, 31-46.
- Carr, W. E., Gleeson, R. A., & Trapido-Rosenthal, H. G. (1990). The role of perireceptor events in chemosensory processes. *Trends in Neurosciences*, 13(6), 212-215.

- Carreau, N. D., & Pyle, G. G. (2005). Effect of copper exposure during embryonic development on chemosensory function of juvenile fathead minnows (*Pimephales promelas*). *Ecotoxicology and Environmental Safety*, *61*(1), 1-6. doi:10.1016/j.ecoenv.2004.10.008
- Case, C. P., & Matthews, M. R. (1985). A quantitative study of structural features, synapses and nearest-neighbour relationships of small, granule-containing cells in the rat superior cervical sympathetic ganglion at various adult stages. *Neuroscience*, *15*(1), 237-282.
- Cassata, G., Kagoshima, H., Andachi, Y., Kohara, Y., Dürrenberger, M. B., Hall, D. H., & Bürglin, T. R. (2000). The LIM homeobox gene *ceh-14* confers thermosensory function to the AFD neurons in *Caenorhabditis elegans*. *Neuron*, *25*(3), 587-597.
- Castillo, K., Delgado, R., & Bacigalupo, J. (2007). Plasma membrane Ca(2+)-ATPase in the cilia of olfactory receptor neurons: possible role in Ca(2+) clearance. *The European Journal of Neuroscience*, *26*(9), 2524-2531. doi:10.1111/j.1460-9568.2007.05863.x
- Cate, H. S., & Derby, C. D. (2002). Ultrastructure and physiology of the hooded sensillum, a bimodal chemo-mechanosensillum of lobsters. *The Journal of Comparative Neurology*, *442*(4), 293-307. doi:10.1002/cne.10106
- Cattarossi, L., Haxhiu-Poskurica, B., Haxhiu, M. A., & Carlo, W. A. (1993). Response of upper airway and chest wall muscles to selective brain stem hypoxia in the newborn. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *74*(5), 2443-2449.
- Cavaggioni, A., & Mucignat-Caretta, C. (2000). Major urinary proteins, alpha(2U)-globulins and aphrodisin. *Biochimica Et Biophysica Acta*, *1482*(1-2), 218-228.
- Cavalcante, J. C., Bittencourt, J. C., & Elias, C. F. (2006). Female odors stimulate CART neurons in the ventral premammillary nucleus of male rats. *Physiology & Behavior*, *88*(1-2), 160-166. doi:10.1016/j.physbeh.2006.03.032
- Cechetto, D. F., Standaert, D. G., & Saper, C. B. (1985). Spinal and trigeminal dorsal horn projections to the parabrachial nucleus in the rat. *The Journal of Comparative Neurology*, *240*(2), 153-160. doi:10.1002/cne.902400205
- Certel, S. J., Clyne, P. J., Carlson, J. R., & Johnson, W. A. (2000). Regulation of central neuron synaptic targeting by the *Drosophila* POU protein, *Acj6*. *Development (Cambridge, England)*, *127*(11), 2395-2405.
- Ceylan, A., Göksu, N., Kemalöglu, Y. K., Uğur, B., Akyürek, N., & Bayazit, Y. A. (2007). Impact of Jacobson's (tympanic) nerve sectioning on middle ear functions. *Otology & Neurotology: Official Publication of the American Otological Society, American Neurotology Society [and] European Academy of Otology and Neurotology*, *28*(3), 341-344. doi:10.1097/01.mao.0000253286.48619.1c
- Chan, K. Y., & Byers, M. R. (1985a). Sensory nerve endings of the incisive papilla of rat hard palate studied by peroxidase cytochemical methods. *The Journal of Comparative Neurology*, *234*(2), 192-200. doi:10.1002/cne.902340206
- Chan, K. Y., & Byers, M. R. (1985b). Anterograde axonal transport and intercellular transfer of WGA-HRP in trigeminal-innervated sensory receptors of rat incisive papilla. *The Journal of Comparative Neurology*, *234*(2), 201-217. doi:10.1002/cne.902340207
- Chandra, S. B. C., & Singh, S. (2005). Chemosensory processing in the fruit fly, *Drosophila melanogaster*: generalization of a feeding response reveals overlapping odour representations. *Journal of Biosciences*, *30*(5), 679-688.
- Chang, A. J., Chronis, N., Karow, D. S., Marletta, M. A., & Bargmann, C. I. (2006). A distributed chemosensory circuit for oxygen preference in *C. elegans*. *PLoS Biology*, *4*(9), e274. doi:10.1371/journal.pbio.0040274
- Chang, S., Johnston, R. J., Frøkjær-Jensen, C., Lockery, S., & Hobert, O. (2004). MicroRNAs act sequentially and asymmetrically to control chemosensory laterality in the nematode. *Nature*, *430*(7001), 785-789. doi:10.1038/nature02752

- Chang, S., Johnston, R. J., & Hobert, O. (2003). A transcriptional regulatory cascade that controls left/right asymmetry in chemosensory neurons of *C. elegans*. *Genes & Development*, *17*(17), 2123-2137. doi:10.1101/gad.1117903
- Chao, M. Y., Komatsu, H., Fukuto, H. S., Dionne, H. M., & Hart, A. C. (2004). Feeding status and serotonin rapidly and reversibly modulate a *Caenorhabditis elegans* chemosensory circuit. *Proceedings of the National Academy of Sciences of the United States of America*, *101*(43), 15512-15517. doi:10.1073/pnas.0403369101
- Chatonnet, F., del Toro, E. D., Voiculescu, O., Charnay, P., & Champagnat, J. (2002). Different respiratory control systems are affected in homozygous and heterozygous kreisler mutant mice. *The European Journal of Neuroscience*, *15*(4), 684-692.
- Chaudhari, N., Yang, H., Lamp, C., Delay, E., Cartford, C., Than, T., & Roper, S. (1996). The taste of monosodium glutamate: membrane receptors in taste buds. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *16*(12), 3817-3826.
- Chen, C., Tuck, S., & Byström, A. S. (2009). Defects in tRNA modification associated with neurological and developmental dysfunctions in *Caenorhabditis elegans* elongator mutants. *PLoS Genetics*, *5*(7), e1000561. doi:10.1371/journal.pgen.1000561
- Chen, J., Dinger, B., & Fidone, S. J. (1995). Second messenger regulation of tyrosine hydroxylase gene expression in rat carotid body. *Biological Signals*, *4*(5), 277-285.
- Chen, J., Gomez-Nino, A., Gonzalez, C., Dinger, B., & Fidone, S. (1997). Stimulus-specific mobilization of dopamine and norepinephrine stores in cat carotid body. *Journal of the Autonomic Nervous System*, *67*(1-2), 109-113.
- Chen, J., He, L., Dinger, B., & Fidone, S. (2000a). Stimulus-specific signaling pathways in rabbit carotid body chemoreceptors. *Neuroscience*, *95*(1), 283-291.
- Chen, J., He, L., Dinger, B., & Fidone, S. (2000b). Cellular mechanisms involved in rabbit carotid body excitation elicited by endothelin peptides. *Respiration Physiology*, *121*(1), 13-23.
- Chen, J., He, L., Dinger, B., Stensaas, L., & Fidone, S. (2002). Chronic hypoxia upregulates connexin43 expression in rat carotid body and petrosal ganglion. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *92*(4), 1480-1486. doi:10.1152/jappphysiol.00077.2001
- Chen, J., He, L., Liu, X., Dinger, B., Stensaas, L., & Fidone, S. (2007). Effect of the endothelin receptor antagonist bosentan on chronic hypoxia-induced morphological and physiological changes in rat carotid body. *American Journal of Physiology. Lung Cellular and Molecular Physiology*, *292*(5), L1257-1262. doi:10.1152/ajplung.00419.2006
- Chen, M. Y., Insall, R. H., & Devreotes, P. N. (1996). Signaling through chemoattractant receptors in *Dictyostelium*. *Trends in Genetics: TIG*, *12*(2), 52-57.
- Chen, N., Pai, S., Zhao, Z., Mah, A., Newbury, R., Johnsen, R. C., Altun, Z., et al. (2005). Identification of a nematode chemosensory gene family. *Proceedings of the National Academy of Sciences of the United States of America*, *102*(1), 146-151. doi:10.1073/pnas.0408307102
- Chen, R. P., Thompson, G. W., & Armour, J. A. (2004). Patent ductus arteriosus remodels cardiac sensory neuronal chemotransduction. *Autonomic Neuroscience: Basic & Clinical*, *110*(1), 1-7. doi:10.1016/S1566-0702(03)00080-8
- Chen, W., & Lim, L. (1994). The *Caenorhabditis elegans* small GTP-binding protein RhoA is enriched in the nerve ring and sensory neurons during larval development. *The Journal of Biological Chemistry*, *269*(51), 32394-32404.
- Chen, Y., Getchell, M. L., Ding, X., & Getchell, T. V. (1992). Immunolocalization of two cytochrome P450 isozymes in rat nasal chemosensory tissue. *Neuroreport*, *3*(9), 749-752.
- Chen, Z., Ophir, D., & Lancet, D. (1986). Monoclonal antibodies to ciliary glycoproteins of frog olfactory neurons. *Brain Research*, *368*(2), 329-338.
- Chen, Z., Pace, U., Heldman, J., Shapira, A., & Lancet, D. (1986). Isolated frog olfactory cilia: a preparation of dendritic membranes from chemosensory neurons. *The Journal of Neuroscience:*

The Official Journal of the Society for Neuroscience, 6(8), 2146-2154.

- Chen, Z., Pace, U., Ronen, D., & Lancet, D. (1986). Polypeptide gp95. A unique glycoprotein of olfactory cilia with transmembrane receptor properties. *The Journal of Biological Chemistry*, 261(3), 1299-1305.
- Chernov, M. M., Daubenspeck, J. A., Denton, J. S., Pfeiffer, J. R., Putnam, R. W., & Leiter, J. C. (2007). A computational analysis of central CO₂ chemosensitivity in *Helix aspersa*. *American Journal of Physiology. Cell Physiology*, 292(1), C278-291. doi:10.1152/ajpcell.00173.2006
- Chiszar, D., Hobika, G., & Smith, H. M. (1993). Prairie rattlesnakes (*Crotalus viridis*) respond to rodent blood with chemosensory searching. *Brain, Behavior and Evolution*, 41(3-5), 229-233.
- Chiszar, D., Radcliffe, C. W., O'Connell, B., & Smith, H. M. (1980). Strike-induced chemosensory searching in rattlesnakes (*Crotalus enyo*) as a function of disturbance prior to presentation of prey. *Transactions of the Kansas Academy of Science. Kansas Academy of Science*, 83(4), 230-234.
- Chiszar, D., Radcliffe, C. W., O'Connell, B., & Smith, H. M. (1982). Analysis of the behavioral sequence emitted by rattlesnakes during feeding episodes II. Duration of strike-induced chemosensory searching in rattlesnakes (*Crotalus viridis*, *C. enyo*). *Behavioral and Neural Biology*, 34(3), 261-270.
- Chotro, M. G., Córdoba, N. E., & Molina, J. C. (1991). Acute prenatal experience with alcohol in the amniotic fluid: interactions with aversive and appetitive alcohol orosensory learning in the rat pup. *Developmental Psychobiology*, 24(6), 431-451. doi:10.1002/dev.420240605
- Chotro, M. G., Kraebel, K. S., McKinzie, D. L., Molina, J. C., & Spear, N. (1996). Prenatal and postnatal ethanol exposure influences preweanling rats' behavioral and autonomic responding to ethanol odor. *Alcohol (Fayetteville, N.Y.)*, 13(4), 377-385.
- Chotro, M. G., & Spear, N. E. (1997). Repeated exposure to moderate doses of alcohol in the rat fetus: evidence of sensitization to toxic and chemosensory aspects of alcohol. *Alcoholism, Clinical and Experimental Research*, 21(2), 360-367.
- Chotro, M. G., & Arias, C. (2006). Exposure to low and moderate doses of alcohol on late gestation modifies infantile response to and preference for alcohol in rats. *Annali dell'Istituto Superiore Di Sanità*, 42(1), 22-30.
- Chou, C. L., & Shirahata, M. (1996). Two types of voltage-gated K channels in carotid body cells of adult cats. *Brain Research*, 742(1-2), 34-42.
- Christensen, S. T., Chemnitz, J., Straarup, E. M., Kristiansen, K., Wheatley, D. N., & Rasmussen, L. (1998). Staurosporine-induced cell death in *Tetrahymena thermophila* has mixed characteristics of both apoptotic and autophagic degeneration. *Cell Biology International*, 22(7-8), 591-598. doi:10.1006/cbir.1998.0320
- Christensen, S. T., Leick, V., Rasmussen, L., & Wheatley, D. N. (1998). Signaling in unicellular eukaryotes. *International Review of Cytology*, 177, 181-253.
- Chugh, D. K., Katayama, M., Mokashi, A., Bebout, D. E., Ray, D. K., & Lahiri, S. (1994). Nitric oxide-related inhibition of carotid chemosensory nerve activity in the cat. *Respiration Physiology*, 97(2), 147-156.
- Churcher, A. M., & Taylor, J. S. (2009). Amphioxus (*Branchiostoma floridae*) has orthologs of vertebrate odorant receptors. *BMC Evolutionary Biology*, 9, 242. doi:10.1186/1471-2148-9-242
- Cinelli, A. R., Wang, D., Chen, P., Liu, W., & Halpern, M. (2002). Calcium transients in the garter snake vomeronasal organ. *Journal of Neurophysiology*, 87(3), 1449-1472.
- Ciofi, P., Garret, M., Lapirot, O., Lafon, P., Loyens, A., Prévot, V., & Levine, J. E. (2009). Brain-endocrine interactions: a microvascular route in the mediobasal hypothalamus. *Endocrinology*, 150(12), 5509-5519. doi:10.1210/en.2009-0584
- Clancy, A. N., Coquelin, A., Macrides, F., Gorski, R. A., & Noble, E. P. (1984). Sexual behavior and aggression in male mice: involvement of the vomeronasal system. *The Journal of*

- Neuroscience: The Official Journal of the Society for Neuroscience*, 4(9), 2222-2229.
- Clark, L., & Smeraski, C. A. (1990). Seasonal shifts in odor acuity by starlings. *The Journal of Experimental Zoology*, 255(1), 22-29. doi:10.1002/jez.1402550105
- Clark, R. W. (2004). Timber rattlesnakes (*Crotalus horridus*) use chemical cues to select ambush sites. *Journal of Chemical Ecology*, 30(3), 607-617.
- Clarke, A. R. (1990). External morphology of the antennae of *Damalinia ovis* (Phthiraptera: Trichodectidae). *Journal of Morphology*, 203(2), 203-209. doi:10.1002/jmor.1052030207
- Clarris, H. J., & Key, B. (2001). Expression of glycoproteins in the vomeronasal organ reveals a novel spatiotemporal pattern of sensory neurone maturation. *Journal of Neurobiology*, 46(2), 113-125.
- Claudianos, C., Ranson, H., Johnson, R. M., Biswas, S., Schuler, M. A., Berenbaum, M. R., Feyereisen, R., et al. (2006). A deficit of detoxification enzymes: pesticide sensitivity and environmental response in the honeybee. *Insect Molecular Biology*, 15(5), 615-636. doi:10.1111/j.1365-2583.2006.00672.x
- Claustre, J., Cottet-Emard, J. M., Dalmaz, Y., Pequignot, J. M., & Peyrin, L. (1992). Response of noradrenaline and dopamine to hypoxia and sympathectomy: evidence for an independent dopaminergic reactivity. *Journal of the Autonomic Nervous System*, 38(1), 21-28.
- Claustre, J., & Peyrin, L. (1982). Free and conjugated catecholamines and metabolites in cat urine after hypoxia. *Journal of Applied Physiology: Respiratory, Environmental and Exercise Physiology*, 52(2), 304-308.
- Clyne, P. J., Certel, S. J., de Bruyne, M., Zaslavsky, L., Johnson, W. A., & Carlson, J. R. (1999). The odor specificities of a subset of olfactory receptor neurons are governed by Acj6, a POU-domain transcription factor. *Neuron*, 22(2), 339-347.
- Cockerham, R. E., Puche, A. C., & Munger, S. D. (2009). Heterogeneous sensory innervation and extensive intrabulbar connections of olfactory necklace glomeruli. *PloS One*, 4(2), e4657. doi:10.1371/journal.pone.0004657
- Coddou, C., Bravo, E., & Eugeni, J. (2009). Alterations in cholinergic sensitivity of respiratory neurons induced by pre-natal nicotine: a mechanism for respiratory dysfunction in neonatal mice. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 364(1529), 2527-2535. doi:10.1098/rstb.2009.0078
- Colbert, H. A., Smith, T. L., & Bargmann, C. I. (1997). OSM-9, a novel protein with structural similarity to channels, is required for olfaction, mechanosensation, and olfactory adaptation in *Caenorhabditis elegans*. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 17(21), 8259-8269.
- Cole, A. G., Mashkournia, A., Parries, S. C., & Goldberg, J. I. (2002). Regulation of early embryonic behavior by nitric oxide in the pond snail *Helisoma trivolvis*. *The Journal of Experimental Biology*, 205(Pt 20), 3143-3152.
- Coleman, S. W., & Rosenthal, G. G. (2006). Swordtail fry attend to chemical and visual cues in detecting predators and conspecifics. *PloS One*, 1, e118. doi:10.1371/journal.pone.0000118
- Collet, J., Spike, C. A., Lundquist, E. A., Shaw, J. E., & Herman, R. K. (1998). Analysis of *osm-6*, a gene that affects sensory cilium structure and sensory neuron function in *Caenorhabditis elegans*. *Genetics*, 148(1), 187-200.
- Collin, S. P., & Barry Collin, H. (2004). Primary cilia in vertebrate corneal endothelial cells. *Cell Biology International*, 28(2), 125-130. doi:10.1016/j.cellbi.2003.11.011
- Collins, J. J., Evason, K., Pickett, C. L., Schneider, D. L., & Kornfeld, K. (2008). The anticonvulsant ethosuximide disrupts sensory function to extend *C. elegans* lifespan. *PLoS Genetics*, 4(10), e1000230. doi:10.1371/journal.pgen.1000230
- Conde, S. V., Obeso, A., Vicario, I., Rigual, R., Rocher, A., & Gonzalez, C. (2006). Caffeine inhibition of rat carotid body chemoreceptors is mediated by A2A and A2B adenosine receptors. *Journal of Neurochemistry*, 98(2), 616-628. doi:10.1111/j.1471-4159.2006.03912.x

- Conde, S. V., Obeso, A., Rigual, R., Monteiro, E. C., & Gonzalez, C. (2006). Function of the rat carotid body chemoreceptors in ageing. *Journal of Neurochemistry*, *99*(3), 711-723. doi:10.1111/j.1471-4159.2006.04094.x
- Conforti, E., Torti, C., Malacrida, A. R., & Bernocchi, G. (1999). Mature and developing visual system of *Ceratitis capitata* (Diptera, Tephritidae): histochemical evidence of nitric oxide synthase in the wild type and the white eye mutant strains. *Brain Research*, *843*(1-2), 1-11.
- Conte, C., Guarin, E., Marcuz, A., & Andres-Barquin, P. J. (2006). Functional expression of mammalian bitter taste receptors in *Caenorhabditis elegans*. *Biochimie*, *88*(7), 801-806. doi:10.1016/j.biochi.2006.01.008
- Coolen, L. M., Peters, H. J., & Veening, J. G. (1996). Fos immunoreactivity in the rat brain following consummatory elements of sexual behavior: a sex comparison. *Brain Research*, *738*(1), 67-82.
- Coolen, L. M., Peters, H. J., & Veening, J. G. (1997). Distribution of Fos immunoreactivity following mating versus anogenital investigation in the male rat brain. *Neuroscience*, *77*(4), 1151-1161.
- Coolen, L. M., & Wood, R. I. (1998). Bidirectional connections of the medial amygdaloid nucleus in the Syrian hamster brain: simultaneous anterograde and retrograde tract tracing. *The Journal of Comparative Neurology*, *399*(2), 189-209.
- Cooper, H. M., Mick, G., & Magnin, M. (1989). Retinal projection to mammalian telencephalon. *Brain Research*, *477*(1-2), 350-357.
- Cooper, W. E. (1995). Effects of estrogen and male head coloration on chemosensory investigation of female cloacal pheromones by male broad-headed skinks (*Eumeces laticeps*). *Physiology & Behavior*, *58*(6), 1221-1225.
- Cooper, W. E. (2000). Food chemical discriminations by an herbivorous lizard, *Corucia zebrata*. *The Journal of Experimental Zoology*, *286*(4), 372-378.
- Cooper, W. E., Al-Johany, A. M., Vitt, L. J., & Habegger, J. J. (2000). Responses to chemical cues from animal and plant foods by actively foraging insectivorous and omnivorous scincine lizards. *The Journal of Experimental Zoology*, *287*(5), 327-339.
- Cooper, W. E., & Pérez-Mellado, V. (2001a). Chemosensory responses to sugar and fat by the omnivorous lizard *Gallotia caesaris*: with behavioral evidence suggesting a role for gustation. *Physiology & Behavior*, *73*(4), 509-516.
- Cooper, W. E., & Pérez-Mellado, V. (2001b). Food chemical cues elicit general and population-specific effects on lingual and biting behaviors in the lacertid lizard *Podarcis lilfordi*. *The Journal of Experimental Zoology*, *290*(3), 207-217. doi:10.1002/jez.1051
- Cooper, W. E., & Vitt, L. J. (1984). Conspecific odor detection by the male broad-headed skink, *Eumeces laticeps*: effects of sex and site of odor source and of male reproductive condition. *The Journal of Experimental Zoology*, *230*(2), 199-209. doi:10.1002/jez.1402300205
- Cooper, W. E. (2003). Foraging mode and evolution of strike-induced chemosensory searching in lizards. *Journal of Chemical Ecology*, *29*(4), 1013-1026.
- Cooper, W. E., Pérez-Mellado, V., & Vitt, L. J. (2002). Lingual and biting responses to selected lipids by the lizard *Podarcis lilfordi*. *Physiology & Behavior*, *75*(1-2), 237-241.
- Cooper, W. E., & Pérez-Mellado, V. (2002). Pheromonal discriminations of sex, reproductive condition, and species by the lacertid lizard *Podarcis hispanica*. *The Journal of Experimental Zoology*, *292*(6), 523-527. doi:10.1002/jez.10089
- Coppola, D. M., & O'Connell, R. J. (1989). Stimulus access to olfactory and vomeronasal receptors in utero. *Neuroscience Letters*, *106*(3), 241-248.
- Coquelin, A., Clancy, A. N., Macrides, F., Noble, E. P., & Gorski, R. A. (1984). Pheromonally induced release of luteinizing hormone in male mice: involvement of the vomeronasal system. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *4*(9), 2230-2236.
- Cornbrooks, C., Bland, C., Williams, D. W., Truman, J. W., & Rand, M. D. (2007). Delta expression in post-mitotic neurons identifies distinct subsets of adult-specific lineages in *Drosophila*.

- Developmental Neurobiology*, 67(1), 23-38. doi:10.1002/dneu.20308
- Corotto, F. S., & O'Brien, M. R. (2002). Chemosensory stimuli for the walking legs of the crayfish *Procambarus clarkii*. *Journal of Chemical Ecology*, 28(6), 1117-1130.
- Cottet-Emard, J. M., Dalmaz, Y., Pequignot, J., Peyrin, L., & Pequignot, J. M. (1997). Long-term exposure to ozone alters peripheral and central catecholamine activity in rats. *Pflügers Archiv: European Journal of Physiology*, 433(6), 744-749.
- Covasa, M., Ritter, R. C., & Burns, G. A. (2000). Reduction of food intake by intestinal macronutrient infusion is not reversed by NMDA receptor blockade. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 278(2), R345-351.
- Cragg, P. A., Runold, M., Kou, Y. R., & Prabhakar, N. R. (1994). Tachykinin antagonists in carotid body responses to hypoxia and substance P in the rat. *Respiration Physiology*, 95(3), 295-310.
- Crews, S. T., & Fan, C. M. (1999). Remembrance of things PAS: regulation of development by bHLH-PAS proteins. *Current Opinion in Genetics & Development*, 9(5), 580-587.
- Cummins, S. F., Leblanc, L., Degnan, B. M., & Nagle, G. T. (2009). Molecular identification of candidate chemoreceptor genes and signal transduction components in the sensory epithelium of *Aplysia*. *The Journal of Experimental Biology*, 212(Pt 13), 2037-2044. doi:10.1242/jeb.026427
- Cummins, S. F., De Vries, M. R., Hill, K. S., Boehning, D., & Nagle, G. T. (2007). Gene identification and evidence for expression of G protein alpha subunits, phospholipase C, and an inositol 1,4,5-trisphosphate receptor in *Aplysia californica* rhinophore. *Genomics*, 90(1), 110-120. doi:10.1016/j.ygeno.2007.03.020
- Cummins, S. F., Erpenbeck, D., Zou, Z., Claudianos, C., Moroz, L. L., Nagle, G. T., & Degnan, B. M. (2009). Candidate chemoreceptor subfamilies differentially expressed in the chemosensory organs of the mollusc *Aplysia*. *BMC Biology*, 7, 28. doi:10.1186/1741-7007-7-28
- Curtis, R. H. C. (2008). Plant-nematode interactions: environmental signals detected by the nematode's chemosensory organs control changes in the surface cuticle and behaviour. *Parasite (Paris, France)*, 15(3), 310-316.
- Cutz, E., Speirs, V., Yeger, H., Newman, C., Wang, D., & Perrin, D. G. (1993). Cell biology of pulmonary neuroepithelial bodies--validation of an in vitro model. I. Effects of hypoxia and Ca²⁺ ionophore on serotonin content and exocytosis of dense core vesicles. *The Anatomical Record*, 236(1), 41-52. doi:10.1002/ar.1092360109
- Dalton, P. (2003). Upper airway irritation, odor perception and health risk due to airborne chemicals. *Toxicology Letters*, 140-141, 239-248.
- Damalama, M., & Swann, J. (1993). Substance P and neurokinin A are colocalized in the central chemosensory pathway of the male golden hamster. *Neuropeptides*, 24(6), 327-334.
- Damann, N., Rothermel, M., Klupp, B. G., Mettenleiter, T. C., Hatt, H., & Wetzelsch, C. H. (2006). Chemosensory properties of murine nasal and cutaneous trigeminal neurons identified by viral tracing. *BMC Neuroscience*, 7, 46. doi:10.1186/1471-2202-7-46
- Dambroski, H. R., Linn, C., Berlocher, S. H., Forbes, A. A., Roelofs, W., & Feder, J. L. (2005). The genetic basis for fruit odor discrimination in *Rhagoletis* flies and its significance for sympatric host shifts. *Evolution; International Journal of Organic Evolution*, 59(9), 1953-1964.
- Daniel, P. C., & Derby, C. D. (1991). Chemosensory responses to mixtures: a model based on composition of receptor cell types. *Physiology & Behavior*, 49(3), 581-589.
- Daniel, P. C., Fox, M., & Mehta, S. (2008). Identification of chemosensory sensilla mediating antennular flicking behavior in *Panulirus argus*, the Caribbean spiny lobster. *The Biological Bulletin*, 215(1), 24-33.
- Daniels, S. A., Ailion, M., Thomas, J. H., & Sengupta, P. (2000). *egl-4* acts through a transforming growth factor-beta/SMAD pathway in *Caenorhabditis elegans* to regulate multiple neuronal circuits in response to sensory cues. *Genetics*, 156(1), 123-141.

- Dantzer, R., Bluthé, R. M., Koob, G. F., & Le Moal, M. (1987). Modulation of social memory in male rats by neurohypophyseal peptides. *Psychopharmacology*, *91*(3), 363-368.
- Das, S., & Dimopoulos, G. (2008). Molecular analysis of photic inhibition of blood-feeding in *Anopheles gambiae*. *BMC Physiology*, *8*, 23. doi:10.1186/1472-6793-8-23
- Dasso, L. L., Buckler, K. J., & Vaughan-Jones, R. D. (1997). Muscarinic and nicotinic receptors raise intracellular Ca²⁺ levels in rat carotid body type I cells. *The Journal of Physiology*, *498* (Pt 2), 327-338.
- Daudu, P. A., Rozanov, C., Roy, A., Mokashi, A., & Lahiri, S. (2000). Effects of 2,4-dinitrophenol (DNP) on the relationship between the chemosensory activities of the rat carotid body and the intracellular calcium of glomus cells. *Advances in Experimental Medicine and Biology*, *475*, 655-661. doi:10.1007/0-306-46825-5_64
- Daudu, P. A., Roy, A., Rozanov, C., Mokashi, A., & Lahiri, S. (2002). Extra- and intracellular free iron and the carotid body responses. *Respiratory Physiology & Neurobiology*, *130*(1), 21-31.
- Dauger, S., Pattyn, A., Lofaso, F., Gaultier, C., Goridis, C., Gallego, J., & Brunet, J. (2003). Phox2b controls the development of peripheral chemoreceptors and afferent visceral pathways. *Development (Cambridge, England)*, *130*(26), 6635-6642. doi:10.1242/dev.00866
- Davis, W. J., Gillette, R., Kovac, M. P., Croll, R. P., & Matera, E. M. (1983). Organization of synaptic inputs to paracerebral feeding command interneurons of *Pleurobranchaea californica*. III. Modifications induced by experience. *Journal of Neurophysiology*, *49*(6), 1557-1572.
- Dawley, E. M., Fingerlin, A., Hwang, D., John, S. S., & Stankiewicz, C. A. (2000). Seasonal cell proliferation in the chemosensory epithelium and brain of red-backed salamanders, *Plethodon cinereus*. *Brain, Behavior and Evolution*, *56*(1), 1-13.
- Dawley, E. M., Nelsen, M., Lopata, A., Schwartz, J., & Bierly, A. (2006). Cell birth and survival following seasonal periods of cell proliferation in the chemosensory epithelia of red-backed salamanders, *Plethodon cinereus*. *Brain, Behavior and Evolution*, *68*(1), 26-36. doi:10.1159/000092311
- De Marco, R. J., & Farina, W. M. (2003). Trophallaxis in forager honeybees (*Apis mellifera*): resource uncertainty enhances begging contacts? *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, *189*(2), 125-134. doi:10.1007/s00359-002-0382-y
- Dean, D. M., Mazzatenta, A., & Menini, A. (2004). Voltage-activated current properties of male and female mouse vomeronasal sensory neurons: sexually dichotomous? *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, *190*(6), 491-499. doi:10.1007/s00359-004-0513-8
- Dear, T. N., Campbell, K., & Rabbitts, T. H. (1991). Molecular cloning of putative odorant-binding and odorant-metabolizing proteins. *Biochemistry*, *30*(43), 10376-10382.
- Deems, R. O., & Friedman, M. I. (1988). Altered preferences for sucrose, sodium chloride, urea and hydrochloric acid solutions in an animal model of cholestatic liver disease. *Physiology & Behavior*, *43*(1), 111-114.
- Dehkordi, O., Millis, R. M., Dennis, G. C., Jazini, E., Williams, C., Hussain, D., & Jayam-Trouth, A. (2007). Expression of alpha-7 and alpha-4 nicotinic acetylcholine receptors by GABAergic neurons of rostral ventral medulla and caudal pons. *Brain Research*, *1185*, 95-102. doi:10.1016/j.brainres.2007.09.027
- Dehkordi, O., Rose, J. E., Balan, K. V., Millis, R. M., Bhatti, B., & Jayam-Trouth, A. (2010). Co-expression of nAChRs and molecules of the bitter taste transduction pathway by epithelial cells of intrapulmonary airways. *Life Sciences*, *86*(7-8), 281-288. doi:10.1016/j.lfs.2009.12.016
- Deiss, V., & Baudoin, C. (1997). Hyposmia for butanol and vanillin in mutant staggerer male mice. *Physiology & Behavior*, *61*(2), 209-213.
- DeJoia, C., Moreaux, B., O'Connell, K., & Bessen, R. A. (2006). Prion infection of oral and nasal mucosa. *Journal of Virology*, *80*(9), 4546-4556. doi:10.1128/JVI.80.9.4546-4556.2006

- Del Cerro, M. C., Perez Izquierdo, M. A., Rosenblatt, J. S., Johnson, B. M., Pacheco, P., & Komisaruk, B. R. (1995). Brain 2-deoxyglucose levels related to maternal behavior-inducing stimuli in the rat. *Brain Research*, 696(1-2), 213-220.
- Del Punta, K., Leinders-Zufall, T., Rodriguez, I., Jukam, D., Wysocki, C. J., Ogawa, S., Zufall, F., et al. (2002). Deficient pheromone responses in mice lacking a cluster of vomeronasal receptor genes. *Nature*, 419(6902), 70-74. doi:10.1038/nature00955
- Del Rio, R., Moya, E. A., Koenig, C. S., Fujiwara, K., Alcayaga, J., & Iturriaga, R. (2008). Modulatory effects of histamine on cat carotid body chemoreception. *Respiratory Physiology & Neurobiology*, 164(3), 401-410. doi:10.1016/j.resp.2008.09.005
- Delay, R. J., & Roper, S. D. (1988). Ultrastructure of taste cells and synapses in the mudpuppy *Necturus maculosus*. *The Journal of Comparative Neurology*, 277(2), 268-280. doi:10.1002/cne.902770208
- Delgado, R., & Bacigalupo, J. (2004). Cilium-attached and excised patch-clamp recordings of odourant-activated Ca-dependent K channels from chemosensory cilia of olfactory receptor neurons. *The European Journal of Neuroscience*, 20(11), 2975-2980. doi:10.1111/j.1460-9568.2004.03778.x
- Delgado, R., Saavedra, M. V., Schmachtenberg, O., Sierralta, J., & Bacigalupo, J. (2003). Presence of Ca²⁺-dependent K⁺ channels in chemosensory cilia support a role in odor transduction. *Journal of Neurophysiology*, 90(3), 2022-2028. doi:10.1152/jn.01167.2002
- Delpiano, M. A., & Acker, H. (1985). Extracellular pH changes in the superfused cat carotid body during hypoxia and hypercapnia. *Brain Research*, 342(2), 273-280.
- Delpiano, M. A., & Acker, H. (1989). Hypoxic and hypercapnic responses of [Ca²⁺]_o and [K⁺]_o in the cat carotid body in vitro. *Brain Research*, 482(2), 235-246.
- Delpiano, M. A., & Hescheler, J. (1989). Evidence for a PO₂-sensitive K⁺ channel in the type-I cell of the rabbit carotid body. *FEBS Letters*, 249(2), 195-198.
- Demas, G. E., Williams, J. M., & Nelson, R. J. (1997). Amygdala but not hippocampal lesions impair olfactory memory for mate in prairie voles (*Microtus ochrogaster*). *The American Journal of Physiology*, 273(5 Pt 2), R1683-1689.
- Demski, L. S. (1993). Terminal nerve complex. *Acta Anatomica*, 148(2-3), 81-95.
- Demski, L. S., & Northcutt, R. G. (1983). The terminal nerve: a new chemosensory system in vertebrates? *Science (New York, N.Y.)*, 220(4595), 435-437.
- Denis-Donini, S. (1989). Expression of dopaminergic phenotypes in the mouse olfactory bulb induced by the calcitonin gene-related peptide. *Nature*, 339(6227), 701-703. doi:10.1038/339701a0
- Denton, J. S., McCann, F. V., & Leiter, J. C. (2007). CO₂ chemosensitivity in *Helix aspersa*: three potassium currents mediate pH-sensitive neuronal spike timing. *American Journal of Physiology. Cell Physiology*, 292(1), C292-304. doi:10.1152/ajpcell.00172.2006
- Derby, C. D. (2000). Learning from spiny lobsters about chemosensory coding of mixtures. *Physiology & Behavior*, 69(1-2), 203-209.
- Derby, C. D., & Ache, B. W. (1984). Quality coding of a complex odorant in an invertebrate. *Journal of Neurophysiology*, 51(5), 906-924.
- Derby, C. D., Hamilton, K. A., & Ache, B. W. (1984). Processing of olfactory information at three neuronal levels in the spiny lobster. *Brain Research*, 300(2), 311-319.
- Derby, C. D., & Steullet, P. (2001). Why do animals have so many receptors? The role of multiple chemosensors in animal perception. *The Biological Bulletin*, 200(2), 211-215.
- Derby, C. D. (2007). Escape by inking and secreting: marine molluscs avoid predators through a rich array of chemicals and mechanisms. *The Biological Bulletin*, 213(3), 274-289.
- Derby, C. D., Kicklighter, C. E., Johnson, P. M., & Zhang, X. (2007). Chemical composition of inks of diverse marine molluscs suggests convergent chemical defenses. *Journal of Chemical Ecology*, 33(5), 1105-1113. doi:10.1007/s10886-007-9279-0

- Derby, C. D., & Sorensen, P. W. (2008). Neural processing, perception, and behavioral responses to natural chemical stimuli by fish and crustaceans. *Journal of Chemical Ecology*, 34(7), 898-914. doi:10.1007/s10886-008-9489-0
- Desgranges, B., Bertrand, D., Sevelinges, Y., Yannick, S., Bonnefond, M., Mathilde, B., Lévy, F., et al. (2009). Critical role of insular cortex in taste but not odour aversion memory. *The European Journal of Neuroscience*, 29(8), 1654-1662. doi:10.1111/j.1460-9568.2009.06711.x
- Dethier, V. G. (1968). Chemosensory input and taste discrimination in the blowfly. *Science (New York, N.Y.)*, 161(839), 389-391.
- Dethier, V. G. (1990). Chemosensory physiology in an age of transition. *Annual Review of Neuroscience*, 13, 1-13. doi:10.1146/annurev.ne.13.030190.000245
- Dethier, V. G., & Crnjar, R. M. (1982). Candidate codes in the gustatory system of caterpillars. *The Journal of General Physiology*, 79(4), 549-569.
- Di Giulio, C., Di Muzio, M., Sabatino, G., Spoletini, L., Amicarelli, F., Di Ilio, C., & Modesti, A. (1998). Effect of chronic hyperoxia on young and old rat carotid body ultrastructure. *Experimental Gerontology*, 33(4), 319-329.
- Di Giulio, C., Grilli, A., De Lutiis, M. A., Di Natale, F., Sabatino, G., & Felaco, M. (1998). Does chronic hypoxia increase rat carotid body nitric oxide? *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology*, 120(2), 243-247.
- Di Giulio, C., Huang, W., Mokashi, A., & Lahiri, S. (1998). Further characterization of stimulus interaction of cat carotid chemoreceptors. *Journal of the Autonomic Nervous System*, 71(2-3), 196-200.
- Di Giulio, C., Huang, W. X., Lahiri, S., Mokashi, A., & Buerk, D. G. (1990). Cobalt stimulates carotid body chemoreceptors. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 68(5), 1844-1849.
- Di Giulio, C., Huang, W. X., Mokashi, A., Roy, A., Cacchio, M., Macri, M. A., & Lahiri, S. (2003). Sustained hypoxia promotes hyperactive response of carotid body in the cat. *Respiratory Physiology & Neurobiology*, 134(1), 69-74.
- Di Giulio, C., Mokashi, A., Huang, W. X., Morelli, L., & Data, P. G. (1993). Effects of inorganic calcium channel blockers on carotid chemosensory responses in the cat. *Advances in Experimental Medicine and Biology*, 337, 117-121.
- Dickens, J. C., Callahan, F. E., Wergin, W. P., Murphy, C. A., & Vogt, R. G. (1998a). Intergeneric distribution and immunolocalization of a putative odorant-binding protein in true bugs (Hemiptera, Heteroptera). *The Journal of Experimental Biology*, 201(Pt 1), 33-41.
- Dickens, J. C., Callahan, F. E., Wergin, W. P., Murphy, C. A., & Vogt, R. G. (1998b). Odorant-binding proteins of true bugs. Generic specificity, sexual dimorphism, and association with subsets of chemosensory sensilla. *Annals of the New York Academy of Sciences*, 855, 306-310.
- Dinger, B., Fidone, S. J., & Stensaas, F. J. (1984). Gustatory trophic action of arterial chemosensory neurones in the cat. *The Journal of Physiology*, 356, 49-64.
- Dinger, B., Fidone, S. J., & Stensaas, L. J. (1985). Regeneration of taste buds by nongustatory nerve fibers. *Experimental Neurology*, 89(1), 189-203.
- Dinger, B., Gonzalez, C., Yoshizaki, K., & Fidone, S. (1985). Localization and function of cat carotid body nicotinic receptors. *Brain Research*, 339(2), 295-304.
- Dinger, B., Stensaas, L., & Fidone, S. (1982). Cytospecific properties of arterial chemosensory neurons. *Brain Research*, 251(2), 353-356.
- Dinger, B., Stensaas, L. J., & Fidone, S. J. (1985). Cat carotid bodies reinnervated by normal or foreign nerves. *Brain Research*, 344(1), 21-32.
- Dinger, B. G., Almaraz, L., Hirano, T., Yoshizaki, K., Gonzalez, C., Gomez-Niño, A., & Fidone, S. J. (1991). Muscarinic receptor localization and function in rabbit carotid body. *Brain Research*, 562(2), 190-198.
- Dionne, V. E. (1992). Chemosensory responses in isolated olfactory receptor neurons from *Necturus*

- maculosus. *The Journal of General Physiology*, 99(3), 415-433.
- Docherty, R. J., & McQueen, D. S. (1978). Inhibitory action of dopamine on cat carotid chemoreceptors. *The Journal of Physiology*, 279, 425-436.
- Docherty, R. J., & McQueen, D. S. (1979). The effects of acetylcholine and dopamine on carotid chemosensory activity in the rabbit. *The Journal of Physiology*, 288, 411-423.
- Dominguez, H. D., Lopez, M. F., Chotro, M. G., & Molina, J. C. (1996). Perinatal responsiveness to alcohol's chemosensory cues as a function of prenatal alcohol administration during gestational days 17-20 in the rat. *Neurobiology of Learning and Memory*, 65(2), 103-112.
- Domínguez, H. D., Chotro, M. G., & Molina, J. C. (1993). Alcohol in the amniotic fluid prior to cesarean delivery: effects of subsequent exposure to the drug's odor upon alcohol responsiveness. *Behavioral and Neural Biology*, 60(2), 129-138.
- Domínguez, H. D., López, M. F., & Molina, J. C. (1998). Neonatal responsiveness to alcohol odor and infant alcohol intake as a function of alcohol experience during late gestation. *Alcohol (Fayetteville, N.Y.)*, 16(2), 109-117.
- Domínguez, H. D., López, M. F., & Molina, J. C. (1999). Interactions between perinatal and neonatal associative learning defined by contiguous olfactory and tactile stimulation. *Neurobiology of Learning and Memory*, 71(3), 272-288.
- Dong, X., Han, S., Zylka, M. J., Simon, M. I., & Anderson, D. J. (2001). A diverse family of GPCRs expressed in specific subsets of nociceptive sensory neurons. *Cell*, 106(5), 619-632.
- Donnell, D. M., & Strand, M. R. (2006). Caste-based differences in gene expression in the polyembryonic wasp *Copidosoma floridanum*. *Insect Biochemistry and Molecular Biology*, 36(2), 141-153. doi:10.1016/j.ibmb.2005.11.009
- Donnelly, D. F. (1999). K⁺ currents of glomus cells and chemosensory functions of carotid body. *Respiration Physiology*, 115(2), 151-160.
- Donoghue, S., Garcia, M., Jordan, D., & Spyer, K. M. (1982). Identification and brain-stem projections of aortic baroreceptor afferent neurones in nodose ganglia of cats and rabbits. *The Journal of Physiology*, 322, 337-352.
- Dousset, E., Decherchi, P., Grelot, L., & Jammes, Y. (2001). Effects of chronic hypoxemia on the afferent nerve activities from skeletal muscle. *American Journal of Respiratory and Critical Care Medicine*, 164(8 Pt 1), 1476-1480.
- Døving, K. B., & Trotier, D. (1998). Structure and function of the vomeronasal organ. *The Journal of Experimental Biology*, 201(Pt 21), 2913-2925.
- Drewes, C. D., & Bernard, R. A. (1976). Electrophysiological responses of chemosensitive sensilla in the wolf spider. *The Journal of Experimental Zoology*, 198(3), 423-435. doi:10.1002/jez.1401980317
- Dubin, A. E., Heald, N. L., Cleveland, B., Carlson, J. R., & Harris, G. L. (1995). Scutoid mutation of *Drosophila melanogaster* specifically decreases olfactory responses to short-chain acetate esters and ketones. *Journal of Neurobiology*, 28(2), 214-233. doi:10.1002/neu.480280208
- Dubreuil, V., Thoby-Brisson, M., Rallu, M., Persson, K., Pattyn, A., Birchmeier, C., Brunet, J., et al. (2009). Defective respiratory rhythmogenesis and loss of central chemosensitivity in Phox2b mutants targeting retrotrapezoid nucleus neurons. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 29(47), 14836-14846. doi:10.1523/JNEUROSCI.2623-09.2009
- Dubruille, R., Laurençon, A., Vandaele, C., Shishido, E., Coulon-Bublex, M., Swoboda, P., Couble, P., et al. (2002). *Drosophila* regulatory factor X is necessary for ciliated sensory neuron differentiation. *Development (Cambridge, England)*, 129(23), 5487-5498.
- Duda, T., & Sharma, R. K. (2008). ONE-GC membrane guanylate cyclase, a trimodal odorant signal transducer. *Biochemical and Biophysical Research Communications*, 367(2), 440-445. doi:10.1016/j.bbrc.2007.12.153

- Dudley, C. A., & Moss, R. L. (1999). Activation of an anatomically distinct subpopulation of accessory olfactory bulb neurons by chemosensory stimulation. *Neuroscience*, *91*(4), 1549-1556.
- Dudley, C. A., Rajendren, G., & Moss, R. L. (1996). Signal processing in the vomeronasal system: modulation of sexual behavior in the female rat. *Critical Reviews in Neurobiology*, *10*(3-4), 265-290.
- Duistermars, B. J., Chow, D. M., & Frye, M. A. (2009). Flies require bilateral sensory input to track odor gradients in flight. *Current Biology: CB*, *19*(15), 1301-1307. doi:10.1016/j.cub.2009.06.022
- Dulac, C., & Wagner, S. (2006). Genetic analysis of brain circuits underlying pheromone signaling. *Annual Review of Genetics*, *40*, 449-467. doi:10.1146/annurev.genet.39.073003.093937
- Dulka, J. G. (1993). Sex pheromone systems in goldfish: comparisons to vomeronasal systems in tetrapods. *Brain, Behavior and Evolution*, *42*(4-5), 265-280.
- Duve, H., & Thorpe, A. (1989). Distribution and functional significance of Met-enkephalin-Arg6-Phe7- and Met-enkephalin-Arg6-Gly7-Leu8-like peptides in the blowfly *Calliphora vomitoria*. I. Immunocytochemical mapping of neuronal pathways in the brain. *Cell and Tissue Research*, *258*(1), 147-161.
- Dwyer, N. D., Troemel, E. R., Sengupta, P., & Bargmann, C. I. (1998). Odorant receptor localization to olfactory cilia is mediated by ODR-4, a novel membrane-associated protein. *Cell*, *93*(3), 455-466.
- Eade, A. M., Sheehe, P. R., & Youngentob, S. L. (2010). Ontogeny of the enhanced fetal-ethanol-induced behavioral and neurophysiologic olfactory response to ethanol odor. *Alcoholism, Clinical and Experimental Research*, *34*(2), 206-213. doi:10.1111/j.1530-0277.2009.01083.x
- Edwards, D. A., & Davis, A. B. (1997). Deafferentation of the olfactory bulbs of male rats reduces erection to remote cues from females. *Physiology & Behavior*, *62*(1), 145-149.
- Edwards, D. A., Nahai, F. R., & Wright, P. (1993). Pathways linking the olfactory bulbs with the medial preoptic anterior hypothalamus are important for intermale aggression in mice. *Physiology & Behavior*, *53*(3), 611-615.
- Edwards, D. A., Walter, B., & Liang, P. (1996). Hypothalamic and olfactory control of sexual behavior and partner preference in male rats. *Physiology & Behavior*, *60*(5), 1347-1354.
- Eggert, F., Höller, C., Luszyk, D., Müller-Ruchholtz, W., & Ferstl, R. (1996). MHC-associated and MHC-independent urinary chemosignals in mice. *Physiology & Behavior*, *59*(1), 57-62.
- Eggert, F., Müller-Ruchholtz, W., & Ferstl, R. (1998). Olfactory cues associated with the major histocompatibility complex. *Genetica*, *104*(3), 191-197.
- Eisthen, H. L., Delay, R. J., Wirsig-Wiechmann, C. R., & Dionne, V. E. (2000). Neuromodulatory effects of gonadotropin releasing hormone on olfactory receptor neurons. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *20*(11), 3947-3955.
- Eisthen, H. L., & Isaacs, R. (2005). Integrative biology: sea hares saved by a delicious distraction. *Current Biology: CB*, *15*(6), R194-196. doi:10.1016/j.cub.2005.03.006
- Ejima, A., & Griffith, L. C. (2008). Courtship initiation is stimulated by acoustic signals in *Drosophila melanogaster*. *PloS One*, *3*(9), e3246. doi:10.1371/journal.pone.0003246
- Ekstrand, J. J., Domroese, M. E., Johnson, D. M., Feig, S. L., Knodel, S. M., Behan, M., & Haberly, L. B. (2001). A new subdivision of anterior piriform cortex and associated deep nucleus with novel features of interest for olfaction and epilepsy. *The Journal of Comparative Neurology*, *434*(3), 289-307.
- Ekström, P., Honkanen, T., & Ebbesson, S. O. (1988). FMRFamide-like immunoreactive neurons of the nervus terminalis of teleosts innervate both retina and pineal organ. *Brain Research*, *460*(1), 68-75.
- El-Sharaby, A., Ueda, K., & Wakisaka, S. (2001). Differentiation of the lingual and palatal gustatory epithelium of the rat as revealed by immunohistochemistry of alpha-gustducin. *Archives of*

Histology and Cytology, 64(4), 401-409.

- Elias, J. A., McBrayer, L. D., & Reilly, S. M. (2000). Prey transport kinematics in *Tupinambis teguixin* and *Varanus exanthematicus*: conservation of feeding behavior in 'chemosensory-tongued' lizards. *The Journal of Experimental Biology*, 203(Pt 4), 791-801.
- Elliott, A. S., Weiss, M. L., & Nunez, A. A. (1995). Direct retinal communication with the peri-amygdaloid area. *Neuroreport*, 6(5), 806-808.
- Elliott, E. J. (1986). Chemosensory stimuli in feeding behavior of the leech *Hirudo medicinalis*. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 159(3), 391-401.
- Elliott, E. J. (1987). Morphology of chemosensory organs required for feeding in the leech *Hirudo medicinalis*. *Journal of Morphology*, 192(2), 181-187. doi:10.1002/jmor.1051920208
- Elphick, M. R., Kemenes, G., Staras, K., & O'Shea, M. (1995). Behavioral role for nitric oxide in chemosensory activation of feeding in a mollusc. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 15(11), 7653-7664.
- Elsaesser, R., Montani, G., Tirindelli, R., & Paysan, J. (2005). Phosphatidyl-inositide signalling proteins in a novel class of sensory cells in the mammalian olfactory epithelium. *The European Journal of Neuroscience*, 21(10), 2692-2700. doi:10.1111/j.1460-9568.2005.04108.x
- Eltz, T., Ayasse, M., & Lunau, K. (2006). Species-specific antennal responses to tibial fragrances by male orchid bees. *Journal of Chemical Ecology*, 32(1), 71-79. doi:10.1007/s10886-006-9352-0
- Elwess, N. L., & Van Houten, J. L. (1997). Cloning and molecular analysis of the plasma membrane Ca(2+)-ATPase gene in *Paramecium tetraurelia*. *The Journal of Eukaryotic Microbiology*, 44(3), 250-257.
- Elzie, C. A., & Janetopoulos, C. (2009). FRAP analysis of chemosensory components of *Dictyostelium*. *Methods in Molecular Biology (Clifton, N.J.)*, 571, 349-369. doi:10.1007/978-1-60761-198-1_24
- Emery, D. G. (1976). Observations on the olfactory organ of adult and juvenile *Octopus joubini*. *Tissue & Cell*, 8(1), 33-46.
- Emery, D. G. (1992). Fine structure of olfactory epithelia of gastropod molluscs. *Microscopy Research and Technique*, 22(4), 307-324. doi:10.1002/jemt.1070220402
- Erickson, J. T., Conover, J. C., Borday, V., Champagnat, J., Barbacid, M., Yancopoulos, G., & Katz, D. M. (1996). Mice lacking brain-derived neurotrophic factor exhibit visceral sensory neuron losses distinct from mice lacking NT4 and display a severe developmental deficit in control of breathing. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 16(17), 5361-5371.
- Erlichman, J. S., & Leiter, J. C. (1997). Comparative aspects of central CO₂ chemoreception. *Respiration Physiology*, 110(2-3), 177-185.
- Erlichman, J. S., Boyer, A. C., Reagan, P., Putnam, R. W., Ritucci, N. A., & Leiter, J. C. (2009). Chemosensory responses to CO₂ in multiple brain stem nuclei determined using a voltage-sensitive dye in brain slices from rats. *Journal of Neurophysiology*, 102(3), 1577-1590. doi:10.1152/jn.00381.2009
- Erlichman, J. S., Cook, A., Schwab, M. C., Budd, T. W., & Leiter, J. C. (2004). Heterogeneous patterns of pH regulation in glial cells in the dorsal and ventral medulla. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 286(2), R289-302. doi:10.1152/ajpregu.00245.2003
- Erlichman, J. S., Hewitt, A., Damon, T. L., Hart, M., Kurasz, J., Li, A., & Leiter, J. C. (2008). Inhibition of monocarboxylate transporter 2 in the retrotrapezoid nucleus in rats: a test of the astrocyte-neuron lactate-shuttle hypothesis. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 28(19), 4888-4896. doi:10.1523/JNEUROSCI.5430-07.2008
- Erlichman, J. S., Putnam, R. W., & Leiter, J. C. (2008). Glial modulation of CO₂ chemosensory

- excitability in the retrotrapezoid nucleus of rodents. *Advances in Experimental Medicine and Biology*, 605, 317-321. doi:10.1007/978-0-387-73693-8_55
- Ernsberger, P., Kou, Y. R., & Prabhakar, N. R. (1998). Carotid body II-imidazoline receptors: binding, visualization and modulatory function. *Respiration Physiology*, 112(3), 239-251.
- Escalera, J., von Hehn, C. A., Bessac, B. F., Sivula, M., & Jordt, S. (2008). TRPA1 mediates the noxious effects of natural sesquiterpene deterrents. *The Journal of Biological Chemistry*, 283(35), 24136-24144. doi:10.1074/jbc.M710280200
- Estevez, A. O., Cowie, R. H., Gardner, K. L., & Estevez, M. (2006). Both insulin and calcium channel signaling are required for developmental regulation of serotonin synthesis in the chemosensory ADF neurons of *Caenorhabditis elegans*. *Developmental Biology*, 298(1), 32-44. doi:10.1016/j.ydbio.2006.06.005
- Estevez, M., Estevez, A. O., Cowie, R. H., & Gardner, K. L. (2004). The voltage-gated calcium channel UNC-2 is involved in stress-mediated regulation of tryptophan hydroxylase. *Journal of Neurochemistry*, 88(1), 102-113.
- Etgen, A. M., & Morales, J. C. (2002). Somatosensory stimuli evoke norepinephrine release in the anterior ventromedial hypothalamus of sexually receptive female rats. *Journal of Neuroendocrinology*, 14(3), 213-218.
- Eugenin, J., Larrain, C., & Zapata, P. (1990). Functional recovery of the ventilatory chemoreflexes after partial chronic denervation of the nucleus tractus solitarius. *Brain Research*, 523(2), 263-272.
- Eugenin, J., Larrain, C., & Zapata, P. (1989). Correlative contribution of carotid and aortic afferences to the ventilatory chemosensory drive in steady-state normoxia and to the ventilatory chemoreflexes induced by transient hypoxia. *Archivos De Biología Y Medicina Experimentales*, 22(4), 395-408.
- Eugenín, J., von Bernhardt, R., Muller, K. J., & Llona, I. (2006). Development and pH sensitivity of the respiratory rhythm of fetal mice in vitro. *Neuroscience*, 141(1), 223-231. doi:10.1016/j.neuroscience.2006.03.046
- Eugenín, J., & Nicholls, J. G. (1997). Chemosensory and cholinergic stimulation of fictive respiration in isolated CNS of neonatal opossum. *The Journal of Physiology*, 501 (Pt 2), 425-437.
- Eugenín, J., Otárola, M., Bravo, E., Coddou, C., Cerpa, V., Reyes-Parada, M., Llona, I., et al. (2008). Prenatal to early postnatal nicotine exposure impairs central chemoreception and modifies breathing pattern in mouse neonates: a probable link to sudden infant death syndrome. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 28(51), 13907-13917. doi:10.1523/JNEUROSCI.4441-08.2008
- Eyzaguirre, C., Leitner, L. M., Nishi, K., & Fidone, S. (1970). Depolarization of chemosensory nerve endings in carotid body of the cat. *Journal of Neurophysiology*, 33(5), 685-696.
- Eyzaguirre, C., & Zapata, P. (1968a). The release of acetylcholine from carotid body tissues. Further study on the effects of acetylcholine and cholinergic blocking agents on the chemosensory discharge. *The Journal of Physiology*, 195(3), 589-607.
- Eyzaguirre, C., & Zapata, P. (1968b). Pharmacology of pH effects on carotid body chemoreceptors in vitro. *The Journal of Physiology*, 195(3), 557-588.
- Faber, T., Joerges, J., & Menzel, R. (1999). Associative learning modifies neural representations of odors in the insect brain. *Nature Neuroscience*, 2(1), 74-78. doi:10.1038/4576
- Faff, L., Kowalewski, C., & Pokorski, M. (1999). Protein kinase C--a potential modifier of carotid body function. *Monaldi Archives for Chest Disease = Archivio Monaldi Per Le Malattie Del Torace / Fondazione Clinica Del Lavoro, IRCCS [and] Istituto Di Clinica Tisiologica E Malattie Apparato Respiratorio, Università Di Napoli, Secondo Ateneo*, 54(2), 172-177.
- Fahrenbach, W. H. (1977). The brain of the horseshoe crab (*Limulus polyphemus*). II. Architecture of the corpora pendunculata. *Tissue & Cell*, 9(1), 157-166.
- Fahrenbach, W. H. (1979). The brain of the horseshoe crab (*Limulus polyphemus*). III. Cellular and

- synaptic organization of the corpora pedunculata. *Tissue & Cell*, *11*(1), 163-200.
- Fanara, J. J., Robinson, K. O., Rollmann, S. M., Anholt, R. R. H., & Mackay, T. F. C. (2002). Vanaso is a candidate quantitative trait gene for *Drosophila* olfactory behavior. *Genetics*, *162*(3), 1321-1328.
- Farfán, C., Shigeno, S., Nödl, M., & de Couet, H. G. (2009). Developmental expression of apterous/Lhx2/9 in the sepiolid squid *Euprymna scolopes* supports an ancestral role in neural development. *Evolution & Development*, *11*(4), 354-362. doi:10.1111/j.1525-142X.2009.00342.x
- Farley, J., Grover, L. M., Sun, L., Huang, S. S., Eisthen, H. L., Girolami, C., & Wu, R. (1990). Chemosensory conditioning of *Hermissenda crassicornis*. *Behavioral Neuroscience*, *104*(4), 583-596.
- Farley, J., Reasoner, H., & Janssen, M. (1997). Potentiation of phototactic suppression in *Hermissenda* by a chemosensory stimulus during compound conditioning. *Behavioral Neuroscience*, *111*(2), 320-341.
- Farrell, B. E., Daniele, R. P., & Lauffenburger, D. A. (1990). Quantitative relationships between single-cell and cell-population model parameters for chemosensory migration responses of alveolar macrophages to C5a. *Cell Motility and the Cytoskeleton*, *16*(4), 279-293. doi:10.1002/cm.970160407
- Faumont, S., Miller, A. C., & Lockery, S. R. (2005). Chemosensory behavior of semi-restrained *Caenorhabditis elegans*. *Journal of Neurobiology*, *65*(2), 171-178. doi:10.1002/neu.20196
- Favier, R., Spielvogel, H., Caceres, E., Rodriguez, A., Sempore, B., Pequignot, J., & Pequignot, J. M. (1997). Differential effects of ventilatory stimulation by sex hormones and almitrine on hypoxic erythrocytosis. *Pflügers Archiv: European Journal of Physiology*, *434*(1), 97-103.
- Fearon, I. M., Zhang, M., Vollmer, C., & Nurse, C. A. (2003). GABA mediates autoreceptor feedback inhibition in the rat carotid body via presynaptic GABAB receptors and TASK-1. *The Journal of Physiology*, *553*(Pt 1), 83-94. doi:10.1113/jphysiol.2003.048298
- Fedotov, V. P. (2009a). [Systems of chemoperception in decapod crayfish]. *Zhurnal Evoliutsionnoï Biokhimmii I Fiziologii*, *45*(1), 3-24.
- Fedotov, V. P. (2009b). [Systems of chemoperception in decapod crayfish]. *Zhurnal Evoliutsionnoï Biokhimmii I Fiziologii*, *45*(1), 3-24.
- Felt, B. T., & Vande Berg, J. S. (1976). Ultrastructure of the blowfly chemoreceptor sensillum (*Phormia regina*). *Journal of Morphology*, *150*(3), 763-783. doi:10.1002/jmor.1051500308
- Fenchel, T., & Blackburn, N. (1999). Motile chemosensory behaviour of phagotrophic protists: mechanisms for and efficiency in congregating at food patches. *Protist*, *150*(3), 325-336.
- de Fernandes, F. F., Chiarini-Garcia, H., & Linardi, P. M. (2004). Scanning electron microscopy studies of sensilla and other structures of adult *Dermatobia hominis* (L. Jr., 1781) (Diptera: Cuterebridae). *Journal of Medical Entomology*, *41*(4), 552-560.
- Fernandez-Fewell, G. D., & Meredith, M. (1994). c-fos expression in vomeronasal pathways of mated or pheromone-stimulated male golden hamsters: contributions from vomeronasal sensory input and expression related to mating performance. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *14*(6), 3643-3654.
- Fernandez-Fewell, G. D., & Meredith, M. (1998). Olfactory contribution to Fos expression during mating in inexperienced male hamsters. *Chemical Senses*, *23*(3), 257-267.
- Fernández, R., Arriagada, I., Garrido, A., Larraín, C., & Zapata, P. (2003). Ventilatory chemosensory drive in cats, rats and guinea-pigs. *Advances in Experimental Medicine and Biology*, *536*, 489-495.
- Fernández, R., González, S., Rey, S., Cortés, P. P., Maisey, K. R., Reyes, E., Larraín, C., et al. (2008). Lipopolysaccharide-induced carotid body inflammation in cats: functional manifestations, histopathology and involvement of tumour necrosis factor-alpha. *Experimental Physiology*,

93(7), 892-907. doi:10.1113/expphysiol.2008.041152

- Fernández, V. M., Arenas, A., & Farina, W. M. (2009). Volatile exposure within the honeybee hive and its effect on olfactory discrimination. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 195(8), 759-768. doi:10.1007/s00359-009-0453-4
- Ferrell, F., & Dreith, A. Z. (1986). Calcium appetite, blood pressure and electrolytes in spontaneously hypertensive rats. *Physiology & Behavior*, 37(2), 337-343.
- Ferrer, R. P., & Zimmer, R. K. (2007a). The scent of danger: arginine as an olfactory cue of reduced predation risk. *The Journal of Experimental Biology*, 210(Pt 10), 1768-1775. doi:10.1242/jeb.001719
- Ferrer, R. P., & Zimmer, R. K. (2007b). Chemosensory reception, behavioral expression, and ecological interactions at multiple trophic levels. *The Journal of Experimental Biology*, 210(Pt 10), 1776-1785. doi:10.1242/jeb.001727
- Ferrer, R. P., & Zimmer, R. K. (2009). Chemical neuroecology and community dynamics. *Annals of the New York Academy of Sciences*, 1170, 450-455. doi:10.1111/j.1749-6632.2009.03908.x
- Ferrero, E. A., & Bedini, C. (1989). Chemoreception in Turbellaria. *Experimental Biology*, 48(3), 141-148.
- Fewell, G. D., & Meredith, M. (2002). Experience facilitates vomeronasal and olfactory influence on Fos expression in medial preoptic area during pheromone exposure or mating in male hamsters. *Brain Research*, 941(1-2), 91-106.
- Fiber, J. M., Adames, P., & Swann, J. M. (1993). Pheromones induce c-fos in limbic areas regulating male hamster mating behavior. *Neuroreport*, 4(7), 871-874.
- Fidone, S., Gonzalez, C., & Yoshizaki, K. (1982). Effects of low oxygen on the release of dopamine from the rabbit carotid body in vitro. *The Journal of Physiology*, 333, 93-110.
- Filiano, J. J. (1994). Arcuate nucleus hypoplasia in sudden infant death syndrome: a review. *Biology of the Neonate*, 65(3-4), 156-159.
- Filiano, J. J., Choi, J. C., & Kinney, H. C. (1990). Candidate cell populations for respiratory chemosensitive fields in the human infant medulla. *The Journal of Comparative Neurology*, 293(3), 448-465. doi:10.1002/cne.902930308
- Fillion, T. J., & Blass, E. M. (1986). Infantile experience with suckling odors determines adult sexual behavior in male rats. *Science (New York, N.Y.)*, 231(4739), 729-731.
- Finger, T. E. (1993). What's so special about special visceral? *Acta Anatomica*, 148(2-3), 132-138.
- Finger, T. E. (1997). Evolution of taste and solitary chemoreceptor cell systems. *Brain, Behavior and Evolution*, 50(4), 234-243.
- Finger, T. E. (2000). Ascending spinal systems in the fish, *Prionotus carolinus*. *The Journal of Comparative Neurology*, 422(1), 106-122.
- Finger, T. E., Böttger, B., Hansen, A., Anderson, K. T., Alimohammadi, H., & Silver, W. L. (2003). Solitary chemoreceptor cells in the nasal cavity serve as sentinels of respiration. *Proceedings of the National Academy of Sciences of the United States of America*, 100(15), 8981-8986. doi:10.1073/pnas.1531172100
- Finnegan, M. C., Pittman, S., & DeLorenzo, M. E. (2009). Lethal and sublethal toxicity of the antifoulant compound Irgarol 1051 to the mud snail *Ilyanassa obsoleta*. *Archives of Environmental Contamination and Toxicology*, 56(1), 85-95. doi:10.1007/s00244-008-9166-x
- Fitzgerald, R. S., Eyzaguirre, C., & Zapata, P. (2009). Fifty years of progress in carotid body physiology--invited article. *Advances in Experimental Medicine and Biology*, 648, 19-28. doi:10.1007/978-90-481-2259-2_2
- Fitzgerald, R. S., Shirahata, M., & Wang, H. Y. (1999). Acetylcholine release from cat carotid bodies. *Brain Research*, 841(1-2), 53-61.
- Fleischer, J., Mamasuew, K., & Breer, H. (2009). Expression of cGMP signaling elements in the Grueneberg ganglion. *Histochemistry and Cell Biology*, 131(1), 75-88. doi:10.1007/s00418-

008-0514-8

- Fleischer, J., Hass, N., Schwarzenbacher, K., Besser, S., & Breer, H. (2006). A novel population of neuronal cells expressing the olfactory marker protein (OMP) in the anterior/dorsal region of the nasal cavity. *Histochemistry and Cell Biology*, *125*(4), 337-349. doi:10.1007/s00418-005-0077-x
- Fleischer, J., Schwarzenbacher, K., Besser, S., Hass, N., & Breer, H. (2006). Olfactory receptors and signalling elements in the Grueneberg ganglion. *Journal of Neurochemistry*, *98*(2), 543-554. doi:10.1111/j.1471-4159.2006.03894.x
- Fleming, A. S., Gavarth, K., & Sarker, J. (1992). Effects of transections to the vomeronasal nerves or to the main olfactory bulbs on the initiation and long-term retention of maternal behavior in primiparous rats. *Behavioral and Neural Biology*, *57*(3), 177-188.
- Folgueira, M., Huesa, G., Anadón, R., & Yáñez, J. (2002). The nucleus subglomerulosus of the trout hypothalamus is a link between chemosensory and visual systems: a DiI study. *Brain Research Bulletin*, *57*(3-4), 427-430.
- Foltán, R., & Sedý, J. (2009). Behavioral changes of patients after orthognathic surgery develop on the basis of the loss of vomeronasal organ: a hypothesis. *Head & Face Medicine*, *5*, 5. doi:10.1186/1746-160X-5-5
- Forbes, A. A., Fisher, J., & Feder, J. L. (2005). Habitat avoidance: overlooking an important aspect of host-specific mating and sympatric speciation? *Evolution; International Journal of Organic Evolution*, *59*(7), 1552-1559.
- Forêt, S., Wanner, K. W., & Maleszka, R. (2007). Chemosensory proteins in the honey bee: Insights from the annotated genome, comparative analyses and expressional profiling. *Insect Biochemistry and Molecular Biology*, *37*(1), 19-28. doi:10.1016/j.ibmb.2006.09.009
- Forstner, M., Breer, H., & Krieger, J. (2009). A receptor and binding protein interplay in the detection of a distinct pheromone component in the silkmoth *Antheraea polyphemus*. *International Journal of Biological Sciences*, *5*(7), 745-757.
- Forstner, M., Gohl, T., Gondesén, I., Raming, K., Breer, H., & Krieger, J. (2008). Differential expression of SNMP-1 and SNMP-2 proteins in pheromone-sensitive hairs of moths. *Chemical Senses*, *33*(3), 291-299. doi:10.1093/chemse/bjm087
- Foster, W. A., & Hancock, R. G. (1994). Nectar-related olfactory and visual attractants for mosquitoes. *Journal of the American Mosquito Control Association*, *10*(2 Pt 2), 288-296.
- Frambach, I., & Schürmann, F. W. (2004). Separate distribution of deutocerebral projection neurons in the mushroom bodies of the cricket brain. *Acta Biologica Hungarica*, *55*(1-4), 21-29. doi:10.1556/ABiol.55.2004.1-4.4
- Frank, M. E. (1990). The school of dental medicine as a community resource. V. The Connecticut chemosensory clinical research center. *Journal - Connecticut State Dental Association*, *66*(1), 30-31.
- Frank, M. E., Lundy, R. F., & Contreras, R. J. (2008). Cracking taste codes by tapping into sensory neuron impulse traffic. *Progress in Neurobiology*, *86*(3), 245-263. doi:10.1016/j.pneurobio.2008.09.003
- Freitag, J., Beck, A., Ludwig, G., von Buchholtz, L., & Breer, H. (1999). On the origin of the olfactory receptor family: receptor genes of the jawless fish (*Lampetra fluviatilis*). *Gene*, *226*(2), 165-174.
- Freitas, T. C., & Arasu, P. (2005). Cloning and characterisation of genes encoding two transforming growth factor-beta-like ligands from the hookworm, *Ancylostoma caninum*. *International Journal for Parasitology*, *35*(14), 1477-1487. doi:10.1016/j.ijpara.2005.07.005
- Frings, S., & Lindemann, B. (1988). Odorant response of isolated olfactory receptor cells is blocked by amiloride. *The Journal of Membrane Biology*, *105*(3), 233-243.
- Frings, S., Reuter, D., & Kleene, S. J. (2000). Neuronal Ca²⁺-activated Cl⁻ channels--homing in on an

- elusive channel species. *Progress in Neurobiology*, 60(3), 247-289.
- Frøkjær-Jensen, C., Ailion, M., & Lockery, S. R. (2008). Ammonium-acetate is sensed by gustatory and olfactory neurons in *Caenorhabditis elegans*. *PloS One*, 3(6), e2467. doi:10.1371/journal.pone.0002467
- Fujii, M., Matsumoto, Y., Tanaka, N., Miki, K., Suzuki, T., Ishii, N., & Ayusawa, D. (2004). Mutations in chemosensory cilia cause resistance to paraquat in nematode *Caenorhabditis elegans*. *The Journal of Biological Chemistry*, 279(19), 20277-20282. doi:10.1074/jbc.M313119200
- Fujise, M., Izumi, S., Selleck, S. B., & Nakato, H. (2001). Regulation of dally, an integral membrane proteoglycan, and its function during adult sensory organ formation of *Drosophila*. *Developmental Biology*, 235(2), 433-448. doi:10.1006/dbio.2001.0290
- Fujishiro, N., Kijima, H., & Miyakawa, Y. (1990). Isolation and characterization of feeding behavior mutants in *Drosophila melanogaster*. *Behavior Genetics*, 20(3), 437-451.
- Fujita, I., Sorensen, P. W., Stacey, N. E., & Hara, T. J. (1991). The olfactory system, not the terminal nerve, functions as the primary chemosensory pathway mediating responses to sex pheromones in male goldfish. *Brain, Behavior and Evolution*, 38(6), 313-321.
- Fuss, S. H., Omura, M., & Mombaerts, P. (2005). The Grueneberg ganglion of the mouse projects axons to glomeruli in the olfactory bulb. *The European Journal of Neuroscience*, 22(10), 2649-2654. doi:10.1111/j.1460-9568.2005.04468.x
- Gaĭnutdinov, M. K., Iargunov, V. G., Krasnoperova, I. A., Varlamov, V. E., Kalinnikova, T. B., Loboda, V. I., Petrova, P. B., et al. (2000). [Coding of the chemosensory information by the nervous system in *Daphnia magna* and *Enchytraeus albidus* in the medium with high temperature]. *Zhurnal Evoliutsionnoi Biokhimii I Fiziologii*, 36(3), 214-218.
- Gaaboub, I., Schuppe, H., & Newland, P. L. (2005). Position-dependent sensitivity and density of taste receptors on the locust leg underlies behavioural effectiveness of chemosensory stimulation. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 191(3), 281-289. doi:10.1007/s00359-004-0582-8
- Gaffin, D. D., & Brownell, P. H. (1997a). Response properties of chemosensory peg sensilla on the pectines of scorpions. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 181(3), 291-300.
- Gaffin, D. D., & Brownell, P. H. (1997b). Electrophysiological evidence of synaptic interactions within chemosensory sensilla of scorpion pectines. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 181(3), 301-307.
- Gaikwad, A., Biju, K. C., Saha, S. G., & Subhedar, N. (2004). Neuropeptide Y in the olfactory system, forebrain and pituitary of the teleost, *Clarias batrachus*. *Journal of Chemical Neuroanatomy*, 27(1), 55-70. doi:10.1016/j.jchemneu.2003.11.002
- Gailey, D. A., Lacaillade, R. C., & Hall, J. C. (1986). Chemosensory elements of courtship in normal and mutant, olfaction-deficient *Drosophila melanogaster*. *Behavior Genetics*, 16(3), 375-405.
- Gaino, E., & Reborá, M. (1999). Larval antennal sensilla in water-living insects. *Microscopy Research and Technique*, 47(6), 440-457. doi:10.1002/(SICI)1097-0029(19991215)47:6<440::AID-JEMT7>3.0.CO;2-O
- Gardiner, A., Barker, D., Butlin, R. K., Jordan, W. C., & Ritchie, M. G. (2008). Evolution of a complex locus: exon gain, loss and divergence at the Gr39a locus in *Drosophila*. *PloS One*, 3(1), e1513. doi:10.1371/journal.pone.0001513
- Garm, A., Hallberg, E., & Høeg, J. T. (2003). Role of maxilla 2 and its setae during feeding in the shrimp *Palaemon adspersus* (Crustacea: Decapoda). *The Biological Bulletin*, 204(2), 126-137.
- Garm, A., & Høeg, J. T. (2006). Ultrastructure and functional organization of mouthpart sensory setae of the spiny lobster *Panulirus argus*: new features of putative mechanoreceptors. *Journal of Morphology*, 267(4), 464-476. doi:10.1002/jmor.10417
- Gautier, P., Ledent, V., Massaer, M., Dambly-Chaudière, C., & Ghysen, A. (1997). tap, a *Drosophila*

- bHLH gene expressed in chemosensory organs. *Gene*, 191(1), 15-21.
- Gaykema, R. P. A., Balachandran, M. K., Godbout, J. P., Johnson, R. W., & Goehler, L. E. (2007). Enhanced neuronal activation in central autonomic network nuclei in aged mice following acute peripheral immune challenge. *Autonomic Neuroscience: Basic & Clinical*, 131(1-2), 137-142. doi:10.1016/j.autneu.2006.07.005
- Gdovin, M. J., Jackson, V. V., Zamora, D. A., & Leiter, J. C. (2006). Effect of prevention of lung inflation on metamorphosis and respiration in the developing bullfrog tadpole, *Rana catesbeiana*. *Journal of Experimental Zoology. Part A, Comparative Experimental Biology*, 305(4), 335-347. doi:10.1002/jez.a.266
- Gelperin, A. (2008). Neural computations with mammalian infochemicals. *Journal of Chemical Ecology*, 34(7), 928-942. doi:10.1007/s10886-008-9483-6
- Gelperin, A., Chang, J. J., & Reingold, S. C. (1978). Feeding motor program in *Limax*. I. Neuromuscular correlates and control by chemosensory input. *Journal of Neurobiology*, 9(4), 285-300. doi:10.1002/neu.480090405
- Gendre, N., Lürer, K., Friche, S., Grillenzoni, N., Ramaekers, A., Technau, G. M., & Stocker, R. F. (2004). Integration of complex larval chemosensory organs into the adult nervous system of *Drosophila*. *Development (Cambridge, England)*, 131(1), 83-92. doi:10.1242/dev.00879
- Gerber, B., Stocker, R. F., Tanimura, T., & Thum, A. S. (2009). Smelling, tasting, learning: *Drosophila* as a study case. *Results and Problems in Cell Differentiation*, 47, 139-185. doi:10.1007/400_2008_9
- Gerber, B., & Stocker, R. F. (2007). The *Drosophila* larva as a model for studying chemosensation and chemosensory learning: a review. *Chemical Senses*, 32(1), 65-89. doi:10.1093/chemse/bjl030
- Germanà, A., Montalbano, G., de Carlos, F., Levanti, M. B., Abbate, F., Vega, J. A., & Ciriaco, E. (2006). Epidermal growth factor (EGF) expression in lateral line system and in taste buds of adult zebrafish (*Brachidanio rerio*). *Neuroscience Letters*, 397(3), 210-213. doi:10.1016/j.neulet.2005.12.015
- Germanà, A., Paruta, S., Germanà, G. P., Ochoa-Erena, F. J., Montalbano, G., Cobo, J., & Vega, J. A. (2007). Differential distribution of S100 protein and calretinin in mechanosensory and chemosensory cells of adult zebrafish (*Danio rerio*). *Brain Research*, 1162, 48-55. doi:10.1016/j.brainres.2007.05.070
- Gestreau, C., Heitzmann, D., Thomas, J., Dubreuil, V., Bandulik, S., Reichold, M., Bendahhou, S., et al. (2010). Task2 potassium channels set central respiratory CO₂ and O₂ sensitivity. *Proceedings of the National Academy of Sciences of the United States of America*, 107(5), 2325-2330. doi:10.1073/pnas.0910059107
- Getchell, T. V., Peng, X., Green, C. P., Stromberg, A. J., Chen, K., Mattson, M. P., & Getchell, M. L. (2004). In silico analysis of gene expression profiles in the olfactory mucosae of aging senescence-accelerated mice. *Journal of Neuroscience Research*, 77(3), 430-452. doi:10.1002/jnr.20157
- Getchell, T. V., Peng, X., Stromberg, A. J., Chen, K., Paul Green, C., Subhedar, N. K., Shah, D. S., et al. (2003). Age-related trends in gene expression in the chemosensory-nasal mucosae of senescence-accelerated mice. *Ageing Research Reviews*, 2(2), 211-243.
- Ghiaroni, V., Fieni, F., Tirindelli, R., Pietra, P., & Bigiani, A. (2003). Ion conductances in supporting cells isolated from the mouse vomeronasal organ. *Journal of Neurophysiology*, 89(1), 118-127. doi:10.1152/jn.00545.2002
- Giannetti, N., Pellier, V., Oestreicher, A. B., & Astic, L. (1995). Immunocytochemical study of the differentiation process of the septal organ of Maserà in developing rats. *Brain Research. Developmental Brain Research*, 84(2), 287-293.
- Gifford, C. A., Assiri, A. M., Satterfield, M. C., Spencer, T. E., & Ott, T. L. (2008). Receptor transporter protein 4 (RTP4) in endometrium, ovary, and peripheral blood leukocytes of pregnant and

- cyclic ewes. *Biology of Reproduction*, 79(3), 518-524. doi:10.1095/biolreprod.108.069468
- Gilad, Y., & Lancet, D. (2003). Population differences in the human functional olfactory repertoire. *Molecular Biology and Evolution*, 20(3), 307-314.
- Gilad, Y., Man, O., Pääbo, S., & Lancet, D. (2003). Human specific loss of olfactory receptor genes. *Proceedings of the National Academy of Sciences of the United States of America*, 100(6), 3324-3327. doi:10.1073/pnas.0535697100
- Gilbert, M. E. (2001). Does the kindling model of epilepsy contribute to our understanding of multiple chemical sensitivity? *Annals of the New York Academy of Sciences*, 933, 68-91.
- Gilbertson, T. A., Fontenot, D. T., Liu, L., Zhang, H., & Monroe, W. T. (1997). Fatty acid modulation of K⁺ channels in taste receptor cells: gustatory cues for dietary fat. *The American Journal of Physiology*, 272(4 Pt 1), C1203-1210.
- Gilbertson, T. A., Liu, L., Kim, I., Burks, C. A., & Hansen, D. R. (2005). Fatty acid responses in taste cells from obesity-prone and -resistant rats. *Physiology & Behavior*, 86(5), 681-690. doi:10.1016/j.physbeh.2005.08.057
- Gill, C. J., Wersinger, S. R., Veney, S. L., & Rissman, E. F. (1998). Induction of fos-like immunoreactivity in musk shrews after mating. *Brain Research*, 811(1-2), 21-28.
- Gillette, M. L. (1984). Stimulation of chemosensory pathways and intracellular alkalization mimic cAMP activation of endogenous bursting in feeding command neurones. *The Journal of Experimental Biology*, 111, 239-245.
- Gillette, R. (1983). Intracellular alkalization potentiates slow inward current and prolonged bursting in a molluscan neuron. *Journal of Neurophysiology*, 49(2), 509-515.
- Gimelbrant, A. A., Haley, S. L., & McClintock, T. S. (2001). Olfactory receptor trafficking involves conserved regulatory steps. *The Journal of Biological Chemistry*, 276(10), 7285-7290. doi:10.1074/jbc.M005433200
- Gimelbrant, A. A., & Chess, A. (2006). An epigenetic state associated with areas of gene duplication. *Genome Research*, 16(6), 723-729. doi:10.1101/gr.5023706
- Gimelbrant, A. A., Ensminger, A. W., Qi, P., Zucker, J., & Chess, A. (2005). Monoallelic expression and asynchronous replication of p120 catenin in mouse and human cells. *The Journal of Biological Chemistry*, 280(2), 1354-1359. doi:10.1074/jbc.M411283200
- Gleeson, R. A., & Ache, B. W. (1985). Amino acid suppression of taurine-sensitive chemosensory neurons. *Brain Research*, 335(1), 99-107.
- Glendinning, J. I. (1996). Is chemosensory input essential for the rapid rejection of toxic foods? *The Journal of Experimental Biology*, 199(Pt 7), 1523-1534.
- Glendinning, J. I., Brown, H., Capoor, M., Davis, A., Gbedemah, A., & Long, E. (2001). A peripheral mechanism for behavioral adaptation to specific "bitter" taste stimuli in an insect. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 21(10), 3688-3696.
- Glendinning, J. I., Valcic, S., & Timmermann, B. N. (1998). Maxillary palps can mediate taste rejection of plant allelochemicals by caterpillars. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 183(1), 35-43.
- Glendinning, J. I. (2007). How do predators cope with chemically defended foods? *The Biological Bulletin*, 213(3), 252-266.
- Goehler, L. E., Gaykema, R. P., Hansen, M. K., Anderson, K., Maier, S. F., & Watkins, L. R. (2000). Vagal immune-to-brain communication: a visceral chemosensory pathway. *Autonomic Neuroscience: Basic & Clinical*, 85(1-3), 49-59.
- Goel, N., & Lee, T. M. (1997). Olfactory bulbectomy impedes social but not photic reentrainment of circadian rhythms in female *Octodon degus*. *Journal of Biological Rhythms*, 12(4), 362-370.
- Goldman, J. A., & Koehl, M. A. (2001). Fluid dynamic design of lobster olfactory organs: high speed kinematic analysis of antennule flicking by *Panulirus argus*. *Chemical Senses*, 26(4), 385-398.
- Goldstein, J., Hoff, K., & Hillyard, S. D. (2003). Comparison of dehydration and angiotensin II-

- stimulated cutaneous drinking in toads, *Bufo punctatus*. *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology*, 136(3), 557-563.
- Gomez, D. M., & Newman, S. W. (1991). Medial nucleus of the amygdala in the adult Syrian hamster: a quantitative Golgi analysis of gonadal hormonal regulation of neuronal morphology. *The Anatomical Record*, 231(4), 498-509. doi:10.1002/ar.1092310412
- Gomez, D. M., & Newman, S. W. (1992). Differential projections of the anterior and posterior regions of the medial amygdaloid nucleus in the Syrian hamster. *The Journal of Comparative Neurology*, 317(2), 195-218. doi:10.1002/cne.903170208
- Gomulski, L. M., Dimopoulos, G., Xi, Z., Soares, M. B., Bonaldo, M. F., Malacrida, A. R., & Gasperi, G. (2008). Gene discovery in an invasive tephritid model pest species, the Mediterranean fruit fly, *Ceratitis capitata*. *BMC Genomics*, 9, 243. doi:10.1186/1471-2164-9-243
- Gong, D., Zhang, H., Zhao, P., Xia, Q., & Xiang, Z. (2009). The odorant binding protein gene family from the genome of silkworm, *Bombyx mori*. *BMC Genomics*, 10, 332. doi:10.1186/1471-2164-10-332
- González, D., Zhao, Q., McMahan, C., Velasquez, D., Haskins, W. E., Sponsel, V., Cassill, A., et al. (2009). The major antennal chemosensory protein of red imported fire ant workers. *Insect Molecular Biology*, 18(3), 395-404. doi:10.1111/j.1365-2583.2009.00883.x
- González-Forero, D., Portillo, F., Sunico, C. R., & Moreno-López, B. (2004). Nerve injury reduces responses of hypoglossal motoneurons to baseline and chemoreceptor-modulated inspiratory drive in the adult rat. *The Journal of Physiology*, 557(Pt 3), 991-1011. doi:10.1113/jphysiol.2003.059972
- Gottfried, J. A. (2006). Smell: central nervous processing. *Advances in Oto-Rhino-Laryngology*, 63, 44-69. doi:10.1159/000093750
- Gottfried, J. A. (2007). What can an orbitofrontal cortex-endowed animal do with smells? *Annals of the New York Academy of Sciences*, 1121, 102-120. doi:10.1196/annals.1401.018
- Gourine, A. V. (2005). On the peripheral and central chemoreception and control of breathing: an emerging role of ATP. *The Journal of Physiology*, 568(Pt 3), 715-724. doi:10.1113/jphysiol.2005.095968
- Gourine, A. V., Dale, N., & Spyer, K. M. (2004). Chemosensory control of the respiratory function. Working towards understanding the role of ATP-mediated purinergic signalling. *Advances in Experimental Medicine and Biology*, 551, 31-38.
- Gourine, A. V., Llaudet, E., Dale, N., & Spyer, K. M. (2005). ATP is a mediator of chemosensory transduction in the central nervous system. *Nature*, 436(7047), 108-111. doi:10.1038/nature03690
- Gourine, A. V., Wood, J. D., & Burnstock, G. (2009). Purinergic signalling in autonomic control. *Trends in Neurosciences*, 32(5), 241-248. doi:10.1016/j.tins.2009.03.002
- Govek, E. K., & Swann, J. M. (2007). Stereological sex difference during development of the magnocellular subdivision of the medial preoptic nucleus (MPN mag). *Brain Research*, 1145, 90-96. doi:10.1016/j.brainres.2007.01.115
- Govorunova, E. G., & Sineshchekov, O. A. (2005). Chemotaxis in the green flagellate alga *Chlamydomonas*. *Biochemistry. Biokhimiia*, 70(7), 717-725.
- Govorunova, E. G., & Sineshchekov, O. A. (2003). Integration of photo- and chemosensory signaling pathways in *Chlamydomonas*. *Planta*, 216(3), 535-540. doi:10.1007/s00425-002-0901-7
- Govorunova, E. G., Voytsekh, O. O., & Sineshchekov, O. A. (2007). Changes in photoreceptor currents and their sensitivity to the chemoeffector tryptone during gamete mating in *Chlamydomonas reinhardtii*. *Planta*, 225(2), 441-449. doi:10.1007/s00425-006-0357-2
- Grassman, M. (1993). Chemosensory orientation behavior in juvenile sea turtles. *Brain, Behavior and Evolution*, 41(3-5), 224-228.
- Graves, B. M., Halpern, M., & Friesen, J. L. (1991). Snake aggregation pheromones: source and

- chemosensory mediation in western ribbon snakes (*Thamnophis proximus*). *Journal of Comparative Psychology (Washington, D.C.: 1983)*, 105(2), 140-144.
- Graziadei, P. P., & Gagne, H. T. (1976). Sensory innervation in the rim of the octopus sucker. *Journal of Morphology*, 150(3), 639-679. doi:10.1002/jmor.1051500304
- Greenberg, N. (1993). Central and endocrine aspects of tongue-flicking and exploratory behavior in *Anolis carolinensis*. *Brain, Behavior and Evolution*, 41(3-5), 210-218.
- Greene, G. J., & Kippen, H. M. (2002). The vomeronasal organ and chemical sensitivity: a hypothesis. *Environmental Health Perspectives*, 110 Suppl 4, 655-661.
- Griffith, L. C., & Ejima, A. (2009a). Multimodal sensory integration of courtship stimulating cues in *Drosophila melanogaster*. *Annals of the New York Academy of Sciences*, 1170, 394-398. doi:10.1111/j.1749-6632.2009.04367.x
- Griffith, L. C., & Ejima, A. (2009b). Multimodal sensory integration of courtship stimulating cues in *Drosophila melanogaster*. *Annals of the New York Academy of Sciences*, 1170, 394-398. doi:10.1111/j.1749-6632.2009.04367.x
- Grillenzoni, N., de Vaux, V., Meuwly, J., Vuichard, S., Jarman, A., Holohan, E., Gendre, N., et al. (2007). Role of proneural genes in the formation of the larval olfactory organ of *Drosophila*. *Development Genes and Evolution*, 217(3), 209-219. doi:10.1007/s00427-007-0135-6
- Groome, J. R., & Vaughan, D. K. (1996). Glutamate as a transmitter in the sensory pathway from prostomial lip to serotonergic Retzius neurons in the medicinal leech *Hirudo*. *Invertebrate Neuroscience: IN*, 2(2), 121-128.
- Grosjean, Y., Grillet, M., Augustin, H., Ferveur, J., & Featherstone, D. E. (2008). A glial amino-acid transporter controls synapse strength and courtship in *Drosophila*. *Nature Neuroscience*, 11(1), 54-61. doi:10.1038/nn2019
- Gruninger, T. R., Gualberto, D. G., & Garcia, L. R. (2008). Sensory perception of food and insulin-like signals influence seizure susceptibility. *PLoS Genetics*, 4(7), e1000117. doi:10.1371/journal.pgen.1000117
- Grus, W. E., & Zhang, J. (2006). Origin and evolution of the vertebrate vomeronasal system viewed through system-specific genes. *BioEssays: News and Reviews in Molecular, Cellular and Developmental Biology*, 28(7), 709-718. doi:10.1002/bies.20432
- Grus, W. E., & Zhang, J. (2009). Origin of the genetic components of the vomeronasal system in the common ancestor of all extant vertebrates. *Molecular Biology and Evolution*, 26(2), 407-419. doi:10.1093/molbev/msn262
- Gu, J., Dudley, C., Su, T., Spink, D. C., Zhang, Q. Y., Moss, R. L., & Ding, X. (1999). Cytochrome P450 and steroid hydroxylase activity in mouse olfactory and vomeronasal mucosa. *Biochemical and Biophysical Research Communications*, 266(1), 262-267. doi:10.1006/bbrc.1999.1807
- Guarna, M. M., & Borowsky, R. L. (1993). Genetically controlled food preference: biochemical mechanisms. *Proceedings of the National Academy of Sciences of the United States of America*, 90(11), 5257-5261.
- Gulbransen, B., Silver, W., & Finger, T. E. (2008). Solitary chemoreceptor cell survival is independent of intact trigeminal innervation. *The Journal of Comparative Neurology*, 508(1), 62-71. doi:10.1002/cne.21657
- Gulbransen, B. D., Clapp, T. R., Finger, T. E., & Kinnamon, S. C. (2008). Nasal solitary chemoreceptor cell responses to bitter and trigeminal stimulants in vitro. *Journal of Neurophysiology*, 99(6), 2929-2937. doi:10.1152/jn.00066.2008
- Guyenet, P. G. (2008). The 2008 Carl Ludwig Lecture: retrotrapezoid nucleus, CO₂ homeostasis, and breathing automaticity. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 105(2), 404-416. doi:10.1152/jappphysiol.90452.2008
- Hadeishi, Y., & Wood, R. I. (1996). Nitric oxide synthase in mating behavior circuitry of male Syrian

- hamster brain. *Journal of Neurobiology*, 30(4), 480-492. doi:10.1002/(SICI)1097-4695(199608)30:4<480::AID-NEU4>3.0.CO;2-#
- Hagendorf, S., Fluegge, D., Engelhardt, C., & Spehr, M. (2009). Homeostatic control of sensory output in basal vomeronasal neurons: activity-dependent expression of ether-à-go-go-related gene potassium channels. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 29(1), 206-221. doi:10.1523/JNEUROSCI.3656-08.2009
- Hairston, J. E., Ball, G. F., & Nelson, R. J. (2003). Photoperiodic and temporal influences on chemosensory induction of brain fos expression in female prairie voles. *Journal of Neuroendocrinology*, 15(2), 161-172.
- Hallem, E. A., Rengarajan, M., Ciche, T. A., & Sternberg, P. W. (2007). Nematodes, bacteria, and flies: a tripartite model for nematode parasitism. *Current Biology: CB*, 17(10), 898-904. doi:10.1016/j.cub.2007.04.027
- Hallock, R. M., Tatangelo, M., Barrows, J., & Finger, T. E. (2009). Residual chemosensory capabilities in double P2X2/P2X3 purinergic receptor null mice: intraoral or postingestive detection? *Chemical Senses*, 34(9), 799-808. doi:10.1093/chemse/bjp069
- Halpern, B. P. (1982). Environmental factors affecting chemoreceptors: an overview. *Environmental Health Perspectives*, 44, 101-105.
- Halpern, B. P. (1983). Tasting and smelling as active, exploratory sensory processes. *American Journal of Otolaryngology*, 4(4), 246-249.
- Hamilton, K. A., & Case, J. F. (1983). Effects of abrasion and Na⁺ on dactyl-mediated chemoreception in mature kelp crabs, *Pugettia producta* (Randall). *The Journal of Experimental Zoology*, 226(3), 363-372. doi:10.1002/jez.1402260305
- Hamner, P., & Hamner, W. M. (1977). Chemosensory tracking of scent trails by the planktonic shrimp *Acetes sibogae australis*. *Science (New York, N.Y.)*, 195(4281), 886-888.
- Han, F., & Strohl, K. P. (2000). Inheritance of ventilatory behavior in rodent models. *Respiration Physiology*, 121(2-3), 247-256.
- Hansen, A. (2007). Olfactory and solitary chemosensory cells: two different chemosensory systems in the nasal cavity of the American alligator, *Alligator mississippiensis*. *BMC Neuroscience*, 8, 64. doi:10.1186/1471-2202-8-64
- Hansen, A., & Finger, T. E. (2008a). Is TrpM5 a reliable marker for chemosensory cells? Multiple types of microvillous cells in the main olfactory epithelium of mice. *BMC Neuroscience*, 9, 115. doi:10.1186/1471-2202-9-115
- Hansen, A., & Finger, T. E. (2008b). Is TrpM5 a reliable marker for chemosensory cells? Multiple types of microvillous cells in the main olfactory epithelium of mice. *BMC Neuroscience*, 9, 115. doi:10.1186/1471-2202-9-115
- Hansen, A., Reutter, K., & Zeiske, E. (2002). Taste bud development in the zebrafish, *Danio rerio*. *Developmental Dynamics: An Official Publication of the American Association of Anatomists*, 223(4), 483-496. doi:10.1002/dvdy.10074
- Hansen, J. T. (1978). Development of type I cells of the rabbit subclavian glomera (aortic bodies): a light, fluorescence and electron microscopic study. *The American Journal of Anatomy*, 153(1), 15-31. doi:10.1002/aja.1001530103
- Hanson, G., Jones, L., & Fidone, S. (1986). Physiological chemoreceptor stimulation decreases enkephalin and substance P in the carotid body. *Peptides*, 7(5), 767-769.
- Hara, T. J. (1994). Olfaction and gustation in fish: an overview. *Acta Physiologica Scandinavica*, 152(2), 207-217.
- Harrison, T. A. (2001). Chorda tympani nerve stimulation evokes Fos expression in regionally limited neuron populations within the gustatory nucleus of the solitary tract. *Brain Research*, 904(1), 54-66.
- Hart, B. L. (1987). Roles of the olfactory and vomeronasal systems in behavior. *The Veterinary Clinics*

- of North America. *Food Animal Practice*, 3(2), 463-475.
- Hart, B. L., Hart, L. A., & Maina, J. N. (1988). Alteration in vomeronasal system anatomy in alcelaphine antelopes: correlation with alteration in chemosensory investigation. *Physiology & Behavior*, 42(2), 155-162.
- Hart, B. L., & Leedy, M. G. (1985). Analysis of the catnip reaction: mediation by olfactory system, not vomeronasal organ. *Behavioral and Neural Biology*, 44(1), 38-46.
- Hartenstein, V., & Posakony, J. W. (1989). Development of adult sensilla on the wing and notum of *Drosophila melanogaster*. *Development (Cambridge, England)*, 107(2), 389-405.
- Hartz, A. J., Sherr, B. F., & Sherr, E. B. (2008). Using inhibitors to investigate the involvement of cell signaling in predation by marine phagotrophic protists. *The Journal of Eukaryotic Microbiology*, 55(1), 18-21. doi:10.1111/j.1550-7408.2007.00297.x
- Hashiguchi, Y., Furuta, Y., & Nishida, M. (2008). Evolutionary patterns and selective pressures of odorant/pheromone receptor gene families in teleost fishes. *PloS One*, 3(12), e4083. doi:10.1371/journal.pone.0004083
- Hashiguchi, Y., & Nishida, M. (2007). Evolution of trace amine associated receptor (TAAR) gene family in vertebrates: lineage-specific expansions and degradations of a second class of vertebrate chemosensory receptors expressed in the olfactory epithelium. *Molecular Biology and Evolution*, 24(9), 2099-2107. doi:10.1093/molbev/msm140
- Hass, N., Schwarzenbacher, K., & Breer, H. (2007). A cluster of gustducin-expressing cells in the mouse stomach associated with two distinct populations of enteroendocrine cells. *Histochemistry and Cell Biology*, 128(5), 457-471. doi:10.1007/s00418-007-0325-3
- Haszprunar, G., Friedrich, S., Wanninger, A., & Ruthensteiner, B. (2002). Fine structure and immunocytochemistry of a new chemosensory system in the Chiton larva (Mollusca: Polyplacophora). *Journal of Morphology*, 251(2), 210-218. doi:10.1002/jmor.1084
- Hauser, D. C., Levandowsky, M., & Glassgold, J. M. (1975). Ultrasensitive chemosensory responses by a protozoan to epinephrine and other neurochemicals. *Science (New York, N.Y.)*, 190(4211), 285-286.
- Havens, M. D., & Rose, J. D. (1992). Investigation of familiar and novel chemosensory stimuli by golden hamsters: effects of castration and testosterone replacement. *Hormones and Behavior*, 26(4), 505-511.
- Hawkes, J. W. (1980). The effects of xenobiotics on fish tissues: morphological studies. *Federation Proceedings*, 39(14), 3230-3236.
- Haxhiu, M. A., Dreshaj, I. A., Erokwu, B., Collins, L. A., & Ernsberger, P. (1995). Effect of I1-imidazoline receptor activation on responses of hypoglossal and phrenic nerve to chemical stimulation. *Annals of the New York Academy of Sciences*, 763, 445-462.
- Haxhiu, M. A., Tolentino-Silva, F., Pete, G., Kc, P., & Mack, S. O. (2001). Monoaminergic neurons, chemosensation and arousal. *Respiration Physiology*, 129(1-2), 191-209.
- Haxhiu, M. A., Kc, P., Moore, C. T., Acquah, S. S., Wilson, C. G., Zaidi, S. I., Massari, V. J., et al. (2005). Brain stem excitatory and inhibitory signaling pathways regulating bronchoconstrictive responses. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 98(6), 1961-1982. doi:10.1152/jappphysiol.01340.2004
- Hayashida, Y., Koyano, H., & Eyzaguirre, C. (1980). An intracellular study of chemosensory fibers and endings. *Journal of Neurophysiology*, 44(6), 1077-1088.
- He, L., Chen, J., Dinger, B., Stensaas, L., & Fidone, S. (2006). Effect of chronic hypoxia on purinergic synaptic transmission in rat carotid body. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 100(1), 157-162. doi:10.1152/jappphysiol.00859.2005
- He, L., Dinger, B., & Fidone, S. (2000). Cellular mechanisms involved in carotid body inhibition produced by atrial natriuretic peptide. *American Journal of Physiology. Cell Physiology*, 278(4), C845-852.

- He, L., Dinger, B., & Fidone, S. (2005). Effect of chronic hypoxia on cholinergic chemotransmission in rat carotid body. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 98(2), 614-619. doi:10.1152/jappphysiol.00714.2004
- Head, M. L., Keogh, J. S., & Doughty, P. (2002). Experimental evidence of an age-specific shift in chemical detection of predators in a lizard. *Journal of Chemical Ecology*, 28(3), 541-554.
- Hedgecock, E. M., Culotti, J. G., Thomson, J. N., & Perkins, L. A. (1985). Axonal guidance mutants of *Caenorhabditis elegans* identified by filling sensory neurons with fluorescein dyes. *Developmental Biology*, 111(1), 158-170.
- Hedrich, U. B. S., Smarandache, C. R., & Stein, W. (2009). Differential activation of projection neurons by two sensory pathways contributes to motor pattern selection. *Journal of Neurophysiology*, 102(5), 2866-2879. doi:10.1152/jn.00618.2009
- Hedrich, U. B. S., & Stein, W. (2008). Characterization of a descending pathway: activation and effects on motor patterns in the brachyuran crustacean stomatogastric nervous system. *The Journal of Experimental Biology*, 211(Pt 16), 2624-2637. doi:10.1242/jeb.019711
- Heimbeck, G., Bugnon, V., Gendre, N., Häberlin, C., & Stocker, R. F. (1999). Smell and taste perception in *Drosophila melanogaster* larva: toxin expression studies in chemosensory neurons. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 19(15), 6599-6609.
- Hekmat-Scafe, D. S., Steinbrecht, R. A., & Carlson, J. R. (1997). Coexpression of two odorant-binding protein homologs in *Drosophila*: implications for olfactory coding. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 17(5), 1616-1624.
- Hekmat-Scafe, D. S., Steinbrecht, R. A., & Carlson, J. R. (1998). Olfactory coding in a compound nose. Coexpression of odorant-binding proteins in *Drosophila*. *Annals of the New York Academy of Sciences*, 855, 311-315.
- Held, L. I. (1993). Segment-polarity mutations cause stripes of defects along a leg segment in *Drosophila*. *Developmental Biology*, 157(1), 240-250. doi:10.1006/dbio.1993.1128
- Heldman, J., & Lancet, D. (1986). Cyclic AMP-dependent protein phosphorylation in chemosensory neurons: identification of cyclic nucleotide-regulated phosphoproteins in olfactory cilia. *Journal of Neurochemistry*, 47(5), 1527-1533.
- Hellström, T., & Døving, K. B. (1986). Chemoreception of taurocholate in anosmic and sham-operated cod, *Gadus morhua*. *Behavioural Brain Research*, 21(2), 155-162.
- Helluy, S. M., Benton, J. L., Langworthy, K. A., Ruchhoeft, M. L., & Beltz, B. S. (1996). Glomerular organization in developing olfactory and accessory lobes of American lobsters: stabilization of numbers and increase in size after metamorphosis. *Journal of Neurobiology*, 29(4), 459-472. doi:10.1002/(SICI)1097-4695(199604)29:4<459::AID-NEU4>3.0.CO;2-7
- Hennessey, T. M., Frego, L. E., & Francis, J. T. (1994). Oxidants act as chemorepellents in *Paramecium* by stimulating an electrogenic plasma membrane reductase activity. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 175(5), 655-665.
- Hennessey, T. M., Kim, M. Y., & Satir, B. H. (1995). Lysozyme acts as a chemorepellent and secretagogue in *Paramecium* by activating a novel receptor-operated Ca⁺⁺ conductance. *The Journal of Membrane Biology*, 148(1), 13-25.
- Henry, M., Drolet, G., & Mougnot, D. (2008). Postsynaptic mu-opioid receptor response in the median preoptic nucleus is altered by a systemic sodium challenge in rats. *The European Journal of Neuroscience*, 27(5), 1197-1209. doi:10.1111/j.1460-9568.2008.06087.x
- Henry, M., Grob, M., & Mougnot, D. (2009). Endogenous angiotensin II facilitates GABAergic neurotransmission afferent to the Na⁺-responsive neurons of the rat median preoptic nucleus. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 297(3), R783-792. doi:10.1152/ajpregu.00226.2009
- Hepper, P. G., & Wells, D. L. (2006). Perinatal olfactory learning in the domestic dog. *Chemical*

- Senses*, 31(3), 207-212. doi:10.1093/chemse/bjj020
- Hernádi, L., Kemenes, G., & Salánki, J. (1987). Sensory responses and axonal morphology of two different types of cerebral neurones in *Helix pomatia* L. *Comparative Biochemistry and Physiology. A, Comparative Physiology*, 88(4), 641-646.
- Heth, G., Nevo, E., & Todrank, J. (1996). Seasonal changes in urinary odors and in responses to them by blind subterranean mole rats. *Physiology & Behavior*, 60(3), 963-968.
- Hettinger, T. P., Formaker, B. K., & Frank, M. E. (2007). Cycloheximide: no ordinary bitter stimulus. *Behavioural Brain Research*, 180(1), 4-17. doi:10.1016/j.bbr.2007.02.027
- Hettinger, T. P., & Frank, M. E. (2009). Salt taste inhibition by cathodal current. *Brain Research Bulletin*, 80(3), 107-115. doi:10.1016/j.brainresbull.2009.06.019
- Hildebrandt, H., & Müller, U. (1995a). Octopamine mediates rapid stimulation of protein kinase A in the antennal lobe of honeybees. *Journal of Neurobiology*, 27(1), 44-50. doi:10.1002/neu.480270105
- Hildebrandt, H., & Müller, U. (1995b). PKA activity in the antennal lobe of honeybees is regulated by chemosensory stimulation in vivo. *Brain Research*, 679(2), 281-288.
- Hilliard, M. A., Apicella, A. J., Kerr, R., Suzuki, H., Bazzicalupo, P., & Schafer, W. R. (2005). In vivo imaging of *C. elegans* ASH neurons: cellular response and adaptation to chemical repellents. *The EMBO Journal*, 24(1), 63-72. doi:10.1038/sj.emboj.7600493
- Hilliard, M. A., Bargmann, C. I., & Bazzicalupo, P. (2002). *C. elegans* responds to chemical repellents by integrating sensory inputs from the head and the tail. *Current Biology: CB*, 12(9), 730-734.
- Hillyard, S. D., Baula, V., Tuttle, W., Willumsen, N. J., & Larsen, E. H. (2007). Behavioral and neural responses of toads to salt solutions correlate with basolateral membrane potential of epidermal cells of the skin. *Chemical Senses*, 32(8), 765-773. doi:10.1093/chemse/bjm044
- Hillyard, S. D., Goldstein, J., Tuttle, W., & Hoff, K. (2004). Transcellular and paracellular elements of salt chemosensation in toad skin. *Chemical Senses*, 29(9), 755-762. doi:10.1093/chemse/bjh080
- Hillyard, S. D., Viborg, A., Nagai, T., & Hoff, K. V. (2007). Chemosensory function of salt and water transport by the amphibian skin. *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology*, 148(1), 44-54. doi:10.1016/j.cbpa.2006.12.025
- Hinman, V. F., & Degnan, B. M. (1998). Retinoic acid disrupts anterior ectodermal and endodermal development in ascidian larvae and postlarvae. *Development Genes and Evolution*, 208(6), 336-345.
- Hirasawa, S., Mendoza, J. A., Jacoby, D. B., Kobayashi, C., Fitzgerald, R. S., Schofield, B., Chandrasegaran, S., et al. (2003). Diverse cholinergic receptors in the cat carotid chemosensory unit. *Advances in Experimental Medicine and Biology*, 536, 313-319.
- Hirata, K., Miyahara, H., & Kanaseki, T. (1988). Substance-P-containing fibers in the incisive papillae of the rat hard palate. Light- and electron-microscopic immunohistochemical study. *Acta Anatomica*, 132(3), 197-204.
- Hitier, R., Heisenberg, M., & Prémat, T. (1998). Abnormal mushroom body plasticity in the *Drosophila* memory mutant amnesiac. *Neuroreport*, 9(12), 2717-2719.
- Hobert, O., Tessmar, K., & Ruvkun, G. (1999). The *Caenorhabditis elegans* lim-6 LIM homeobox gene regulates neurite outgrowth and function of particular GABAergic neurons. *Development (Cambridge, England)*, 126(7), 1547-1562.
- Hodgson, E. S., & Mathewson, R. F. (1971). Chemosensory orientation in sharks. *Annals of the New York Academy of Sciences*, 188, 175-182.
- Hoffmann, F., Musolf, K., & Penn, D. J. (2009). Freezing urine reduces its efficacy for eliciting ultrasonic vocalizations from male mice. *Physiology & Behavior*, 96(4-5), 602-605. doi:10.1016/j.physbeh.2008.12.014
- Holland, K. N., & Teeter, J. H. (1981). Behavioral and cardiac reflex assays of the chemosensory acuity of channel catfish to amino acids. *Physiology & Behavior*, 27(4), 699-707.

- Holland, L. Z., Schubert, M., Holland, N. D., & Neuman, T. (2000). Evolutionary conservation of the presumptive neural plate markers *AmphiSox1/2/3* and *AmphiNeurogenin* in the invertebrate chordate amphioxus. *Developmental Biology*, 226(1), 18-33. doi:10.1006/dbio.2000.9810
- Hollister, B., Dickens, J. C., Perez, F., & Deahl, K. L. (2001). Differential neurosensory responses of adult Colorado potato beetle, *Leptinotarsa decemlineata*, to glycoalkaloids. *Journal of Chemical Ecology*, 27(6), 1105-1118.
- Holtzman, D. A. (1993). The ontogeny of nasal chemical senses in garter snakes. *Brain, Behavior and Evolution*, 41(3-5), 163-170.
- Holtzman, D. A., & Halpern, M. (1991). Incorporation of 3H-thymidine in telencephalic structures of the vomeronasal and olfactory systems of embryonic garter snakes. *The Journal of Comparative Neurology*, 304(3), 450-466. doi:10.1002/cne.903040309
- Holy, T. E., Dulac, C., & Meister, M. (2000). Responses of vomeronasal neurons to natural stimuli. *Science (New York, N.Y.)*, 289(5484), 1569-1572.
- Hong, R. L., & Sommer, R. J. (2006). Chemoattraction in *Pristionchus* nematodes and implications for insect recognition. *Current Biology: CB*, 16(23), 2359-2365. doi:10.1016/j.cub.2006.10.031
- Horn, C. C., Geizhals, C. R., & Kupfermann, I. (2001). Further studies of bulk and orosensory decrement in producing satiation of feeding in *Aplysia*. *Brain Research*, 918(1-2), 51-59.
- Horner, A. J., Schmidt, M., Edwards, D. H., & Derby, C. D. (2008). Role of the olfactory pathway in agonistic behavior of crayfish, *Procambarus clarkii*. *Invertebrate Neuroscience: IN*, 8(1), 11-18. doi:10.1007/s10158-007-0063-1
- Horner, A. J., Weissburg, M. J., & Derby, C. D. (2004). Dual antennular chemosensory pathways can mediate orientation by Caribbean spiny lobsters in naturalistic flow conditions. *The Journal of Experimental Biology*, 207(Pt 21), 3785-3796. doi:10.1242/jeb.01200
- Horner, A. J., Weissburg, M. J., & Derby, C. D. (2008). The olfactory pathway mediates sheltering behavior of Caribbean spiny lobsters, *Panulirus argus*, to conspecific urine signals. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 194(3), 243-253. doi:10.1007/s00359-007-0302-2
- Horth, L. (2007). Sensory genes and mate choice: evidence that duplications, mutations, and adaptive evolution alter variation in mating cue genes and their receptors. *Genomics*, 90(2), 159-175. doi:10.1016/j.ygeno.2007.03.021
- Hosley, M. A., & Oakley, B. (1987). Postnatal development of the vallate papilla and taste buds in rats. *The Anatomical Record*, 218(2), 216-222. doi:10.1002/ar.1092180217
- Höfer, D., & Drenckhahn, D. (1998). Identification of the taste cell G-protein, alpha-gustducin, in brush cells of the rat pancreatic duct system. *Histochemistry and Cell Biology*, 110(3), 303-309.
- Höfer, D., & Drenckhahn, D. (1999). Localisation of actin, villin, fimbrin, ezrin and ankyrin in rat taste receptor cells. *Histochemistry and Cell Biology*, 112(1), 79-86.
- Höfer, D., Shin, D. W., & Drenckhahn, D. (2000). Identification of cytoskeletal markers for the different microvilli and cell types of the rat vomeronasal sensory epithelium. *Journal of Neurocytology*, 29(3), 147-156.
- Huang, A. L., Chen, X., Hoon, M. A., Chandrashekar, J., Guo, W., Tränkner, D., Ryba, N. J. P., et al. (2006). The cells and logic for mammalian sour taste detection. *Nature*, 442(7105), 934-938. doi:10.1038/nature05084
- Huang, W., Lahiri, S., Mokashi, A., & Sherpa, A. K. (1988). Relationship between sympathetic and phrenic nerve responses to peripheral chemoreflex in the cat. *Journal of the Autonomic Nervous System*, 25(2-3), 95-105.
- Hufnagel, L. A. (1992). Cortical ultrastructure and chemoreception in ciliated protists (Ciliophora). *Microscopy Research and Technique*, 22(3), 225-264. doi:10.1002/jemt.1070220304
- Hull, E. M., & Dominguez, J. M. (2007). Sexual behavior in male rodents. *Hormones and Behavior*, 52(1), 45-55. doi:10.1016/j.yhbeh.2007.03.030

- Hunter, K., & Pyle, G. (2004). Morphological responses of *Daphnia pulex* to *Chaoborus americanus* kairomone in the presence and absence of metals. *Environmental Toxicology and Chemistry / SETAC*, 23(5), 1311-1316.
- Hurwitz, I., Harel, A., Markowitz, S., Noy, O., & Susswein, A. J. (2006). Control of feeding in aplysia with ad libitum access to food: presence of food increases the intervals between feeding bouts. *Journal of Neurophysiology*, 95(1), 106-118. doi:10.1152/jn.00705.2005
- Ichikawa, H., & Sugimoto, T. (2002). Co-expression of VRL-1 and calbindin D-28k in the rat sensory ganglia. *Brain Research*, 924(1), 109-112.
- Ichikawa, M. (1999). Axonal growth of newly formed vomeronasal receptor neurons after nerve transection. *Anatomy and Embryology*, 200(4), 413-417.
- Idé, C., & Munger, B. L. (1980). The cytologic composition of primate laryngeal chemosensory corpuscles. *The American Journal of Anatomy*, 158(2), 193-209. doi:10.1002/aja.1001580208
- Igarashi, A., Zadzilka, N., & Shirahata, M. (2009). Benzodiazepines and GABA-GABAA receptor system in the cat carotid body. *Advances in Experimental Medicine and Biology*, 648, 169-175. doi:10.1007/978-90-481-2259-2_19
- Igarashi, N., Tauchi, K., Imamichi, T., & Saito, T. R. (1988). [Improvement of the vomeronasal organ ablation in the rat]. *Jikken Dobutsu. Experimental Animals*, 37(3), 355-359.
- Ignell, R., Anton, S., & Hansson, B. S. (2001). The antennal lobe of orthoptera - anatomy and evolution. *Brain, Behavior and Evolution*, 57(1), 1-17.
- Ilan, M., Jensen, R. A., & Morse, D. E. (1993). Calcium control of metamorphosis in polychaete larvae. *The Journal of Experimental Zoology*, 267(4), 423-430. doi:10.1002/jez.1402670408
- Illing, N., Boolay, S., Siwoski, J. S., Casper, D., Lucero, M. T., & Roskams, A. J. (2002). Conditionally immortalized clonal cell lines from the mouse olfactory placode differentiate into olfactory receptor neurons. *Molecular and Cellular Neurosciences*, 20(2), 225-243.
- Inoue, T., Haque, Z., Lukowiak, K., & Syed, N. I. (2001). Hypoxia-induced respiratory patterned activity in *Lymnaea* originates at the periphery. *Journal of Neurophysiology*, 86(1), 156-163.
- Inoue, T., & Thomas, J. H. (2000a). Targets of TGF-beta signaling in *Caenorhabditis elegans* dauer formation. *Developmental Biology*, 217(1), 192-204. doi:10.1006/dbio.1999.9545
- Inoue, T., & Thomas, J. H. (2000b). Suppressors of transforming growth factor-beta pathway mutants in the *Caenorhabditis elegans* dauer formation pathway. *Genetics*, 156(3), 1035-1046.
- Ishida, T., Enomoto, H., & Nishida, R. (2008). New attractants for males of the solanaceous fruit fly *Bactrocera latifrons*. *Journal of Chemical Ecology*, 34(12), 1532-1535. doi:10.1007/s10886-008-9562-8
- Ishida, Y., Yoshikawa, H., & Kobayashi, H. (1996). Electrophysiological responses of three chemosensory systems in the carp to pesticides. *Physiology & Behavior*, 60(2), 633-638.
- Ishida, Y., Chiang, V., & Leal, W. S. (2002). Protein that makes sense in the Argentine ant. *Die Naturwissenschaften*, 89(11), 505-507. doi:10.1007/s00114-002-0368-1
- Ishida, Y., Chiang, V. P., Haverty, M. I., & Leal, W. S. (2002). Odorant-binding proteins from a primitive termite. *Journal of Chemical Ecology*, 28(9), 1887-1893.
- Ishii, K., Ishii, K., & Kusakabe, T. (1985). Electrophysiological aspects of reflexogenic area in the chelonian, *Geoclemmys reevesii*. *Respiration Physiology*, 59(1), 45-54.
- Ishii, T., Hirota, J., & Mombaerts, P. (2003). Combinatorial coexpression of neural and immune multigene families in mouse vomeronasal sensory neurons. *Current Biology: CB*, 13(5), 394-400.
- Ito, H., & Eyzaguirre, C. (1983). Effects of temperature on the response of chemoreceptor fibers to chemical agents. *Brain Research*, 279(1-2), 286-290.
- Iturriaga, R. (1993). Carotid body chemoreception: the importance of CO₂-HCO₃- and carbonic anhydrase. (review). *Biological Research*, 26(3), 319-329.
- Iturriaga, R. (1996). Acetate enhances the chemosensory response to hypoxia in the cat carotid body in

- vitro in the absence of CO₂-HCO₃⁻. *Biological Research*, 29(2), 237-243.
- Iturriaga, R. (2001). Nitric oxide and carotid body chemoreception. *Biological Research*, 34(2), 135-139.
- Iturriaga, R., & Alcayaga, J. (1998). Effects of CO₂-HCO₃⁻ on catecholamine efflux from cat carotid body. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 84(1), 60-68.
- Iturriaga, R., Alcayaga, J., & Gonzalez, C. (2009a). Neurotransmitters in carotid body function: the case of dopamine--invited article. *Advances in Experimental Medicine and Biology*, 648, 137-143. doi:10.1007/978-90-481-2259-2_16
- Iturriaga, R., Alcayaga, J., & Gonzalez, C. (2009b). Neurotransmitters in carotid body function: the case of dopamine--invited article. *Advances in Experimental Medicine and Biology*, 648, 137-143. doi:10.1007/978-90-481-2259-2_16
- Iturriaga, R., Alcayaga, J., & Rey, S. (1998). Sodium nitroprusside blocks the cat carotid chemosensory inhibition induced by dopamine, but not that by hyperoxia. *Brain Research*, 799(1), 26-34.
- Iturriaga, R., Alcayaga, J., & Zapata, P. (1988). Contribution of carotid body chemoreceptors and carotid sinus baroreceptors to the ventilatory and circulatory reflexes produced by common carotid occlusion. *Acta Physiologica Et Pharmacologica Latinoamericana: Organo De La Asociación Latinoamericana De Ciencias Fisiológicas Y De La Asociación Latinoamericana De Farmacología*, 38(1), 27-48.
- Iturriaga, R., Alcayaga, J., & Zapata, P. (1996). Dissociation of hypoxia-induced chemosensory responses and catecholamine efflux in cat carotid body superfused in vitro. *The Journal of Physiology*, 497 (Pt 2), 551-564.
- Iturriaga, R., Alcayaga, J., & Zapata, P. (2000). Lack of correlation between cholinergic-induced changes in chemosensory activity and dopamine release from the cat carotid body in vitro. *Brain Research*, 868(2), 380-385.
- Iturriaga, R., & Lahiri, S. (1991). Carotid body chemoreception in the absence and presence of CO₂-HCO₃⁻. *Brain Research*, 568(1-2), 253-260.
- Iturriaga, R., Lahiri, S., & Mokashi, A. (1991). Carbonic anhydrase and chemoreception in the cat carotid body. *The American Journal of Physiology*, 261(4 Pt 1), C565-573.
- Iturriaga, R., Larrain, C., & Zapata, P. (1994). Phrenic nerve activity during artificial ventilation at different body temperatures and its relationships with carotid chemosensory activity. *Biological Research*, 27(2), 145-157.
- Iturriaga, R., Larrain, C., & Zapata, P. (1994). Effects of dopaminergic blockade upon carotid chemosensory activity and its hypoxia-induced excitation. *Brain Research*, 663(1), 145-154.
- Iturriaga, R., Mokashi, A., & Lahiri, S. (1993). Dynamics of carotid body responses in vitro in the presence of CO₂-HCO₃⁻: role of carbonic anhydrase. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 75(4), 1587-1594.
- Iturriaga, R., Mokashi, A., & Lahiri, S. (1996). The coupling between intracellular pH, ion transport, and chemosensory discharge. *Advances in Experimental Medicine and Biology*, 410, 175-180.
- Iturriaga, R., Mokashi, A., & Lahiri, S. (1998). Anion exchanger and chloride channel in cat carotid body chemotransduction. *Journal of the Autonomic Nervous System*, 70(1-2), 23-31.
- Iturriaga, R., Mosqueira, M., & Villanueva, S. (2000). Effects of nitric oxide gas on cat carotid body chemosensory response to hypoxia. *Brain Research*, 855(2), 282-286.
- Iturriaga, R., Rey, S., Del Rio, R., Moya, E. A., & Alcayaga, J. (2009). Cardioventilatory acclimatization induced by chronic intermittent hypoxia. *Advances in Experimental Medicine and Biology*, 648, 329-335. doi:10.1007/978-90-481-2259-2_37
- Iturriaga, R., Rumsey, W. L., Lahiri, S., Spergel, D., & Wilson, D. F. (1992). Intracellular pH and oxygen chemoreception in the cat carotid body in vitro. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 72(6), 2259-2266.
- Iturriaga, R., Rumsey, W. L., Mokashi, A., Spergel, D., Wilson, D. F., & Lahiri, S. (1991). In vitro

- perfused-superfused cat carotid body for physiological and pharmacological studies. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 70(3), 1393-1400.
- Iturriaga, R., Villanueva, S., & Mosqueira, M. (2000). Dual effects of nitric oxide on cat carotid body chemoreception. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 89(3), 1005-1012.
- Iturriaga, R., & Alcayaga, J. (2004). Neurotransmission in the carotid body: transmitters and modulators between glomus cells and petrosal ganglion nerve terminals. *Brain Research. Brain Research Reviews*, 47(1-3), 46-53. doi:10.1016/j.brainresrev.2004.05.007
- Iturriaga, R., & Alcayaga, J. (2007). Effects of intermittent hypoxia on cat petrosal ganglion responses induced by acetylcholine, adenosine 5'-triphosphate and NaCN. *Brain Research*, 1128(1), 86-90. doi:10.1016/j.brainres.2006.10.051
- Iturriaga, R., Moya, E. A., & Del Rio, R. (2009). Carotid body potentiation induced by intermittent hypoxia: implications for cardiorespiratory changes induced by sleep apnoea. *Clinical and Experimental Pharmacology & Physiology*, 36(12), 1197-1204. doi:10.1111/j.1440-1681.2009.05213.x
- Iturriaga, R., Rey, S., Alcayaga, J., & Del Rio, R. (2006). Chronic intermittent hypoxia enhances carotid body chemosensory responses to acute hypoxia. *Advances in Experimental Medicine and Biology*, 580, 227-232; discussion 351-359. doi:10.1007/0-387-31311-7_35
- Iturriaga, R., Rey, S., & Del Rio, R. (2005). Cardiovascular and ventilatory acclimatization induced by chronic intermittent hypoxia: a role for the carotid body in the pathophysiology of sleep apnea. *Biological Research*, 38(4), 335-340.
- Iturriaga, R., Varas, R., & Alcayaga, J. (2007). Electrical and pharmacological properties of petrosal ganglion neurons that innervate the carotid body. *Respiratory Physiology & Neurobiology*, 157(1), 130-139. doi:10.1016/j.resp.2006.12.006
- Ivy, T. M., Weddle, C. B., & Sakaluk, S. K. (2005). Females use self-referent cues to avoid mating with previous mates. *Proceedings. Biological Sciences / The Royal Society*, 272(1580), 2475-2478. doi:10.1098/rspb.2005.3222
- Iwatsuki, K., Ichikawa, R., Hiasa, M., Moriyama, Y., Torii, K., & Uneyama, H. (2009). Identification of the vesicular nucleotide transporter (VNUT) in taste cells. *Biochemical and Biophysical Research Communications*, 388(1), 1-5. doi:10.1016/j.bbrc.2009.07.069
- Izumizaki, M., Pokorski, M., & Homma, I. (2004). Role of the carotid bodies in chemosensory ventilatory responses in the anesthetized mouse. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 97(4), 1401-1407. doi:10.1152/jappphysiol.00025.2004
- Jacklet, J. W. (1997). Nitric oxide signaling in invertebrates. *Invertebrate Neuroscience: IN*, 3(1), 1-14.
- Jacobs, S. P., Liggins, A. P., Zhou, J., Pickett, J. A., Jin, X., & Field, L. M. (2005). OS-D-like genes and their expression in aphids (Hemiptera: Aphididae). *Insect Molecular Biology*, 14(4), 423-432. doi:10.1111/j.1365-2583.2005.00573.x
- Jacquin-Joly, E., Vogt, R. G., François, M. C., & Nagnan-Le Meillour, P. (2001). Functional and expression pattern analysis of chemosensory proteins expressed in antennae and pheromonal gland of *Mamestra brassicae*. *Chemical Senses*, 26(7), 833-844.
- Jadhao, A. G. (2001). Localization of molluscan cardioexcitatory tetrapeptide in the brain of African Cichlid fish (*Haplochromis burtoni*) revealed by immunocytochemistry. *Neuroscience Letters*, 303(2), 103-106.
- Jahan-Parwar, B., & Freedman, S. M. (1979). Role of interganglionic synaptic connections in the control of pedal and parapodial movements in *Aplysia*. *Brain Research Bulletin*, 4(3), 407-420.
- Jain, S., & Roper, S. D. (1991). Immunocytochemistry of gamma-aminobutyric acid, glutamate, serotonin, and histamine in *Necturus* taste buds. *The Journal of Comparative Neurology*, 307(4), 675-682. doi:10.1002/cne.903070412
- Jammes, Y. (1988). Tonic sensory pathways of the respiratory system. *The European Respiratory Journal: Official Journal of the European Society for Clinical Respiratory Physiology*, 1(2),

176-183.

- Jansen, G., Thijssen, K. L., Werner, P., van der Horst, M., Hazendonk, E., & Plasterk, R. H. (1999). The complete family of genes encoding G proteins of *Caenorhabditis elegans*. *Nature Genetics*, *21*(4), 414-419. doi:10.1038/7753
- Jansen, S., Chmelík, J., Zidek, L., Padrta, P., Novák, P., Zdráhal, Z., Picimbon, J., et al. (2007). Structure of *Bombyx mori* chemosensory protein 1 in solution. *Archives of Insect Biochemistry and Physiology*, *66*(3), 135-145. doi:10.1002/arch.20205
- Jansen, S., Zidek, L., Löfstedt, C., Picimbon, J., & Sklenár, V. (2006). 1H, 13C, and 15N resonance assignment of *Bombyx mori* chemosensory protein 1 (BmorCSP1). *Journal of Biomolecular NMR*, *36 Suppl 1*, 47. doi:10.1007/s10858-006-9019-8
- Jansson, H. B., Jeyaprakash, A., Damon, R. A., & Zuckerman, B. M. (1984). *Caenorhabditis elegans* and *Panagrellus redivivus*: enzyme-mediated modification of chemotaxis. *Experimental Parasitology*, *58*(3), 270-277.
- Jee, W. S. S. (2005). The past, present, and future of bone morphometry: its contribution to an improved understanding of bone biology. *Journal of Bone and Mineral Metabolism*, *23 Suppl*, 1-10.
- Jeong, P., Jung, M., Yim, Y., Kim, H., Park, M., Hong, E., Lee, W., et al. (2005). Chemical structure and biological activity of the *Caenorhabditis elegans* dauer-inducing pheromone. *Nature*, *433*(7025), 541-545. doi:10.1038/nature03201
- Jermakowicz, W. J., Dorsey, D. A., Brown, A. L., Wojciechowski, K., Giscombe, C. L., Graves, B. M., Summers, C. H., et al. (2004). Development of the nasal chemosensory organs in two terrestrial anurans: the directly developing frog, *Eleutherodactylus coqui* (Anura: Leptodactylidae), and the metamorphosing toad, *Bufo americanus* (Anura: Bufonidae). *Journal of Morphology*, *261*(2), 225-248. doi:10.1002/jmor.10246
- Ji, Y., Zhang, Z., & Hu, Y. (2009). The repertoire of G-protein-coupled receptors in *Xenopus tropicalis*. *BMC Genomics*, *10*, 263. doi:10.1186/1471-2164-10-263
- Jia, C., Chen, W. R., & Shepherd, G. M. (1999). Synaptic organization and neurotransmitters in the rat accessory olfactory bulb. *Journal of Neurophysiology*, *81*(1), 345-355.
- Jia, C., & Halpern, M. (1998). Neurogenesis and migration of receptor neurons in the vomeronasal sensory epithelium in the opossum, *Monodelphis domestica*. *The Journal of Comparative Neurology*, *400*(2), 287-297.
- Jia, C., & Halpern, M. (2003). Calbindin D28K immunoreactive neurons in vomeronasal organ and their projections to the accessory olfactory bulb in the rat. *Brain Research*, *977*(2), 261-269.
- Jin, I., Huang, H., Kim, J., & Farley, J. (2004). Chemosensory conditioning in molluscs: I. Failure of contextual conditioning in *Hermissenda*. *Learning & Behavior: A Psychonomic Society Publication*, *32*(3), 257-276.
- Jin, X., Brandazza, A., Navarrini, A., Ban, L., Zhang, S., Steinbrecht, R. A., Zhang, L., et al. (2005). Expression and immunolocalisation of odorant-binding and chemosensory proteins in locusts. *Cellular and Molecular Life Sciences: CMLS*, *62*(10), 1156-1166. doi:10.1007/s00018-005-5014-6
- Johnson, E. W., Eller, P. M., Jafek, B. W., & Norman, A. W. (1992). Calbindin-like immunoreactivity in two peripheral chemosensory tissues of the rat: taste buds and the vomeronasal organ. *Brain Research*, *572*(1-2), 319-324.
- Johnson, M. E., & Atema, J. (2005). The olfactory pathway for individual recognition in the American lobster *Homarus americanus*. *The Journal of Experimental Biology*, *208*(Pt 15), 2865-2872. doi:10.1242/jeb.01707
- Johnston, R. E., & Mueller, U. G. (1990). Olfactory but not vomeronasal mediation of scent marking by male golden hamsters. *Physiology & Behavior*, *48*(5), 701-706.
- Johnston, R. J., & Hobert, O. (2003). A microRNA controlling left/right neuronal asymmetry in

- Caenorhabditis elegans. *Nature*, 426(6968), 845-849. doi:10.1038/nature02255
- Johnston, R. J., & Hobert, O. (2005). A novel C. elegans zinc finger transcription factor, lsy-2, required for the cell type-specific expression of the lsy-6 microRNA. *Development (Cambridge, England)*, 132(24), 5451-5460. doi:10.1242/dev.02163
- Joiner, M. A., & Griffith, L. C. (1999). Mapping of the anatomical circuit of CaM kinase-dependent courtship conditioning in Drosophila. *Learning & Memory (Cold Spring Harbor, N.Y.)*, 6(2), 177-192.
- Joiner, M. A., & Griffith, L. C. (2000). Visual input regulates circuit configuration in courtship conditioning of Drosophila melanogaster. *Learning & Memory (Cold Spring Harbor, N.Y.)*, 7(1), 32-42.
- Jones, N. A., Kuo, Y. M., Sun, Y. H., & Beckendorf, S. K. (1998). The Drosophila Pax gene eye gone is required for embryonic salivary duct development. *Development (Cambridge, England)*, 125(21), 4163-4174.
- Jones, W. D., Cayirlioglu, P., Kadow, I. G., & Vosshall, L. B. (2007). Two chemosensory receptors together mediate carbon dioxide detection in Drosophila. *Nature*, 445(7123), 86-90. doi:10.1038/nature05466
- Jorquera, O., Latorre, R., & Labarca, P. (1995). Ion channel classes in purified olfactory cilia membranes: planar lipid bilayer studies. *The American Journal of Physiology*, 269(5 Pt 1), C1235-1244.
- Joseph, V., Dalmaz, Y., Cottet-Emard, J. M., & Pequignot, J. M. (1998). Dexamethasone's influence on tyrosine hydroxylase activity in the chemoreflex pathway and on the hypoxic ventilatory response. *Pflügers Archiv: European Journal of Physiology*, 435(6), 834-839.
- Joseph, V., Soliz, J., Pequignot, J., Semporé, B., Cottet-Emard, J. M., Dalmaz, Y., Favier, R., et al. (2000). Gender differentiation of the chemoreflex during growth at high altitude: functional and neurochemical studies. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 278(4), R806-816.
- Jovelin, R., Ajie, B. C., & Phillips, P. C. (2003). Molecular evolution and quantitative variation for chemosensory behaviour in the nematode genus Caenorhabditis. *Molecular Ecology*, 12(5), 1325-1337.
- Jovelin, R. (2009). Rapid sequence evolution of transcription factors controlling neuron differentiation in Caenorhabditis. *Molecular Biology and Evolution*, 26(10), 2373-2386. doi:10.1093/molbev/msp142
- Jovelin, R., Dunham, J. P., Sung, F. S., & Phillips, P. C. (2009). High nucleotide divergence in developmental regulatory genes contrasts with the structural elements of olfactory pathways in caenorhabditis. *Genetics*, 181(4), 1387-1397. doi:10.1534/genetics.107.082651
- Jungblut, L. D., Paz, D. A., López-Costa, J. J., & Pozzi, A. G. (2009). Heterogeneous distribution of G protein alpha subunits in the main olfactory and vomeronasal systems of Rhinella (Bufo) arenarum tadpoles. *Zoological Science*, 26(10), 722-728. doi:10.2108/zsj.26.722
- Kalinowski, D. L., Bruch, R. C., & Brand, J. G. (1987). Differential interaction of lectins with chemosensory receptors. *Brain Research*, 418(1), 34-40.
- Kaluza, J. F., Gussing, F., Bohm, S., Breer, H., & Strotmann, J. (2004). Olfactory receptors in the mouse septal organ. *Journal of Neuroscience Research*, 76(4), 442-452. doi:10.1002/jnr.20083
- Kamardin, N. N., Szücs, A., & S-Rózsa, K. (1999). Influence of HgCl₂ on the osphradial multisensory system of Lymnaea stagnalis L. *Acta Biologica Hungarica*, 50(1-3), 99-116.
- Kamikouchi, A., Morioka, M., & Kubo, T. (2004). Identification of honeybee antennal proteins/genes expressed in a sex- and/or caste selective manner. *Zoological Science*, 21(1), 53-62.
- Kamio, M., Araki, M., Nagayama, T., Matsunaga, S., & Fusetani, N. (2005). Behavioral and electrophysiological experiments suggest that the antennular outer flagellum is the site of pheromone reception in the male helmet crab Telmessus cheiragonus. *The Biological Bulletin*,

208(1), 12-19.

- Kaplan, J. M. (1996). Sensory signaling in *Caenorhabditis elegans*. *Current Opinion in Neurobiology*, 6(4), 494-499.
- Kaplan, J. M., & Horvitz, H. R. (1993). A dual mechanosensory and chemosensory neuron in *Caenorhabditis elegans*. *Proceedings of the National Academy of Sciences of the United States of America*, 90(6), 2227-2231.
- Karádi, Z., Faludi, B., Hernádi, I., & Lénárd, L. (1995). Role of forebrain glucose-monitoring neurons in the central control of feeding: II. Complex functional attributes. *Neurobiology (Budapest, Hungary)*, 3(3-4), 241-256.
- Karádi, Z., Oomura, Y., Nishino, H., & Aou, S. (1989). Olfactory coding in the monkey lateral hypothalamus: behavioral and neurochemical properties of odor-responding neurons. *Physiology & Behavior*, 45(6), 1249-1257.
- Kardong, K. V., & Berkhoudt, H. (1999). Rattlesnake hunting behavior: correlations between plasticity of predatory performance and neuroanatomy. *Brain, Behavior and Evolution*, 53(1), 20-28.
- Kashinsky, W. M., Rozboril, L. W., Robinson, S. R., & Smotherman, W. P. (1990). An inexpensive rotary infusion pump for delivering microliter volumes of fluids to animal subjects. *Physiology & Behavior*, 47(6), 1279-1281.
- Kasumyan, A. O., & Marusov, E. A. (2005). The complementarity of chemosensory systems in mediating the searching behavioral response to food chemical signals in stone loach *Barbatula barbatula*. *Doklady Biological Sciences: Proceedings of the Academy of Sciences of the USSR, Biological Sciences Sections / Translated from Russian*, 402, 202-204.
- Katz, D. B., Simon, S. A., & Nicolelis, M. A. (2001). Dynamic and multimodal responses of gustatory cortical neurons in awake rats. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 21(12), 4478-4489.
- Katz, D. B., Nicolelis, M. A. L., & Simon, S. A. (2002). Gustatory processing is dynamic and distributed. *Current Opinion in Neurobiology*, 12(4), 448-454.
- Kaupp, U. B. (2010). Olfactory signalling in vertebrates and insects: differences and commonalities. *Nature Reviews. Neuroscience*, 11(3), 188-200. doi:10.1038/nrn2789
- Kawakami, T., Kusakabe, T., Matsuda, H., Hiruma, H., Gono, Y., Kurihara, K., & Takenaka, T. (1998). Distribution of neuropeptide-containing nerve fibers in the salamander taste organs. *Histology and Histopathology*, 13(1), 115-119.
- Keiger, C. J., & Walker, J. C. (2000). Individual variation in the expression profiles of nicotinic receptors in the olfactory bulb and trigeminal ganglion and identification of alpha2, alpha6, alpha9, and beta3 transcripts. *Biochemical Pharmacology*, 59(3), 233-240.
- Keller, A., & Vosshall, L. B. (2008). Better smelling through genetics: mammalian odor perception. *Current Opinion in Neurobiology*, 18(4), 364-369. doi:10.1016/j.conb.2008.09.020
- Keller, T. A., & Weissburg, M. J. (2004). Effects of odor flux and pulse rate on chemosensory tracking in turbulent odor plumes by the blue crab, *Callinectes sapidus*. *The Biological Bulletin*, 207(1), 44-55.
- Kelliher, K. R. (2007). The combined role of the main olfactory and vomeronasal systems in social communication in mammals. *Hormones and Behavior*, 52(5), 561-570. doi:10.1016/j.yhbeh.2007.08.012
- Kelliher, K. R., & Wersinger, S. R. (2009). Olfactory regulation of the sexual behavior and reproductive physiology of the laboratory mouse: effects and neural mechanisms. *ILAR Journal / National Research Council, Institute of Laboratory Animal Resources*, 50(1), 28-42.
- Kemenes, G. (1992). Processing of mechano- and chemosensory information in the lip nerve and cerebral ganglia of the snail *Helix pomatia* L. *Zhurnal Vyssheĭ Nervnoĭ Deiatelnosti Imeni I P Pavlova*, 42(6), 1180-1195.
- Kemp, P. J. (2006). Detecting acute changes in oxygen: will the real sensor please stand up?

- Experimental Physiology*, 91(5), 829-834. doi:10.1113/expphysiol.2006.034587
- Kempf, S. C., & Page, L. R. (2005). Anti-tubulin labeling reveals ampullary neuron ciliary bundles in opisthobranch larvae and a new putative neural structure associated with the apical ganglion. *The Biological Bulletin*, 208(3), 169-182.
- Kendal-Reed, M. (2001). Approaches to understanding chemosensory responses: new directions and new caveats. *AIHAJ: A Journal for the Science of Occupational and Environmental Health and Safety*, 62(6), 717-722.
- Kent, K. S., & Hildebrand, J. G. (1987). Cephalic sensory pathways in the central nervous system of larval *Manduca sexta* (Lepidoptera : Sphingidae). *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 315(1168), 1-36.
- Keverne, E. B. (2004). Importance of olfactory and vomeronasal systems for male sexual function. *Physiology & Behavior*, 83(2), 177-187. doi:10.1016/j.physbeh.2004.08.013
- Keverne, E. B. (2007). Genomic imprinting and the evolution of sex differences in mammalian reproductive strategies. *Advances in Genetics*, 59, 217-243. doi:10.1016/S0065-2660(07)59008-5
- Keverne, E. B. (2004). Brain evolution, chemosensory processing, and behavior. *Nutrition Reviews*, 62(11 Pt 2), S218-223; discussion S224-241.
- Key, B., & Akeson, R. A. (1990). Immunochemical markers for the frog olfactory neuroepithelium. *Brain Research. Developmental Brain Research*, 57(1), 103-117.
- Khurana, A., & Thach, B. T. (1996). Effects of upper airway stimulation on swallowing, gasping, and autoresuscitation in hypoxic mice. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 80(2), 472-477.
- Kikuchi, T. (1976). [Chemosensory mutation of *Drosophila* (author's transl)]. *Tanpakushitsu Kakusan Koso. Protein, Nucleic Acid, Enzyme*, 21(5), 353-363.
- Kim, K., Colosimo, M. E., Yeung, H., & Sengupta, P. (2005). The UNC-3 Olf/EBF protein represses alternate neuronal programs to specify chemosensory neuron identity. *Developmental Biology*, 286(1), 136-148. doi:10.1016/j.ydbio.2005.07.024
- Kim, K., Sato, K., Shibuya, M., Zeiger, D. M., Butcher, R. A., Ragains, J. R., Clardy, J., et al. (2009). Two chemoreceptors mediate developmental effects of dauer pheromone in *C. elegans*. *Science (New York, N.Y.)*, 326(5955), 994-998. doi:10.1126/science.1176331
- Kim, M. S., Repp, A., & Smith, D. P. (1998). LUSH odorant-binding protein mediates chemosensory responses to alcohols in *Drosophila melanogaster*. *Genetics*, 150(2), 711-721.
- Kim, M. S., & Smith, D. P. (2001). The invertebrate odorant-binding protein LUSH is required for normal olfactory behavior in *Drosophila*. *Chemical Senses*, 26(2), 195-199.
- Kim, S., Lee, J., & Ahnn, J. (2000). Analysis of the fit-1 gene encoding a ECM protein, flectin, in *Caenorhabditis elegans*. *Molecules and Cells*, 10(2), 226-231.
- Kindon, H. A., Baum, M. J., & Paredes, R. J. (1996). Medial preoptic/anterior hypothalamic lesions induce a female-typical profile of sexual partner preference in male ferrets. *Hormones and Behavior*, 30(4), 514-527. doi:10.1006/hbeh.1996.0055
- Kinkead, R., Bach, K. B., Johnson, S. M., Hodgeman, B. A., & Mitchell, G. S. (2001). Plasticity in respiratory motor control: intermittent hypoxia and hypercapnia activate opposing serotonergic and noradrenergic modulatory systems. *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology*, 130(2), 207-218.
- Kinkead, R., Genest, S., Gulemetova, R., Lajeunesse, Y., Laforest, S., Drolet, G., & Bairam, A. (2005). Neonatal maternal separation and early life programming of the hypoxic ventilatory response in rats. *Respiratory Physiology & Neurobiology*, 149(1-3), 313-324. doi:10.1016/j.resp.2005.04.014
- Kinnamon, S. C., & Cummings, T. A. (1992). Chemosensory transduction mechanisms in taste. *Annual Review of Physiology*, 54, 715-731. doi:10.1146/annurev.ph.54.030192.003435

- Kinzinger, J. H., Johnson, E. W., Bhatnagar, K. P., Bonar, C. J., Burrows, A. M., Mooney, M. P., Siegel, M. I., et al. (2005). Comparative study of lectin reactivity in the vomeronasal organ of human and nonhuman primates. *The Anatomical Record. Part A, Discoveries in Molecular, Cellular, and Evolutionary Biology*, 284(2), 550-560. doi:10.1002/ar.a.20194
- Kirby, G. C., & McQueen, D. S. (1984). Effects of the antagonists MDL 72222 and ketanserin on responses of cat carotid body chemoreceptors to 5-hydroxytryptamine. *British Journal of Pharmacology*, 83(1), 259-269.
- Kirby, G. C., & McQueen, D. S. (1986). Characterization of opioid receptors in the cat carotid body involved in chemosensory depression in vivo. *British Journal of Pharmacology*, 88(4), 889-898.
- Kiseleva, E. I. (1993). [The chemical interaction of the tadpoles of the common toad (*Bufo bufo* L.) with the tadpoles of other species of anurans inhabiting the same reservoirs]. *Zhurnal Obshchei Biologii*, 54(3), 311-316.
- Kishimoto, J., Cox, H., Keverne, E. B., & Emson, P. C. (1994). Cellular localization of putative odorant receptor mRNAs in olfactory and chemosensory neurons: a non radioactive in situ hybridization study. *Brain Research. Molecular Brain Research*, 23(1-2), 33-39.
- Kitagawa, J., Takahashi, Y., Matsumoto, S., & Shingai, T. (2007). Response properties of the pharyngeal branch of the glossopharyngeal nerve for umami taste in mice and rats. *Neuroscience Letters*, 417(1), 42-45. doi:10.1016/j.neulet.2007.02.032
- Kiyohara, S., Hidaka, I., Kitoh, J., & Yamashita, S. (1985). Mechanical sensitivity of the facial nerve fibers innervating the anterior palate of the puffer, *Fugu pardalis*, and their central projection to the primary taste center. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 157(6), 705-716.
- Kiyohara, S., Yamashita, S., Lamb, C. F., & Finger, T. E. (1999). Distribution of trigeminal fibers in the primary facial gustatory center of channel catfish, *Ictalurus punctatus*. *Brain Research*, 841(1-2), 93-100.
- Klimmeck, D., Daiber, P. C., Brühl, A., Baumann, A., Frings, S., & Möhrlen, F. (2009). Bestrophin 2: an anion channel associated with neurogenesis in chemosensory systems. *The Journal of Comparative Neurology*, 515(5), 585-599. doi:10.1002/cne.22075
- Kline, D. D., Buniel, M. C. F., Glazebrook, P., Peng, Y., Ramirez-Navarro, A., Prabhakar, N. R., & Kunze, D. L. (2005). Kv1.1 deletion augments the afferent hypoxic chemosensory pathway and respiration. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 25(13), 3389-3399. doi:10.1523/JNEUROSCI.4556-04.2005
- Kline, D. D., Hendricks, G., Hermann, G., Rogers, R. C., & Kunze, D. L. (2009). Dopamine inhibits N-type channels in visceral afferents to reduce synaptic transmitter release under normoxic and chronic intermittent hypoxic conditions. *Journal of Neurophysiology*, 101(5), 2270-2278. doi:10.1152/jn.91304.2008
- Kline, D. D., Ramirez-Navarro, A., & Kunze, D. L. (2007). Adaptive depression in synaptic transmission in the nucleus of the solitary tract after in vivo chronic intermittent hypoxia: evidence for homeostatic plasticity. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 27(17), 4663-4673. doi:10.1523/JNEUROSCI.4946-06.2007
- Koehl, M. A., Koseff, J. R., Crimaldi, J. P., McCay, M. G., Cooper, T., Wiley, M. B., & Moore, P. A. (2001). Lobster sniffing: antennule design and hydrodynamic filtering of information in an odor plume. *Science (New York, N.Y.)*, 294(5548), 1948-1951. doi:10.1126/science.1063724
- Koehl, M. A. R. (2006). The fluid mechanics of arthropod sniffing in turbulent odor plumes. *Chemical Senses*, 31(2), 93-105. doi:10.1093/chemse/bjj009
- Koga, M., & Ohshima, Y. (2004). The *C. elegans* *ceh-36* gene encodes a putative homeodomain transcription factor involved in chemosensory functions of ASE and AWC neurons. *Journal of Molecular Biology*, 336(3), 579-587. doi:10.1016/j.jmb.2003.12.037

- Koizumi, O., Kijima, H., & Morita, H. (1974). Characterization of alpha-glucosidase at the tips of the chemosensory setae of the fly, *Phormia regina*. *Journal of Insect Physiology*, 20(5), 925-934.
- Kojima, S., Hosono, T., Fujito, Y., & Ito, E. (2001). Optical detection of neuromodulatory effects of conditioned taste aversion in the pond snail *Lymnaea stagnalis*. *Journal of Neurobiology*, 49(2), 118-128.
- Kojima, S., Nanakamura, H., Nagayama, S., Fujito, Y., & Ito, E. (1997). Enhancement of an inhibitory input to the feeding central pattern generator in *Lymnaea stagnalis* during conditioned taste-aversion learning. *Neuroscience Letters*, 230(3), 179-182.
- Kokrashvili, Z., Mosinger, B., & Margolskee, R. F. (2009a). Tr1r3 and alpha-gustducin in gut regulate secretion of glucagon-like peptide-1. *Annals of the New York Academy of Sciences*, 1170, 91-94. doi:10.1111/j.1749-6632.2009.04485.x
- Kokrashvili, Z., Mosinger, B., & Margolskee, R. F. (2009b). Taste signaling elements expressed in gut enteroendocrine cells regulate nutrient-responsive secretion of gut hormones. *The American Journal of Clinical Nutrition*, 90(3), 822S-825S. doi:10.3945/ajcn.2009.27462T
- Kokrashvili, Z., Rodriguez, D., Yevshayeva, V., Zhou, H., Margolskee, R. F., & Mosinger, B. (2009). Release of endogenous opioids from duodenal enteroendocrine cells requires Trpm5. *Gastroenterology*, 137(2), 598-606, 606.e1-2. doi:10.1053/j.gastro.2009.02.070
- Kollack, S. S., & Newman, S. W. (1992). Mating behavior induces selective expression of Fos protein within the chemosensory pathways of the male Syrian hamster brain. *Neuroscience Letters*, 143(1-2), 223-228.
- Kollack-Walker, S., & Newman, S. W. (1995). Mating and agonistic behavior produce different patterns of Fos immunolabeling in the male Syrian hamster brain. *Neuroscience*, 66(3), 721-736.
- Kolonie, J. M., & Stern, J. M. (1995). Maternal aggression in rats: effects of olfactory bulbectomy, ZnSO₄-induced anosmia, and vomeronasal organ removal. *Hormones and Behavior*, 29(4), 492-518. doi:10.1006/hbeh.1995.1285
- Koppelhus, U., Hellung-Larsen, P., & Leick, V. (1994a). Physiological parameters affecting the chemosensory response of *Tetrahymena*. *The Biological Bulletin*, 187(1), 1-7.
- Koppelhus, U., Hellung-Larsen, P., & Leick, V. (1994b). An improved quantitative assay for chemokinesis in *Tetrahymena*. *The Biological Bulletin*, 187(1), 8-15.
- Korkala, O., & Waris, T. (1977). The acetylcholinesterase reaction and catecholamine fluorescence in the glomus cells of rat carotid body. *Experientia*, 33(10), 1363-1364.
- Kornreich, L., & Kleinhaus, A. L. (1999). Postingestive chemosensation and feeding by leeches. *Physiology & Behavior*, 67(5), 635-641.
- Korot'ko, G. F., & Voskanian, S. E. (2003). [Morphofunctional organization of pancreatic secretory activity (a new paradigm)]. *Èksperimental'naiâ I Klinicheskaiâ Gastroènterologiiâ = Experimental & Clinical Gastroenterology*, (3), 43-46, 117.
- Korthank, A. J., & Robinson, S. R. (1998). Effects of amniotic fluid on opioid activity and fetal responses to chemosensory stimuli. *Developmental Psychobiology*, 33(3), 235-248.
- Kosiol, C., Vinar, T., da Fonseca, R. R., Hubisz, M. J., Bustamante, C. D., Nielsen, R., & Siepel, A. (2008). Patterns of positive selection in six Mammalian genomes. *PLoS Genetics*, 4(8), e1000144. doi:10.1371/journal.pgen.1000144
- Kotrschal, K. (2000). Taste(s) and olfaction(s) in fish: a review of specialized sub-systems and central integration. *Pflügers Archiv: European Journal of Physiology*, 439(3 Suppl), R178-180.
- Kotrschal, K., & Finger, T. E. (1996). Secondary connections of the dorsal and ventral facial lobes in a teleost fish, the rockling (*Ciliata mustela*). *The Journal of Comparative Neurology*, 370(4), 415-426. doi:10.1002/(SICI)1096-9861(19960708)370:4<415::AID-CNE1>3.0.CO;2-7
- Kotrschal, K., Krautgartner, W. D., & Hansen, A. (1997). Ontogeny of the solitary chemosensory cells in the zebrafish, *Danio rerio*. *Chemical Senses*, 22(2), 111-118.

- Kotrschal, K., Royer, S., & Kinnamon, J. C. (1998). High-voltage electron microscopy and 3-D reconstruction of solitary chemosensory cells in the anterior dorsal fin of the Gadid fish *Ciliata mustela* (Teleostei). *Journal of Structural Biology*, *124*(1), 59-69. doi:10.1006/jsbi.1998.4046
- Kotrschal, K., & Whitear, M. (1988). Chemosensory anterior dorsal fin in rocklings (*Gaidropsarus* and *Ciliata*, Teleostei, Gadidae): somatotopic representation of the ramus recurrens facialis as revealed by transganglionic transport of HRP. *The Journal of Comparative Neurology*, *268*(1), 109-120. doi:10.1002/cne.902680111
- Kotrschal, K., Whitear, M., & Finger, T. E. (1993). Spinal and facial innervation of the skin in the gadid fish *Ciliata mustela* (Teleostei). *The Journal of Comparative Neurology*, *331*(3), 407-417. doi:10.1002/cne.903310310
- Kovac, M. P., Davis, W. J., Matera, E. M., Morielli, A., & Croll, R. P. (1985). Learning: neural analysis in the isolated brain of a previously trained mollusc, *Pleurobranchaea californica*. *Brain Research*, *331*(2), 275-284.
- Koyama, H., Nagai, T., Takeuchi, H., & Hillyard, S. D. (2001). The spinal nerves innervate putative chemosensory cells in the ventral skin of desert toads, *Bufo alvarius*. *Cell and Tissue Research*, *304*(2), 185-192.
- Köhidaï, L., & Csaba, G. (1998). Chemotaxis and chemotactic selection induced with cytokines (IL-8, RANTES and TNF-alpha) in the unicellular *Tetrahymena pyriformis*. *Cytokine*, *10*(7), 481-486. doi:10.1006/cyto.1997.0328
- Köhidaï, L., Soós, P., & Csaba, G. (1997). Effects of dipeptides containing the amino acid, proline on the chemotaxis of *Tetrahymena pyriformis*. Evolutionary conclusions on the formation of hormone receptors and hormones. *Cell Biology International*, *21*(6), 341-345. doi:10.1006/cbir.1997.0161
- Kratzing, J. E., & Woodall, P. F. (1988). The rostral nasal anatomy of two elephant shrews. *Journal of Anatomy*, *157*, 135-143.
- Krång, A. (2007). Naphthalene disrupts pheromone induced mate search in the amphipod *Corophium volutator* (Pallas). *Aquatic Toxicology (Amsterdam, Netherlands)*, *85*(1), 9-18. doi:10.1016/j.aquatox.2007.07.012
- Krång, A., & Ekerholm, M. (2006). Copper reduced mating behaviour in male shore crabs (*Carcinus maenas* (L.)). *Aquatic Toxicology (Amsterdam, Netherlands)*, *80*(1), 60-69. doi:10.1016/j.aquatox.2006.07.014
- Krång, A., & Rosenqvist, G. (2006). Effects of manganese on chemically induced food search behaviour of the Norway lobster, *Nephrops norvegicus* (L.). *Aquatic Toxicology (Amsterdam, Netherlands)*, *78*(3), 284-291. doi:10.1016/j.aquatox.2006.04.001
- Kream, R. M., Davis, B. J., Kawano, T., Margolis, F. L., & Macrides, F. (1984). Substance P and catecholaminergic expression in neurons of the hamster main olfactory bulb. *The Journal of Comparative Neurology*, *222*(1), 140-154. doi:10.1002/cne.902220112
- Kream, R. M., & Margolis, F. L. (1984). Olfactory marker protein: turnover and transport in normal and regenerating neurons. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *4*(3), 868-879.
- Krieger, J., & Breer, H. (1999). Olfactory reception in invertebrates. *Science (New York, N.Y.)*, *286*(5440), 720-723.
- Krieger, J., Klink, O., Mohl, C., Raming, K., & Breer, H. (2003). A candidate olfactory receptor subtype highly conserved across different insect orders. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, *189*(7), 519-526. doi:10.1007/s00359-003-0427-x
- Krieger, J., Mameli, M., & Breer, H. (1997). Elements of the olfactory signaling pathways in insect antennae. *Invertebrate Neuroscience: IN*, *3*(2-3), 137-144.
- Krieger, J., Schmitt, A., Löbel, D., Gudermann, T., Schultz, G., Breer, H., & Boekhoff, I. (1999).

- Selective activation of G protein subtypes in the vomeronasal organ upon stimulation with urine-derived compounds. *The Journal of Biological Chemistry*, 274(8), 4655-4662.
- Kriegsfeld, L. J., Hotchkiss, A. K., Demas, G. E., Silverman, A. J., Silver, R., & Nelson, R. J. (2003). Brain mast cells are influenced by chemosensory cues associated with estrus induction in female prairie voles (*Microtus ochrogaster*). *Hormones and Behavior*, 44(5), 377-384.
- Krishna, N. S., Getchell, M. L., & Getchell, T. V. (1994). Expression of the putative pheromone and odorant transporter vomeromodulin mRNA and protein in nasal chemosensory mucosae. *Journal of Neuroscience Research*, 39(3), 243-259. doi:10.1002/jnr.490390303
- Krishna, N. S., Getchell, M. L., Margolis, F. L., & Getchell, T. V. (1995). Differential expression of vomeromodulin and odorant-binding protein, putative pheromone and odorant transporters, in the developing rat nasal chemosensory mucosae. *Journal of Neuroscience Research*, 40(1), 54-71. doi:10.1002/jnr.490400107
- Krishna, N. S., Getchell, T. V., & Getchell, M. L. (1994). Differential expression of alpha, mu, and pi classes of glutathione S-transferases in chemosensory mucosae of rats during development. *Cell and Tissue Research*, 275(3), 435-450.
- Krishnan, B., Dryer, S. E., & Hardin, P. E. (1999). Circadian rhythms in olfactory responses of *Drosophila melanogaster*. *Nature*, 400(6742), 375-378. doi:10.1038/22566
- Kroner, C., Breer, H., Singer, A. G., & O'Connell, R. J. (1996). Pheromone-induced second messenger signaling in the hamster vomeronasal organ. *Neuroreport*, 7(18), 2989-2992.
- Krug, P. J. (2006). Defense of benthic invertebrates against surface colonization by larvae: a chemical arms race. *Progress in Molecular and Subcellular Biology*, 42, 1-53.
- Krug, P. J., & Zimmer, R. K. (2000). Developmental dimorphism and expression of chemosensory-mediated behavior: habitat selection by a specialist marine herbivore. *The Journal of Experimental Biology*, 203(Pt 11), 1741-1754.
- Kruger, L., Sternini, C., Brecha, N. C., & Mantyh, P. W. (1988). Distribution of calcitonin gene-related peptide immunoreactivity in relation to the rat central somatosensory projection. *The Journal of Comparative Neurology*, 273(2), 149-162. doi:10.1002/cne.902730203
- Kuang, D., Yao, Y., Maclean, D., Wang, M., Hampson, D. R., & Chang, B. S. W. (2006). Ancestral reconstruction of the ligand-binding pocket of Family C G protein-coupled receptors. *Proceedings of the National Academy of Sciences of the United States of America*, 103(38), 14050-14055. doi:10.1073/pnas.0604717103
- Kugimiya, S., Nishida, R., & Kuwahara, Y. (2003). Comparison of oligosaccharide compositions in male nuptial secretions of three cockroach species of the genus *Blattella*. *Journal of Chemical Ecology*, 29(9), 2183-2187.
- Kuhn, M. (2009). Function and dysfunction of mammalian membrane guanylyl cyclase receptors: lessons from genetic mouse models and implications for human diseases. *Handbook of Experimental Pharmacology*, (191), 47-69. doi:10.1007/978-3-540-68964-5_4
- Kulkarni, A. P., Getchell, T. V., & Getchell, M. L. (1994). Neuronal nitric oxide synthase is localized in extrinsic nerves regulating perireceptor processes in the chemosensory nasal mucosae of rats and humans. *The Journal of Comparative Neurology*, 345(1), 125-138. doi:10.1002/cne.903450110
- Kulkarni, N. H., Karavanich, C. A., Atchley, W. R., & Anholt, R. R. (2000). Characterization and differential expression of a human gene family of olfactomedin-related proteins. *Genetical Research*, 76(1), 41-50.
- Kulkarni-Narla, A., Getchell, T. V., & Getchell, M. L. (1997). Differential expression of manganese and copper-zinc superoxide dismutases in the olfactory and vomeronasal receptor neurons of rats during ontogeny. *The Journal of Comparative Neurology*, 381(1), 31-40.
- Kumar, A., Dudley, C. A., & Moss, R. L. (1999). Functional dichotomy within the vomeronasal system: distinct zones of neuronal activity in the accessory olfactory bulb correlate with sex-specific

- behaviors. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 19(20), RC32.
- Kumar, G. K., Kou, Y. R., Overholt, J. L., & Prabhakar, N. R. (2000). Involvement of substance P in neutral endopeptidase modulation of carotid body sensory responses to hypoxia. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 88(1), 195-202.
- Kuruvilla, H. G., & Hennessey, T. M. (1998). Purification and characterization of a novel chemorepellent receptor from *Tetrahymena thermophila*. *The Journal of Membrane Biology*, 162(1), 51-57.
- Kuruvilla, H. G., & Hennessey, T. M. (1999). Chemosensory responses of *Tetrahymena thermophila* to CB2, a 24-amino-acid fragment of lysozyme. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 184(5), 529-534.
- Kusakabe, T., Hayashida, Y., Matsuda, H., Gono, Y., Powell, F. L., Ellisman, M. H., Kawakami, T., et al. (1998). Hypoxic adaptation of the peptidergic innervation in the rat carotid body. *Brain Research*, 806(2), 165-174.
- Kusakabe, T., Kawakami, T., Tanabe, Y., Fujii, S., & Takenaka, T. (1994). Distribution of substance P-containing and catecholaminergic nerve fibers in the rabbit carotid body: an immunohistochemical study in combination with catecholamine fluorescent histochemistry. *Archives of Histology and Cytology*, 57(2), 193-199.
- Kuster, J. E., French, A. S., & Sanders, E. J. (1983). The effects of microtubule dissociating agents on the physiology and cytology of the sensory neuron in the femoral tactile spine of the cockroach, *periplaneta americana* L. *Proceedings of the Royal Society of London. Series B, Containing Papers of a Biological Character. Royal Society (Great Britain)*, 219(1217), 397-412.
- Kwak, J., Opiekun, M. C., Matsumura, K., Preti, G., Yamazaki, K., & Beauchamp, G. K. (2009). Major histocompatibility complex-regulated odortypes: peptide-free urinary volatile signals. *Physiology & Behavior*, 96(1), 184-188. doi:10.1016/j.physbeh.2008.10.003
- Kwon, J. Y., Dahanukar, A., Weiss, L. A., & Carlson, J. R. (2007). The molecular basis of CO₂ reception in *Drosophila*. *Proceedings of the National Academy of Sciences of the United States of America*, 104(9), 3574-3578. doi:10.1073/pnas.0700079104
- Labarca, P., & Bacigalupo, J. (1988). Ion channels from chemosensory olfactory neurons. *Journal of Bioenergetics and Biomembranes*, 20(5), 551-569.
- Labra, A., Brann, J. H., & Fadool, D. A. (2005). Heterogeneity of voltage- and chemosignal-activated response profiles in vomeronasal sensory neurons. *Journal of Neurophysiology*, 94(4), 2535-2548. doi:10.1152/jn.00490.2005
- Lahiri, S., Antosiewicz, J., & Pokorski, M. (2007). A common oxygen sensor regulates the sensory discharge and glomus cell HIF-1 α in the rat carotid body. *Journal of Physiology and Pharmacology: An Official Journal of the Polish Physiological Society*, 58 Suppl 5(Pt 1), 327-333.
- Lahiri, S., Buerk, D. G., Chugh, D., Osanai, S., & Mokashi, A. (1995). Reciprocal photolabile O₂ consumption and chemoreceptor excitation by carbon monoxide in the cat carotid body: evidence for cytochrome a₃ as the primary O₂ sensor. *Brain Research*, 684(2), 194-200.
- Lahiri, S., Buerk, D. G., Osanai, S., Mokashi, A., & Chugh, D. K. (1997). Effect of CO on VO₂ of carotid body and chemoreception with and without Ca²⁺. *Journal of the Autonomic Nervous System*, 66(1-2), 1-6.
- Lahiri, S., & Data, P. G. (1992). Chemosensitivity and regulation of ventilation during sleep at high altitudes. *International Journal of Sports Medicine*, 13 Suppl 1, S31-33. doi:10.1055/s-2007-1024585
- Lahiri, S., Ehleben, W., & Acker, H. (1999). Chemoreceptor discharges and cytochrome redox changes of the rat carotid body: role of heme ligands. *Proceedings of the National Academy of Sciences of the United States of America*, 96(16), 9427-9432.

- Lahiri, S., Huang, W. X., & Mokashi, A. (1991). Carotid chemosensory timing effects on cervical sympathetic discharges in the cat. *Journal of the Autonomic Nervous System*, 33(1), 65-78.
- Lahiri, S., Iturriaga, R., Mokashi, A., Botré, F., Chugh, D., & Osanai, S. (1996). Adaptation to hypercapnia vs. intracellular pH in cat carotid body: responses in vitro. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 80(4), 1090-1099.
- Lahiri, S., Iturriaga, R., Mokashi, A., Ray, D. K., & Chugh, D. (1993). CO reveals dual mechanisms of O₂ chemoreception in the cat carotid body. *Respiration Physiology*, 94(2), 227-240.
- Lahiri, S., Mokashi, A., Huang, W., Sherpa, A. K., & Di Giulio, C. (1989). Stimulus interaction between CO₂ and almitrine in the cat carotid chemoreceptors. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 67(1), 232-238.
- Lahiri, S., Mokashi, A., Shirahata, M., & Andronikou, S. (1990). Chemical respiratory control in chronically hyperoxic cats. *Respiration Physiology*, 82(2), 201-215.
- Lahiri, S., Mulligan, E., Andronikou, S., Shirahata, M., & Mokashi, A. (1987). Carotid body chemosensory function in prolonged normobaric hyperoxia in the cat. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 62(5), 1924-1931.
- Lahiri, S., Osanai, S., Buerk, D. G., Mokashi, A., & Chugh, D. K. (1996). Thapsigargin enhances carotid body chemosensory discharge in response to hypoxia in zero [Ca²⁺]_i: evidence for intracellular Ca²⁺ release. *Brain Research*, 709(1), 141-144.
- Lahiri, S., Roy, A., Rozanov, C., & Mokashi, A. (1998). K⁺-current modulated by PO₂ in type I cells in rat carotid body is not a chemosensor. *Brain Research*, 794(1), 162-165.
- Lahiri, S., Rumsey, W. L., Wilson, D. F., & Iturriaga, R. (1993). Contribution of in vivo microvascular PO₂ in the cat carotid body chemotransduction. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 75(3), 1035-1043.
- Lahiri, S., Smatresk, N., Pokorski, M., Barnard, P., & Mokashi, A. (1983). Efferent inhibition of carotid body chemoreception in chronically hypoxic cats. *The American Journal of Physiology*, 245(5 Pt 1), R678-683.
- Lahiri, S., Smatresk, N., Pokorski, M., Barnard, P., Mokashi, A., & McGregor, K. H. (1984). Dopaminergic efferent inhibition of carotid body chemoreceptors in chronically hypoxic cats. *The American Journal of Physiology*, 247(1 Pt 2), R24-28.
- Laing, D. G. (1987). Coding of chemosensory stimulus mixtures. *Annals of the New York Academy of Sciences*, 510, 61-66.
- Lancet, D., Greer, C. A., Kauer, J. S., & Shepherd, G. M. (1982). Mapping of odor-related neuronal activity in the olfactory bulb by high-resolution 2-deoxyglucose autoradiography. *Proceedings of the National Academy of Sciences of the United States of America*, 79(2), 670-674.
- Landin, A. M., Kim, J. W., & Chaudhari, N. (2005). Liposome-mediated transfection of mature taste cells. *Journal of Neurobiology*, 65(1), 12-21. doi:10.1002/neu.20157
- Langridge, K. V., Broom, M., & Osorio, D. (2007). Selective signalling by cuttlefish to predators. *Current Biology: CB*, 17(24), R1044-1045. doi:10.1016/j.cub.2007.10.028
- Lanjuin, A., & Sengupta, P. (2002). Regulation of chemosensory receptor expression and sensory signaling by the KIN-29 Ser/Thr kinase. *Neuron*, 33(3), 369-381.
- Lanjuin, A., & Sengupta, P. (2004). Specification of chemosensory neuron subtype identities in *Caenorhabditis elegans*. *Current Opinion in Neurobiology*, 14(1), 22-30. doi:10.1016/j.conb.2004.01.006
- Lanjuin, A., VanHoven, M. K., Bargmann, C. I., Thompson, J. K., & Sengupta, P. (2003). Otx/otd homeobox genes specify distinct sensory neuron identities in *C. elegans*. *Developmental Cell*, 5(4), 621-633.
- Lanuza, E., & Halpern, M. (1998). Efferents and centrifugal afferents of the main and accessory olfactory bulbs in the snake *Thamnophis sirtalis*. *Brain, Behavior and Evolution*, 51(1), 1-22.
- Lanuza, E., Novejarque, A., Martínez-Ricós, J., Martínez-Hernández, J., Agustín-Pavón, C., &

- Martínez-García, F. (2008). Sexual pheromones and the evolution of the reward system of the brain: the chemosensory function of the amygdala. *Brain Research Bulletin*, 75(2-4), 460-466. doi:10.1016/j.brainresbull.2007.10.042
- Lartigue, A., Campanacci, V., Roussel, A., Larsson, A. M., Jones, T. A., Tegoni, M., & Cambillau, C. (2002). X-ray structure and ligand binding study of a moth chemosensory protein. *The Journal of Biological Chemistry*, 277(35), 32094-32098. doi:10.1074/jbc.M204371200
- Laska, M., Freist, P., & Krause, S. (2007). Which senses play a role in nonhuman primate food selection? A comparison between squirrel monkeys and spider monkeys. *American Journal of Primatology*, 69(3), 282-294. doi:10.1002/ajp.20345
- Lavagnino, N. J., Anholt, R. R. H., & Fanara, J. J. (2008). Variation in genetic architecture of olfactory behaviour among wild-derived populations of *Drosophila melanogaster*. *Journal of Evolutionary Biology*, 21(4), 988-996. doi:10.1111/j.1420-9101.2008.01546.x
- LaVinka, P. C., Brand, A., Landau, V. J., Wirtshafter, D., & Park, T. J. (2009). Extreme tolerance to ammonia fumes in African naked mole-rats: animals that naturally lack neuropeptides from trigeminal chemosensory nerve fibers. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 195(5), 419-427. doi:10.1007/s00359-009-0420-0
- Lawson, E. E. (1982). Recovery from central apnea: effect of stimulus duration and end-tidal CO₂ partial pressure. *Journal of Applied Physiology: Respiratory, Environmental and Exercise Physiology*, 53(1), 105-109.
- Layalle, S., Coessens, E., Ghysen, A., & Dambly-Chaudière, C. (2005). Smooth, a hnRNP encoding gene, controls axonal navigation in *Drosophila*. *Genes to Cells: Devoted to Molecular & Cellular Mechanisms*, 10(2), 119-125. doi:10.1111/j.1365-2443.2005.00822.x
- Layalle, S., Ragone, G., Giangrande, A., Ghysen, A., & Dambly-Chaudière, C. (2004). Control of bract formation in *Drosophila*: *poxn*, *kek1*, and the EGF-R pathway. *Genesis (New York, N.Y.: 2000)*, 39(4), 246-255. doi:10.1002/gene.20052
- Lazar, J., Greenwood, D. R., Rasmussen, L. E. L., & Prestwich, G. D. (2002). Molecular and functional characterization of an odorant binding protein of the Asian elephant, *Elephas maximus*: implications for the role of lipocalins in mammalian olfaction. *Biochemistry*, 41(39), 11786-11794.
- Lazar, J., Rasmussen, L. E. L., Greenwood, D. R., Bang, I., & Prestwich, G. D. (2004). Elephant albumin: a multipurpose pheromone shuttle. *Chemistry & Biology*, 11(8), 1093-1100. doi:10.1016/j.chembiol.2004.05.018
- Lazard, D., Barak, Y., & Lancet, D. (1989). Bovine olfactory cilia preparation: thiol-modulated odorant-sensitive adenylyl cyclase. *Biochimica Et Biophysica Acta*, 1013(1), 68-72.
- Lazarov, N., Rozloznik, M., Reindl, S., Rey-Ares, V., Dutschmann, M., & Gratzl, M. (2006). Expression of histamine receptors and effect of histamine in the rat carotid body chemoafferent pathway. *The European Journal of Neuroscience*, 24(12), 3431-3444. doi:10.1111/j.1460-9568.2006.05241.x
- Lánský, P., Krivan, V., & Rospars, J. P. (2001). Ligand-receptor interaction under periodic stimulation: a modeling study of concentration chemoreceptors. *European Biophysics Journal: EBJ*, 30(2), 110-120.
- Leadbeater, E., & Chittka, L. (2007). Social learning in insects--from miniature brains to consensus building. *Current Biology: CB*, 17(16), R703-713. doi:10.1016/j.cub.2007.06.012
- Leal, W. S., & Ishida, Y. (2008). GP-9s are ubiquitous proteins unlikely involved in olfactory mediation of social organization in the red imported fire ant, *Solenopsis invicta*. *PloS One*, 3(11), e3762. doi:10.1371/journal.pone.0003762
- Leal, W. S., Ishida, Y., Pelletier, J., Xu, W., Rayo, J., Xu, X., & Ames, J. B. (2009). Olfactory proteins mediating chemical communication in the navel orangeworm moth, *Amyelois transitella*. *PloS One*, 4(9), e7235. doi:10.1371/journal.pone.0007235

- Ledent, V., Gaillard, F., Gautier, P., Ghysen, A., & Dambly-Chaudière, C. (1998). Expression and function of tap in the gustatory and olfactory organs of *Drosophila*. *The International Journal of Developmental Biology*, 42(2), 163-170.
- Lee, M., & Salvaterra, P. M. (2002). Abnormal chemosensory jump 6 is a positive transcriptional regulator of the cholinergic gene locus in *Drosophila* olfactory neurons. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 22(13), 5291-5299. doi:20026531
- Lee, S. J., Mammen, A., Kim, E. J., Kim, S. Y., Park, Y. J., Park, M., Han, H. S., et al. (2008). The vomeronasal organ and adjacent glands express components of signaling cascades found in sensory neurons in the main olfactory system. *Molecules and Cells*, 26(5), 503-513.
- Lehman, M. N., & Winans, S. S. (1982). Vomeronasal and olfactory pathways to the amygdala controlling male hamster sexual behavior: autoradiographic and behavioral analyses. *Brain Research*, 240(1), 27-41.
- Lehman, M. N., Winans, S. S., & Powers, J. B. (1980). Medial nucleus of the amygdala mediates chemosensory control of male hamster sexual behavior. *Science (New York, N.Y.)*, 210(4469), 557-560.
- Lei, H., Christensen, T. A., & Hildebrand, J. G. (2004). Spatial and temporal organization of ensemble representations for different odor classes in the moth antennal lobe. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 24(49), 11108-11119. doi:10.1523/JNEUROSCI.3677-04.2004
- Leick, V., & Hellung-Larsen, P. (1992). Chemosensory behaviour of *Tetrahymena*. *BioEssays: News and Reviews in Molecular, Cellular and Developmental Biology*, 14(1), 61-66. doi:10.1002/bies.950140113
- Leinders-Zufall, T., Brennan, P., Widmayer, P., S, P. C., Maul-Pavicic, A., Jäger, M., Li, X., et al. (2004). MHC class I peptides as chemosensory signals in the vomeronasal organ. *Science (New York, N.Y.)*, 306(5698), 1033-1037. doi:10.1126/science.1102818
- Leinders-Zufall, T., Cockerham, R. E., Michalakis, S., Biel, M., Garbers, D. L., Reed, R. R., Zufall, F., et al. (2007). Contribution of the receptor guanylyl cyclase GC-D to chemosensory function in the olfactory epithelium. *Proceedings of the National Academy of Sciences of the United States of America*, 104(36), 14507-14512. doi:10.1073/pnas.0704965104
- Leise, E. M. (1996). Selective retention of the fluorescent dye DASPEI in a larval gastropod mollusc after paraformaldehyde fixation. *Microscopy Research and Technique*, 33(6), 496-500. doi:10.1002/(SICI)1097-0029(19960415)33:6<496::AID-JEMT4>3.0.CO;2-J
- Leise, E. M., & Hadfield, M. G. (2000). An inducer of molluscan metamorphosis transforms activity patterns in a larval nervous system. *The Biological Bulletin*, 199(3), 241-250.
- Leonhardt, S. D., Brandstaetter, A. S., & Kleineidam, C. J. (2007). Reformation process of the neuronal template for nestmate-recognition cues in the carpenter ant *Camponotus floridanus*. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 193(9), 993-1000. doi:10.1007/s00359-007-0252-8
- Leonovich, S. A. (2009). [Fine structural features of the sensory system in the ixodid tick *Dermacentor niveus* (Parasitiformes, Ixodidae)]. *Parazitologiya*, 43(1), 3-11.
- Lepri, J. J., & Wysocki, C. J. (1987). Removal of the vomeronasal organ disrupts the activation of reproduction in female voles. *Physiology & Behavior*, 40(3), 349-355.
- Leroy, B., Toubreau, G., Falmagne, P., & Wattiez, R. (2006). Identification and characterization of new protein chemoattractants in the frog skin secretome. *Molecular & Cellular Proteomics: MCP*, 5(11), 2114-2123. doi:10.1074/mcp.M600205-MCP200
- Lessing, D., & Carlson, J. R. (1999). Chemosensory behavior: the path from stimulus to response. *Current Opinion in Neurobiology*, 9(6), 766-771.
- Levandowsky, M., & Hauser, D. C. (1978). Chemosensory responses of swimming algae and protozoa. *International*

Cytology, 53, 145-210.

- Levanti, M. B., Montalbano, G., Laurà, R., Ciriaco, E., Cobo, T., García-Suarez, O., Germanà, A., et al. (2008). Calretinin in the peripheral nervous system of the adult zebrafish. *Journal of Anatomy*, 212(1), 67-71. doi:10.1111/j.1469-7580.2007.00836.x
- Levine, R. B. (1984). Changes in neuronal circuits during insect metamorphosis. *The Journal of Experimental Biology*, 112, 27-44.
- Levy, M., Blumberg, S., & Susswein, A. J. (1997). The rhinophores sense pheromones regulating multiple behaviors in *Aplysia fasciata*. *Neuroscience Letters*, 225(2), 113-116.
- Lewis, J. A., & Hodgkin, J. A. (1977). Specific neuroanatomical changes in chemosensory mutants of the nematode *Caenorhabditis elegans*. *The Journal of Comparative Neurology*, 172(3), 489-510. doi:10.1002/cne.901720306
- Lévai, O., Feistel, T., Breer, H., & Strotmann, J. (2006). Cells in the vomeronasal organ express odorant receptors but project to the accessory olfactory bulb. *The Journal of Comparative Neurology*, 498(4), 476-490. doi:10.1002/cne.21067
- Lévai, O., & Strotmann, J. (2003). Projection pattern of nerve fibers from the septal organ: DiI-tracing studies with transgenic OMP mice. *Histochemistry and Cell Biology*, 120(6), 483-492. doi:10.1007/s00418-003-0594-4
- Li, J., Zhu, X., Boston, R., Ashton, F. T., Gamble, H. R., & Schad, G. A. (2000). Thermotaxis and thermosensory neurons in infective larvae of *Haemonchus contortus*, a passively ingested nematode parasite. *The Journal of Comparative Neurology*, 424(1), 58-73.
- Li, J., Roy, A., Mokashi, A., & Lahiri, S. (2002). CO-induced K(+) currents in rat glomus cells are insensitive to light unlike carotid body neural discharge and Vo(O₂). *Respiratory Physiology & Neurobiology*, 131(3), 285-290.
- Li, S., Picimbon, J., Ji, S., Kan, Y., Chuanling, Q., Zhou, J., & Pelosi, P. (2008). Multiple functions of an odorant-binding protein in the mosquito *Aedes aegypti*. *Biochemical and Biophysical Research Communications*, 372(3), 464-468. doi:10.1016/j.bbrc.2008.05.064
- Li, Y., Perruccio, E., Zhang, X., & Kleinhaus, A. L. (2001). Bitter substances suppress afferent responses to an appetitive mixture: evidence for peripheral integration of chemosensory stimuli. *Journal of Neurobiology*, 49(4), 255-263.
- Li, Z., Shen, Z., Zhou, J., & Field, L. (2003). Bioinformatics-based identification of chemosensory proteins in African Malaria Mosquito, *Anopheles gambiae*. *Genomics, Proteomics & Bioinformatics / Beijing Genomics Institute*, 1(4), 288-298.
- Libants, S., Carr, K., Wu, H., Teeter, J. H., Chung-Davidson, Y., Zhang, Z., Wilkerson, C., et al. (2009). The sea lamprey *Petromyzon marinus* genome reveals the early origin of several chemosensory receptor families in the vertebrate lineage. *BMC Evolutionary Biology*, 9, 180. doi:10.1186/1471-2148-9-180
- Liberles, S. D. (2009). Trace amine-associated receptors are olfactory receptors in vertebrates. *Annals of the New York Academy of Sciences*, 1170, 168-172. doi:10.1111/j.1749-6632.2009.04014.x
- Liberles, S. D., & Buck, L. B. (2006). A second class of chemosensory receptors in the olfactory epithelium. *Nature*, 442(7103), 645-650. doi:10.1038/nature05066
- Liberles, S. D., Horowitz, L. F., Kuang, D., Contos, J. J., Wilson, K. L., Siltberg-Liberles, J., Liberles, D. A., et al. (2009). Formyl peptide receptors are candidate chemosensory receptors in the vomeronasal organ. *Proceedings of the National Academy of Sciences of the United States of America*, 106(24), 9842-9847. doi:10.1073/pnas.0904464106
- Lilly, M., & Carlson, J. (1990). smellblind: a gene required for *Drosophila* olfaction. *Genetics*, 124(2), 293-302.
- Liman, E. R., & Corey, D. P. (1996). Electrophysiological characterization of chemosensory neurons from the mouse vomeronasal organ. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 16(15), 4625-4637.

- Lin, H., Mann, K. J., Starostina, E., Kinser, R. D., & Pikielny, C. W. (2005). A *Drosophila* DEG/ENaC channel subunit is required for male response to female pheromones. *Proceedings of the National Academy of Sciences of the United States of America*, *102*(36), 12831-12836. doi:10.1073/pnas.0506420102
- Lin, L., Wakabayashi, T., Oikawa, T., Sato, T., Ogurusu, T., & Shingai, R. (2006). *Caenorhabditis elegans* mutants having altered preference of chemotaxis behavior during simultaneous presentation of two chemoattractants. *Bioscience, Biotechnology, and Biochemistry*, *70*(11), 2754-2758.
- Lin, W., Ezekwe, E. A. D., Zhao, Z., Liman, E. R., & Restrepo, D. (2008). TRPM5-expressing microvillous cells in the main olfactory epithelium. *BMC Neuroscience*, *9*, 114. doi:10.1186/1471-2202-9-114
- Lin, W., Ogura, T., Margolskee, R. F., Finger, T. E., & Restrepo, D. (2008). TRPM5-expressing solitary chemosensory cells respond to odorous irritants. *Journal of Neurophysiology*, *99*(3), 1451-1460. doi:10.1152/jn.01195.2007
- van der Linden, A. M., Nolan, K. M., & Sengupta, P. (2007). KIN-29 SIK regulates chemoreceptor gene expression via an MEF2 transcription factor and a class II HDAC. *The EMBO Journal*, *26*(2), 358-370. doi:10.1038/sj.emboj.7601479
- Lindsay, S. M., Riordan, T. J., & Forest, D. (2004). Identification and activity-dependent labeling of peripheral sensory structures on a spionid polychaete. *The Biological Bulletin*, *206*(2), 65-77.
- Lindsay, S. M., & Vogt, R. G. (2004). Behavioral responses of newly hatched zebrafish (*Danio rerio*) to amino acid chemostimulants. *Chemical Senses*, *29*(2), 93-100.
- Ling, G., Gu, J., Genter, M. B., Zhuo, X., & Ding, X. (2004). Regulation of cytochrome P450 gene expression in the olfactory mucosa. *Chemico-Biological Interactions*, *147*(3), 247-258. doi:10.1016/j.cbi.2004.02.003
- Linnoila, R. I. (2006). Functional facets of the pulmonary neuroendocrine system. *Laboratory Investigation; a Journal of Technical Methods and Pathology*, *86*(5), 425-444. doi:10.1038/labinvest.3700412
- Liscia, A., Angioy, A. M., Crnjar, R., Pietra, P., & Stoffolano, J. G. (1982). Electrophysiological activity of labellar and tarsal chemosensilla of *Hybomitra lasiophthalma* (Macquart) to stimulation with NaCl and various sugars. *Bollettino Della Società Italiana Di Biologia Sperimentale*, *58*(11), 666-672.
- Liscia, A., Crnjar, R., Angioy, A. M., Pietra, P., & Stoffolano, J. G. (1982). Ovipositor chemosensilla in *Tabanus nigrovittatus* (Macq.) *Chrysops fuliginosus* (Wied.), and *Rhagoletis pomonella* (Walsh). *Bollettino Della Società Italiana Di Biologia Sperimentale*, *58*(20), 1325-1329.
- Liscia, A., Solari, P., Majone, R., Tomassini Barbarossa, I., & Crnjar, R. (1997). Taste reception mechanisms in the blowfly: evidence of amiloride-sensitive and insensitive receptor sites. *Physiology & Behavior*, *62*(4), 875-879.
- Litmanovitz, I., Martin, R. J., Haxhiu, M. A., Cattarossi, L., Haxhiu-Poskurica, B., & Carlo, W. A. (1993). Regulation of expiratory muscles during postnatal development in anesthetized piglets. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *74*(6), 2655-2660.
- Liubimova, Z. V., & Esakov, A. I. (1977). [Development of the accessory apparatus of the chemosensitive structures of the rat tongue during ontogenesis according to scanning electron microscope findings]. *Biulleten' Eksperimental'noi Biologii I Meditsiny*, *84*(10), 499-502.
- Liubimova, Z. V., Subrakova, S. A., & Nikitina, A. A. (1992). [The chemosensory support of feeding behavior in precocial and altricial mammals during ontogeny]. *Biulleten' Eksperimental'noi Biologii I Meditsiny*, *114*(12), 563-565.
- Llados, F., & Zapata, P. (1978a). Effects of dopamine analogues and antagonists on carotid body chemosensors in situ. *The Journal of Physiology*, *274*, 487-499.
- Llados, F., & Zapata, P. (1978b). Effects of adrenoceptor stimulating and blocking agents on carotid

- body chemosensory inhibition. *The Journal of Physiology*, 274, 501-509.
- Llona, I., & Eugenin, J. (2005). Central actions of somatostatin in the generation and control of breathing. *Biological Research*, 38(4), 347-352.
- London, J. A., & Gillette, R. (1984). Functional roles and circuitry in an inhibitory pathway to feeding command neurones in Pleurobranchaea. *The Journal of Experimental Biology*, 113, 423-446.
- Long, D. J., Devantier, H. R., Brennan, F. X., Bryant, R. W., Salemme, F. R., & Palmer, R. K. (2010). Pharmacologic antagonism of the oral aversive taste-directed response to capsaicin in a mouse brief access taste aversion assay. *The Journal of Pharmacology and Experimental Therapeutics*, 332(2), 525-530. doi:10.1124/jpet.109.155416
- Loos, N., Haouzi, P., & Marchal, F. (1998). Mechanisms of ventilatory inhibition by exogenous dopamine in cats. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 84(4), 1131-1137.
- Loyola, H., Fadic, R., Cardenas, H., Larrain, C., & Zapata, P. (1991). Effects of body temperature on chemosensory activity of the cat carotid body in situ. *Neuroscience Letters*, 132(2), 251-254.
- López, P., & Martín, J. (2009a). Potential chemosignals associated with male identity in the amphibiaenian *Blanus cinereus*. *Chemical Senses*, 34(6), 479-486. doi:10.1093/chemse/bjp021
- López, P., & Martín, J. (2009b). Potential chemosignals associated with male identity in the amphibiaenian *Blanus cinereus*. *Chemical Senses*, 34(6), 479-486. doi:10.1093/chemse/bjp021
- López, P., Moreira, P. L., & Martín, J. (2009). Chemical polymorphism and chemosensory recognition between *Iberolacerta monticola* lizard color morphs. *Chemical Senses*, 34(8), 723-731. doi:10.1093/chemse/bjp059
- Lu, D., Li, X., Liu, X., & Zhang, Q. (2007). Identification and molecular cloning of putative odorant-binding proteins and chemosensory protein from the bethylid wasp, *Scleroderma guani* Xiao et Wu. *Journal of Chemical Ecology*, 33(7), 1359-1375. doi:10.1007/s10886-007-9310-5
- Lu, X. Y., Gross, R. E., Bagchi, S., & Rubin, C. S. (1990). Cloning, structure, and expression of the gene for a novel regulatory subunit of cAMP-dependent protein kinase in *Caenorhabditis elegans*. *The Journal of Biological Chemistry*, 265(6), 3293-3303.
- Lucero, M. T., Huang, W., & Dang, T. (2000). Immunohistochemical evidence for the Na⁺/Ca²⁺ exchanger in squid olfactory neurons. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 355(1401), 1215-1218. doi:10.1098/rstb.2000.0670
- Lundquist, E. A., & Herman, R. K. (1994). The *mec-8* gene of *Caenorhabditis elegans* affects muscle and sensory neuron function and interacts with three other genes: *unc-52*, *smu-1* and *smu-2*. *Genetics*, 138(1), 83-101.
- Lundquist, E. A., Herman, R. K., Rogalski, T. M., Mullen, G. P., Moerman, D. G., & Shaw, J. E. (1996). The *mec-8* gene of *C. elegans* encodes a protein with two RNA recognition motifs and regulates alternative splicing of *unc-52* transcripts. *Development (Cambridge, England)*, 122(5), 1601-1610.
- Luo, L., Gabel, C. V., Ha, H., Zhang, Y., & Samuel, A. D. T. (2008). Olfactory behavior of swimming *C. elegans* analyzed by measuring motile responses to temporal variations of odorants. *Journal of Neurophysiology*, 99(5), 2617-2625. doi:10.1152/jn.00053.2008
- Luszyk, D., Eggert, F., Ferstl, R., Blank, M., & Müller-Ruchholtz, W. (1989). [Exchange of the hematopoietic system changes chemosensory identity]. *Zeitschrift Für Experimentelle Und Angewandte Psychologie*, 36(2), 239-250.
- Luu, P., Acher, F., Bertrand, H., Fan, J., & Ngai, J. (2004). Molecular determinants of ligand selectivity in a vertebrate odorant receptor. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 24(45), 10128-10137. doi:10.1523/JNEUROSCI.3117-04.2004
- Ma, D., Allen, N. D., Van Bergen, Y. C. H., Jones, C. M. E., Baum, M. J., Keverne, E. B., & Brennan, P. A. (2002). Selective ablation of olfactory receptor neurons without functional impairment of vomeronasal receptor neurons in OMP-ntr transgenic mice. *The European Journal of Neuroscience*, 16(12), 2317-2323.

- Ma, M. (2007). Encoding olfactory signals via multiple chemosensory systems. *Critical Reviews in Biochemistry and Molecular Biology*, 42(6), 463-480. doi:10.1080/10409230701693359
- Ma, M., Grosmaître, X., Iwema, C. L., Baker, H., Greer, C. A., & Shepherd, G. M. (2003). Olfactory signal transduction in the mouse septal organ. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 23(1), 317-324.
- Mace, O. J., Affleck, J., Patel, N., & Kellett, G. L. (2007). Sweet taste receptors in rat small intestine stimulate glucose absorption through apical GLUT2. *The Journal of Physiology*, 582(Pt 1), 379-392. doi:10.1113/jphysiol.2007.130906
- MacFarlane, P. M., Wilkerson, J. E. R., Lovett-Barr, M. R., & Mitchell, G. S. (2008). Reactive oxygen species and respiratory plasticity following intermittent hypoxia. *Respiratory Physiology & Neurobiology*, 164(1-2), 263-271. doi:10.1016/j.resp.2008.07.008
- Mackay-Sim, A., & Rose, J. D. (1986). Removal of the vomeronasal organ impairs lordosis in female hamsters: effect is reversed by luteinising hormone-releasing hormone. *Neuroendocrinology*, 42(6), 489-493.
- Macrides, F., Clancy, A. N., Singer, A. G., & Agosta, W. C. (1984). Male hamster investigatory and copulatory responses to vaginal discharge: an attempt to impart sexual significance to an arbitrary chemosensory stimulus. *Physiology & Behavior*, 33(4), 627-632.
- Macrides, F., Firl, A. C., Schneider, S. P., Bartke, A., & Stein, D. G. (1976). Effects of one-stage or serial transections of the lateral olfactory tracts on behavior and plasma testosterone levels in male hamsters. *Brain Research*, 109(1), 97-109.
- Maggio, J. C., Maggio, J. H., & Whitney, G. (1983). Experience-based vocalization of male mice to female chemosignals. *Physiology & Behavior*, 31(3), 269-272.
- Maillet, E. L., Margolskee, R. F., & Mosinger, B. (2009). Phenoxy herbicides and fibrates potently inhibit the human chemosensory receptor subunit T1R3. *Journal of Medicinal Chemistry*, 52(21), 6931-6935. doi:10.1021/jm900823s
- Mainen, Z. F. (2006). Behavioral analysis of olfactory coding and computation in rodents. *Current Opinion in Neurobiology*, 16(4), 429-434. doi:10.1016/j.conb.2006.06.003
- Malaka, R., Ragg, T., & Hammer, M. (1995). Kinetic models of odor transduction implemented as artificial neural networks. Simulations of complex response properties of honeybee olfactory neurons. *Biological Cybernetics*, 73(3), 195-207.
- Maleszka, J., Forêt, S., Saint, R., & Maleszka, R. (2007). RNAi-induced phenotypes suggest a novel role for a chemosensory protein CSP5 in the development of embryonic integument in the honeybee (*Apis mellifera*). *Development Genes and Evolution*, 217(3), 189-196. doi:10.1007/s00427-006-0127-y
- Maleszka, R., & Helliwell, P. (2001). Effect of juvenile hormone on short-term olfactory memory in young honeybees (*Apis mellifera*). *Hormones and Behavior*, 40(3), 403-408. doi:10.1006/hbeh.2001.1705
- Malpel, S., Merlin, C., François, M., & Jacquin-Joly, E. (2008). Molecular identification and characterization of two new Lepidoptera chemoreceptors belonging to the *Drosophila melanogaster* OR83b family. *Insect Molecular Biology*, 17(5), 587-596. doi:10.1111/j.1365-2583.2008.00830.x
- Mameli, M., Tuccini, A., Mazza, M., Petacchi, R., & Pelosi, P. (1996). Soluble proteins in chemosensory organs of phasmids. *Insect Biochemistry and Molecular Biology*, 26(8-9), 875-882.
- Manteifel, I. B., Kruzhalov, N. B., Kiseleva, E. I., & Margolis, S. E. (1989). [Sensitivity of chemosensory systems of amphibia and reptiles to amino acids]. *Zhurnal Evoliutsionnoï Biokhimii I Fiziologii*, 25(2), 246-252.
- Maras, P. M., & Petrusis, A. (2008). The posteromedial cortical amygdala regulates copulatory behavior, but not sexual odor preference, in the male Syrian hamster (*Mesocricetus auratus*).

- Neuroscience*, 156(3), 425-435. doi:10.1016/j.neuroscience.2008.08.004
- Maras, P. M., & Petrulis, A. (2010). Lesions that functionally disconnect the anterior and posterodorsal sub-regions of the medial amygdala eliminate opposite-sex odor preference in male Syrian hamsters (*Mesocricetus auratus*). *Neuroscience*, 165(4), 1052-1062. doi:10.1016/j.neuroscience.2009.11.024
- Maras, P. M., & Petrulis, A. (2006). Chemosensory and steroid-responsive regions of the medial amygdala regulate distinct aspects of opposite-sex odor preference in male Syrian hamsters. *The European Journal of Neuroscience*, 24(12), 3541-3552. doi:10.1111/j.1460-9568.2006.05216.x
- Marchal, F., Bairam, A., Haouzi, P., Crance, J. P., Di Giulio, C., Vert, P., & Lahiri, S. (1992). Carotid chemoreceptor response to natural stimuli in the newborn kitten. *Respiration Physiology*, 87(2), 183-193.
- Marchal, F., Bairam, A., Haouzi, P., Crance, J. P., & Lahiri, S. (1993). The carotid chemosensory response to hypoxia in the developing kitten. *Advances in Experimental Medicine and Biology*, 337, 415-419.
- Marchal, F., Bairam, A., Haouzi, P., Hascoet, J. M., Crance, J. P., Vert, P., & Lahiri, S. (1992). Dual responses of carotid chemosensory afferents to dopamine in the newborn kitten. *Respiration Physiology*, 90(2), 173-183.
- Marchese, S., Angeli, S., Andolfo, A., Scaloni, A., Brandazza, A., Mazza, M., Picimbon, J., et al. (2000). Soluble proteins from chemosensory organs of *Eurycantha calcarata* (Insects, Phasmatodea). *Insect Biochemistry and Molecular Biology*, 30(11), 1091-1098.
- Marek, W., & Prabhakar, N. R. (1985). Electrical stimulation of arterial and central chemosensory afferents at different times in the respiratory cycle of the cat: II. Responses of respiratory muscles and their motor nerves. *Pflügers Archiv: European Journal of Physiology*, 403(4), 422-428.
- Margalit, T., & Lancet, D. (1993). Expression of olfactory receptor and transduction genes during rat development. *Brain Research. Developmental Brain Research*, 73(1), 7-16.
- Margolis, F. L., Kudrycki, K., Stein-Izsak, C., Grillo, M., & Akeson, R. (1993). From genotype to olfactory neuron phenotype: the role of the Olf-1-binding site. *Ciba Foundation Symposium*, 179, 3-20; discussion 20-26.
- Margolis, S. E. (1988). [Electrophysiology of the chemosensory systems and the behavioral analysis of caudate amphibia]. *Zhurnal Obshchei Biologii*, 49(1), 84-94.
- Markham, C. M., Norvelle, A., & Huhman, K. L. (2009). Role of the bed nucleus of the stria terminalis in the acquisition and expression of conditioned defeat in Syrian hamsters. *Behavioural Brain Research*, 198(1), 69-73. doi:10.1016/j.bbr.2008.10.022
- Marshall, D. A., & Maruniak, J. A. (1986). Maser's organ responds to odorants. *Brain Research*, 366(1-2), 329-332.
- Martin, R. L., & Sinclair, J. D. (1990). Kainic acid on the rat ventral medullary surface depresses hypoxic and hypercapnic ventilatory responses. *Respiration Physiology*, 80(1), 55-70.
- Martin-Body, R. L., Robson, G. J., & Sinclair, J. D. (1985). Respiratory effects of sectioning the carotid sinus glossopharyngeal and abdominal vagal nerves in the awake rat. *The Journal of Physiology*, 361, 35-45.
- Martinez-Marcos, A. (2009a). On the organization of olfactory and vomeronasal cortices. *Progress in Neurobiology*, 87(1), 21-30. doi:10.1016/j.pneurobio.2008.09.010
- Martinez-Marcos, A. (2009b). On the organization of olfactory and vomeronasal cortices. *Progress in Neurobiology*, 87(1), 21-30. doi:10.1016/j.pneurobio.2008.09.010
- Martín, J., & López, P. (2006). Vitamin D supplementation increases the attractiveness of males' scent for female Iberian rock lizards. *Proceedings. Biological Sciences / The Royal Society*, 273(1601), 2619-2624. doi:10.1098/rspb.2006.3619

- Martínez-García, F., Martínez-Marcos, A., & Lanuza, E. (2002). The pallial amygdala of amniote vertebrates: evolution of the concept, evolution of the structure. *Brain Research Bulletin*, 57(3-4), 463-469.
- Martínez-Marcos, A., Lanuza, E., & Halpern, M. (1999). Organization of the ophidian amygdala: chemosensory pathways to the hypothalamus. *The Journal of Comparative Neurology*, 412(1), 51-68.
- Martínez-Marcos, A., Ubeda-Bañón, I., & Halpern, M. (2001). Neural substrates for tongue-flicking behavior in snakes. *The Journal of Comparative Neurology*, 432(1), 75-87.
- Martínez-Marcos, A., Lanuza, E., & Halpern, M. (2002). Neural substrates for processing chemosensory information in snakes. *Brain Research Bulletin*, 57(3-4), 543-546.
- Masala, C., Solari, P., Sollai, G., Crnjar, R., & Liscia, A. (2008). Clonidine effects on protein and carbohydrate electrophysiological responses of labellar and tarsal sensilla in *Phormia regina*. *Journal of Insect Physiology*, 54(7), 1193-1199. doi:10.1016/j.jinsphys.2008.04.024
- Massey, H. C., Ball, C. C., & Lok, J. B. (2001). PCR amplification of putative gpa-2 and gpa-3 orthologs from the (A+T)-rich genome of *Strongyloides stercoralis*. *International Journal for Parasitology*, 31(4), 377-383.
- Masyuk, A. I., Gradilone, S. A., Banales, J. M., Huang, B. Q., Masyuk, T. V., Lee, S., Splinter, P. L., et al. (2008). Cholangiocyte primary cilia are chemosensory organelles that detect biliary nucleotides via P2Y12 purinergic receptors. *American Journal of Physiology. Gastrointestinal and Liver Physiology*, 295(4), G725-734. doi:10.1152/ajpgi.90265.2008
- Matarazzo, V., Clot-Faybesse, O., Marcet, B., Guiraudie-Capraz, G., Atanasova, B., Devauchelle, G., Cerutti, M., et al. (2005). Functional characterization of two human olfactory receptors expressed in the baculovirus Sf9 insect cell system. *Chemical Senses*, 30(3), 195-207. doi:10.1093/chemse/bji015
- Matishov, G. G., Shparkovskii, I. A., Muraveiko, V. M., & Taskina, E. V. (2003). Chemosensory systems of fish as indicators of aqueous medium quality. *Doklady Biological Sciences: Proceedings of the Academy of Sciences of the USSR, Biological Sciences Sections / Translated from Russian*, 391, 315-317.
- Matsuki, M., Kunitomo, H., & Iino, Y. (2006). Gqalpha regulates olfactory adaptation by antagonizing Gqalpha-DAG signaling in *Caenorhabditis elegans*. *Proceedings of the National Academy of Sciences of the United States of America*, 103(4), 1112-1117. doi:10.1073/pnas.0506954103
- Matsumoto, M., Solzin, J., Helbig, A., Hagen, V., Ueno, S., Kawase, O., Maruyama, Y., et al. (2003). A sperm-activating peptide controls a cGMP-signaling pathway in starfish sperm. *Developmental Biology*, 260(2), 314-324.
- Matsunami, H., & Amrein, H. (2003). Taste and pheromone perception in mammals and flies. *Genome Biology*, 4(7), 220. doi:10.1186/gb-2003-4-7-220
- Matsuo, T. (2008). Genes for host-plant selection in *Drosophila*. *Journal of Neurogenetics*, 22(3), 195-210. doi:10.1080/01677060802298483
- Matsuoka, I., Mori, T., Sato, T., Sakai, M., & Kurihara, K. (1995). Identification of novel guanylyl cyclases from chemosensory tissues of rat and cattle. *Biochemical and Biophysical Research Communications*, 216(1), 242-248. doi:10.1006/bbrc.1995.2616
- Matsuoka, M., Mori, Y., Hoshino, K., & Ichikawa, M. (1994). Social environment affects synaptic structure in the glomerulus of the accessory olfactory bulb of the hamster. *Neuroscience Research*, 19(2), 187-193.
- Matsuoka, M., Yokosuka, M., Mori, Y., & Ichikawa, M. (1999). Specific expression pattern of Fos in the accessory olfactory bulb of male mice after exposure to soiled bedding of females. *Neuroscience Research*, 35(3), 189-195.
- Matsuoka, M., Osada, T., Yoshida-Matsuoka, J., Ikai, A., Ichikawa, M., Norita, M., & Costanzo, R. M. (2002). A comparative immunocytochemical study of development and regeneration of

- chemosensory neurons in the rat vomeronasal system. *Brain Research*, 946(1), 52-63.
- Matsuura, S. (1973). Chemoreceptor properties of glomus tissue found in the carotid region of the cat. *The Journal of Physiology*, 235(1), 57-73.
- Mattes, R. D. (1987). Sensory influences on food intake and utilization in humans. *Human Nutrition. Applied Nutrition*, 41(2), 77-95.
- Mattes, R. D. (2006). Orosensory considerations. *Obesity (Silver Spring, Md.)*, 14 Suppl 4, 164S-167S. doi:10.1038/oby.2006.299
- Matus, D. Q., Thomsen, G. H., & Martindale, M. Q. (2007). FGF signaling in gastrulation and neural development in *Nematostella vectensis*, an anthozoan cnidarian. *Development Genes and Evolution*, 217(2), 137-148. doi:10.1007/s00427-006-0122-3
- Mayer, U., Küller, A., Daiber, P. C., Neudorf, I., Warnken, U., Schnölzer, M., Frings, S., et al. (2009). The proteome of rat olfactory sensory cilia. *Proteomics*, 9(2), 322-334. doi:10.1002/pmic.200800149
- McCall, J. R., & Mead, K. S. (2008). Structural and functional changes in regenerating antennules in the crayfish *Orconectes sanborni*. *The Biological Bulletin*, 214(2), 99-110.
- McCarroll, S. A., Li, H., & Bargmann, C. I. (2005). Identification of transcriptional regulatory elements in chemosensory receptor genes by probabilistic segmentation. *Current Biology: CB*, 15(4), 347-352. doi:10.1016/j.cub.2005.02.023
- McCarthy, A. M. (1990). The influence of second intermediate host dispersion pattern upon the transmission of cercariae of *Echinoparyphium recurvatum* (Digenea: Echinostomatidae). *Parasitology*, 101 Pt 1, 43-47.
- McClintock, M. K. (1998). On the nature of mammalian and human pheromones. *Annals of the New York Academy of Sciences*, 855, 390-392.
- McClintock, T. S., & Sammeta, N. (2003). Trafficking prerogatives of olfactory receptors. *Neuroreport*, 14(12), 1547-1552. doi:10.1097/01.wnr.0000085904.20980.e1
- McElroy, E. J., Hickey, K. L., & Reilly, S. M. (2008). The correlated evolution of biomechanics, gait and foraging mode in lizards. *The Journal of Experimental Biology*, 211(Pt 7), 1029-1040. doi:10.1242/jeb.015503
- McGuire, T. R., & Tully, T. (1986). Food-search behavior and its relation to the central excitatory state in the genetic analysis of the blow fly *Phormia regina*. *Journal of Comparative Psychology (Washington, D.C.: 1983)*, 100(1), 52-58.
- McIntyre, J. K., Baldwin, D. H., Meador, J. P., & Scholz, N. L. (2008). Chemosensory deprivation in juvenile coho salmon exposed to dissolved copper under varying water chemistry conditions. *Environmental Science & Technology*, 42(4), 1352-1358.
- McKeegan, D. E. F., Smith, F. S., Demmers, T. G. M., Wathes, C. M., & Jones, R. B. (2005). Behavioral correlates of olfactory and trigeminal gaseous stimulation in chickens, *Gallus domesticus*. *Physiology & Behavior*, 84(5), 761-768. doi:10.1016/j.physbeh.2005.03.005
- McKenna, M., Monte, P., Helfand, S. L., Woodard, C., & Carlson, J. (1989). A simple chemosensory response in *Drosophila* and the isolation of acj mutants in which it is affected. *Proceedings of the National Academy of Sciences of the United States of America*, 86(20), 8118-8122.
- McMiller, T. L., Sims, D., Lee, T., Williams, T., & Johnson, C. M. (2007). Molecular characterization of the *Caenorhabditis elegans* REF-1 family member, hlh-29/hlh-28. *Biochimica Et Biophysica Acta*, 1769(1), 5-19. doi:10.1016/j.bbaexp.2006.12.001
- McQueen, D. S. (1978). Effects of methacholine on the carotid chemoreceptors. *Quarterly Journal of Experimental Physiology and Cognate Medical Sciences*, 63(2), 171-178.
- McQueen, D. S. (1980). Effects of substance P on carotid chemoreceptor activity in the cat. *The Journal of Physiology*, 302, 31-47.
- McQueen, D. S., Dashwood, M. R., Cobb, V. J., Bond, S. M., Marr, C. G., & Spyer, K. M. (1995). Endothelins and rat carotid body: autoradiographic and functional pharmacological studies.

- Journal of the Autonomic Nervous System*, 53(2-3), 115-125.
- McQueen, D. S., Evrard, Y., Gordon, B. H., & Campbell, D. B. (1989). Ganglioglomerular nerves influence responsiveness of cat carotid body chemoreceptors to almitrine. *Journal of the Autonomic Nervous System*, 27(1), 57-66.
- McQueen, D. S., & Ribeiro, J. A. (1983). On the specificity and type of receptor involved in carotid body chemoreceptor activation by adenosine in the cat. *British Journal of Pharmacology*, 80(2), 347-354.
- McQueen, D. S., & Ribeiro, J. A. (1986). Pharmacological characterization of the receptor involved in chemoexcitation induced by adenosine. *British Journal of Pharmacology*, 88(3), 615-620.
- McQueen, D. S., Ritchie, I. M., & Birrell, G. J. (1989). Arterial chemoreceptor involvement in salicylate-induced hyperventilation in rats. *British Journal of Pharmacology*, 98(2), 413-424.
- Mead, K. S., & Koehl, M. A. (2000). Stomatopod antennule design: the asymmetry, sampling efficiency and ontogeny of olfactory flicking. *The Journal of Experimental Biology*, 203(Pt 24), 3795-3808.
- Mead, K. S., Wiley, M. B., Koehl, M. A. R., & Koseff, J. R. (2003). Fine-scale patterns of odor encounter by the antennules of mantis shrimp tracking turbulent plumes in wave-affected and unidirectional flow. *The Journal of Experimental Biology*, 206(Pt 1), 181-193.
- Meek, L. R., Lee, T. M., Rogers, E. A., & Hernandez, R. G. (1994). Effect of vomeronasal organ removal on behavioral estrus and mating latency in female meadow voles (*Microtus pennsylvanicus*). *Biology of Reproduction*, 51(3), 400-404.
- Mekosh-Rosenbaum, V., Carr, W. J., Goodwin, J. L., Thomas, P. L., D'Veer, A., & Wysocki, C. J. (1994). Age-dependent responses to chemosensory cues mediating kin recognition in dogs (*Canis familiaris*). *Physiology & Behavior*, 55(3), 495-499.
- Melcher, C., & Pankratz, M. J. (2005). Candidate gustatory interneurons modulating feeding behavior in the *Drosophila* brain. *PLoS Biology*, 3(9), e305. doi:10.1371/journal.pbio.0030305
- Melkman, T., & Sengupta, P. (2004). The worm's sense of smell. Development of functional diversity in the chemosensory system of *Caenorhabditis elegans*. *Developmental Biology*, 265(2), 302-319.
- Melkman, T., & Sengupta, P. (2005). Regulation of chemosensory and GABAergic motor neuron development by the *C. elegans* *Aristaless/Arx* homolog *alr-1*. *Development (Cambridge, England)*, 132(8), 1935-1949. doi:10.1242/dev.01788
- Mellon, D. (2007). Combining dissimilar senses: central processing of hydrodynamic and chemosensory inputs in aquatic crustaceans. *The Biological Bulletin*, 213(1), 1-11.
- Melo, A. C. A., Rützler, M., Pitts, R. J., & Zwiebel, L. J. (2004). Identification of a chemosensory receptor from the yellow fever mosquito, *Aedes aegypti*, that is highly conserved and expressed in olfactory and gustatory organs. *Chemical Senses*, 29(5), 403-410. doi:10.1093/chemse/bjh041
- Mencarelli, C., Lupetti, P., & Dallai, R. (2008). New insights into the cell biology of insect axonemes. *International Review of Cell and Molecular Biology*, 268, 95-145. doi:10.1016/S1937-6448(08)00804-6
- Mendoza, A. S., & Kühnel, W. (1991). [Lectin histochemistry on the olfactory region and the vomeronasal organ of rats and golden hamsters]. *Acta Histochemica*, 91(2), 173-184.
- Menini, A., & Pifferi, S. (2008). New whiffs about chemesthesis. Focus on "TRPM5-expressing solitary chemosensory cells respond to odorous irritants". *Journal of Neurophysiology*, 99(3), 1055-1056. doi:10.1152/jn.00043.2008
- Mennella, J. A. (1995). Mother's milk: a medium for early flavor experiences. *Journal of Human Lactation: Official Journal of International Lactation Consultant Association*, 11(1), 39-45.
- Mercer, K. B., Szlam, S. M., Manning, E., Gernert, K. M., Walthall, W. W., Benian, G. M., & Gutekunst, C. (2009). A *C. elegans* homolog of huntingtin-associated protein 1 is expressed in

- chemosensory neurons and in a number of other somatic cell types. *Journal of Molecular Neuroscience: MN*, 37(1), 37-49. doi:10.1007/s12031-008-9109-z
- Meredith, M. (1998). Vomeronasal, olfactory, hormonal convergence in the brain. Cooperation or coincidence? *Annals of the New York Academy of Sciences*, 855, 349-361.
- Meredith, M., & Fernandez-Fewell, G. (1994). Vomeronasal system, LHRH, and sex behaviour. *Psychoneuroendocrinology*, 19(5-7), 657-672.
- Meredith, M., & Fewell, G. (2001). Vomeronasal organ: electrical stimulation activates Fos in mating pathways and in GnRH neurons. *Brain Research*, 922(1), 87-94.
- Meredith, M., & Westberry, J. M. (2004). Distinctive responses in the medial amygdala to same-species and different-species pheromones. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 24(25), 5719-5725. doi:10.1523/JNEUROSCI.1139-04.2004
- Merigo, F., Benati, D., Cecchini, M. P., Cristofolletti, M., Osculati, F., & Sbarbati, A. (2009). Amylase expression in taste receptor cells of rat circumvallate papillae. *Cell and Tissue Research*, 336(3), 411-421. doi:10.1007/s00441-009-0789-7
- Merigo, F., Benati, D., Di Chio, M., Osculati, F., & Sbarbati, A. (2007). Secretory cells of the airway express molecules of the chemoreceptive cascade. *Cell and Tissue Research*, 327(2), 231-247. doi:10.1007/s00441-006-0280-7
- Merigo, F., Benati, D., Galiè, M., Crescimanno, C., Osculati, F., & Sbarbati, A. (2008). Immunohistochemical localization of cystic fibrosis transmembrane regulator and clara cell secretory protein in taste receptor cells of rat circumvallate papillae. *Chemical Senses*, 33(3), 231-241. doi:10.1093/chemse/bjm082
- Merivee, E., Märtmann, H., Must, A., Milius, M., Williams, I., & Mänd, M. (2008). Electrophysiological responses from neurons of antennal taste sensilla in the polyphagous predatory ground beetle *Pterostichus oblongopunctatus* (Fabricius 1787) to plant sugars and amino acids. *Journal of Insect Physiology*, 54(8), 1213-1219. doi:10.1016/j.jinsphys.2008.05.002
- Merivee, E., Must, A., Milius, M., & Luik, A. (2007). Electrophysiological identification of the sugar cell in antennal taste sensilla of the predatory ground beetle *Pterostichus aethiops*. *Journal of Insect Physiology*, 53(4), 377-384. doi:10.1016/j.jinsphys.2006.12.012
- Merlin, C., François, M., Bozzolan, F., Pelletier, J., Jacquin-Joly, E., & Maïbèche-Coisne, M. (2005). A new aldehyde oxidase selectively expressed in chemosensory organs of insects. *Biochemical and Biophysical Research Communications*, 332(1), 4-10. doi:10.1016/j.bbrc.2005.04.084
- Merrill, C. E., Riesgo-Escovar, J., Pitts, R. J., Kafatos, F. C., Carlson, J. R., & Zwiebel, L. J. (2002). Visual arrestins in olfactory pathways of *Drosophila* and the malaria vector mosquito *Anopheles gambiae*. *Proceedings of the National Academy of Sciences of the United States of America*, 99(3), 1633-1638. doi:10.1073/pnas.022505499
- Metillo, E. B., & Ritz, D. A. (2003). Differential chemosensory feeding behaviour by three co-occurring mysids (Crustacea, Mysidacea) from southeastern Tasmania. *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology*, 134(2), 399-408.
- Metz, L. N., Martin, R. B., & Turner, A. S. (2003). Histomorphometric analysis of the effects of osteocyte density on osteonal morphology and remodeling. *Bone*, 33(5), 753-759.
- Meunier, N., Ferveur, J. F., & Marion-Poll, F. (2000). Sex-specific non-pheromonal taste receptors in *Drosophila*. *Current Biology: CB*, 10(24), 1583-1586.
- Meyer, J. H., Hlinka, M., Khatibi, A., Raybould, H. E., & Tso, P. (1998). Role of small intestine in caloric compensations to oil premeals in rats. *The American Journal of Physiology*, 275(4 Pt 2), R1320-1333.
- Meyerhof, W., & Richter, D. (2006). Signaling in chemosensory systems. *Cellular and Molecular Life Sciences: CMLS*, 63(13), 1461-1464. doi:10.1007/s00018-006-6107-6
- Meyerhof, W., & Korsching, S. (2009). Chemosensory systems in mammals, fishes, and insects.

Preface. *Results and Problems in Cell Differentiation*, 47, v-xi.

- Michel, W. C., Trapido-Rosenthal, H. G., Chao, E. T., & Wachowiak, M. (1993). Stereoselective detection of amino acids by lobster olfactory receptor neurons. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 171(6), 705-712.
- Mick, G., Cooper, H., & Magnin, M. (1993). Retinal projection to the olfactory tubercle and basal telencephalon in primates. *The Journal of Comparative Neurology*, 327(2), 205-219.
doi:10.1002/cne.903270204
- Middleton, F. A., Carrierfenster, K., Mooney, S. M., & Youngentob, S. L. (2009). Gestational ethanol exposure alters the behavioral response to ethanol odor and the expression of neurotransmission genes in the olfactory bulb of adolescent rats. *Brain Research*, 1252, 105-116.
doi:10.1016/j.brainres.2008.11.023
- Miernicki, M., Pospichal, M. W., & Powers, J. B. (1990). Short photoperiods affect male hamster sociosexual behaviors in the presence and absence of testosterone. *Physiology & Behavior*, 47(1), 95-106.
- Milani, N., Guarin, E., Renfer, E., Nef, P., & Andres-Barquin, P. J. (2002). Functional expression of a mammalian olfactory receptor in *Caenorhabditis elegans*. *Neuroreport*, 13(18), 2515-2520.
doi:10.1097/01.wnr.0000048920.29922.09
- Miles, C. I., del Campo, M. L., & Renwick, J. A. A. (2005). Behavioral and chemosensory responses to a host recognition cue by larvae of *Pieris rapae*. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 191(2), 147-155.
doi:10.1007/s00359-004-0580-x
- Miller, A. C., Thiele, T. R., Faumont, S., Moravec, M. L., & Lockery, S. R. (2005). Step-response analysis of chemotaxis in *Caenorhabditis elegans*. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 25(13), 3369-3378. doi:10.1523/JNEUROSCI.5133-04.2005
- Miller, M. J., Haxhiu, M. A., Georgiadis, P., Gudz, T. I., Kangas, C. D., & Macklin, W. B. (2003). Proteolipid protein gene mutation induces altered ventilatory response to hypoxia in the myelin-deficient rat. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 23(6), 2265-2273.
- Miller, S., & Diehn, B. (1978). Cytochrome c oxidase as the receptor molecule for chemoaccumulation (chemotaxis) of *Euglena* toward oxygen. *Science (New York, N.Y.)*, 200(4341), 548-549.
- Milligan, G., Canals, M., Pediani, J. D., Ellis, J., & Lopez-Gimenez, J. F. (2006). The role of GPCR dimerisation/oligomerisation in receptor signalling. *Ernst Schering Foundation Symposium Proceedings*, (2), 145-161.
- Milner, T. A., Pickel, V. M., Morrison, S. F., & Reis, D. J. (1989). Adrenergic neurons in the rostral ventrolateral medulla: ultrastructure and synaptic relations with other transmitter-identified neurons. *Progress in Brain Research*, 81, 29-47.
- Milner, T. A., Pickel, V. M., Park, D. H., Joh, T. H., & Reis, D. J. (1987). Phenylethanolamine N-methyltransferase-containing neurons in the rostral ventrolateral medulla of the rat. I. Normal ultrastructure. *Brain Research*, 411(1), 28-45.
- Milsom, W. K., & Sadig, T. (1983). Interaction between norepinephrine and hypoxia on carotid body chemoreception in rabbits. *Journal of Applied Physiology: Respiratory, Environmental and Exercise Physiology*, 55(6), 1893-1898.
- Mir, A. K., McQueen, D. S., Pallot, D. J., & Nahorski, S. R. (1984). Direct biochemical and neuropharmacological identification of dopamine D2-receptors in the rabbit carotid body. *Brain Research*, 291(2), 273-283.
- Miyamoto, T., & Amrein, H. (2008). Suppression of male courtship by a *Drosophila* pheromone receptor. *Nature Neuroscience*, 11(8), 874-876. doi:10.1038/nn.2161
- Miyoshi, K., Kasahara, K., Miyazaki, I., & Asanuma, M. (2009). Lithium treatment elongates primary

- cilia in the mouse brain and in cultured cells. *Biochemical and Biophysical Research Communications*, 388(4), 757-762. doi:10.1016/j.bbrc.2009.08.099
- Miyoshi, K., Kasahara, K., Miyazaki, I., Shimizu, S., Taniguchi, M., Matsuzaki, S., Tohyama, M., et al. (2009). Pericentrin, a centrosomal protein related to microcephalic primordial dwarfism, is required for olfactory cilia assembly in mice. *The FASEB Journal: Official Publication of the Federation of American Societies for Experimental Biology*, 23(10), 3289-3297. doi:10.1096/fj.08-124420
- Mizusawa, A., Ogawa, H., Kikuchi, Y., Hida, W., Kurosawa, H., Okabe, S., Takishima, T., et al. (1994). In vivo release of glutamate in nucleus tractus solitarii of the rat during hypoxia. *The Journal of Physiology*, 478 (Pt 1), 55-66.
- Mobley, A. S., Lucero, M. T., & Michel, W. C. (2008). Cross-species comparison of metabolite profiles in chemosensory epithelia: an indication of metabolite roles in chemosensory cells. *Anatomical Record (Hoboken, N.J.: 2007)*, 291(4), 410-432. doi:10.1002/ar.20666
- Mobley, A. S., Mahendra, G., & Lucero, M. T. (2007). Evidence for multiple signaling pathways in single squid olfactory receptor neurons. *The Journal of Comparative Neurology*, 501(2), 231-242. doi:10.1002/cne.21230
- Moffatt, C. A., Ball, G. F., & Nelson, R. J. (1995). The effects of photoperiod on olfactory c-fos expression in prairie voles, *Microtus ochrogaster*. *Brain Research*, 677(1), 82-88.
- Moffatt, C. A., Bennett, S. A., & Nelson, R. J. (1991). Effects of photoperiod and 6-methoxy-2-benzoxazolinone on male-induced estrus in prairie voles. *Physiology & Behavior*, 49(1), 27-31.
- Moffatt, C. A., Gerber, J. M., Blom, J. M., Kriegsfeld, L. J., & Nelson, R. J. (1995). Photoperiodic effects on steroid negative feedback in female prairie voles (*Microtus ochrogaster*). *General and Comparative Endocrinology*, 100(1), 92-95. doi:10.1006/gcen.1995.1137
- Moffatt, C. A., & Nelson, R. J. (1994). Day length influences proceptive behavior of female prairie voles (*Microtus ochrogaster*). *Physiology & Behavior*, 55(6), 1163-1165.
- Moffatt, C. A. (2003). Steroid hormone modulation of olfactory processing in the context of socio-sexual behaviors in rodents and humans. *Brain Research. Brain Research Reviews*, 43(2), 192-206.
- Moghe, P. V., & Tranquillo, R. T. (1994). Stochastic model of chemoattractant receptor dynamics in leukocyte chemosensory movement. *Bulletin of Mathematical Biology*, 56(6), 1041-1093.
- Mokashi, A., & Lahiri, S. (1991). Aortic and carotid body chemoreception in prolonged hyperoxia in the cat. *Respiration Physiology*, 86(2), 233-243.
- Mokashi, A., Ray, D., Botre, F., Katayama, M., Osanai, S., & Lahiri, S. (1995). Effect of hypoxia on intracellular pH of glomus cells cultured from cat and rat carotid bodies. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 78(5), 1875-1881.
- Mokashi, A., Roy, A., Rozanov, C., Daudu, P., DiGuilio, C., & Lahiri, S. (2001). Ryanodine receptor-mediated [Ca(2+)]_i release in glomus cells is independent of natural stimuli and does not participate in the chemosensory responses of the rat carotid body. *Brain Research*, 916(1-2), 32-40.
- Mokashi, A., Roy, A., Rozanov, C., Daudu, P., & Lahiri, S. (2000). Effect of barium on rat carotid body glomus cell [Ca²⁺]_i and carotid chemosensory response. *Advances in Experimental Medicine and Biology*, 475, 715-722. doi:10.1007/0-306-46825-5_71
- Mokashi, A., Roy, A., Rozanov, C., Osanai, S., Storey, B. T., & Lahiri, S. (1998). High PCO₂ does not alter pHi, but raises [Ca²⁺]_i in cultured rat carotid body glomus cells in the absence and presence of CdCl₂. *Brain Research*, 803(1-2), 194-197.
- Molet, M., Chittka, L., & Raine, N. E. (2009). How floral odours are learned inside the bumblebee (*Bombus terrestris*) nest. *Die Naturwissenschaften*, 96(2), 213-219. doi:10.1007/s00114-008-0465-x
- Molina, J. C., & Chotro, M. G. (1991). Association between chemosensory stimuli and cesarean

- delivery in rat fetuses: neonatal presentation of similar stimuli increases motor activity. *Behavioral and Neural Biology*, 55(1), 42-60.
- Molina, J. C., Pepino, M. Y., Johnson, J., & Spear, N. E. (2000). The infant rat learns about alcohol through interaction with an intoxicated mother. *Alcoholism, Clinical and Experimental Research*, 24(4), 428-437.
- Molina, J. C., Spear, N. E., Spear, L. P., Mennella, J. A., & Lewis, M. J. (2007). The International society for developmental psychobiology 39th annual meeting symposium: Alcohol and development: beyond fetal alcohol syndrome. *Developmental Psychobiology*, 49(3), 227-242. doi:10.1002/dev.20224
- Moll, B., Klimek, L., Eggers, G., & Mann, W. (1998). Comparison of olfactory function in patients with seasonal and perennial allergic rhinitis. *Allergy*, 53(3), 297-301.
- Mombaerts, P. (1999). Seven-transmembrane proteins as odorant and chemosensory receptors. *Science (New York, N.Y.)*, 286(5440), 707-711.
- Moncho-Bogani, J., Martinez-Garcia, F., Novejarque, A., & Lanuza, E. (2005). Attraction to sexual pheromones and associated odorants in female mice involves activation of the reward system and basolateral amygdala. *The European Journal of Neuroscience*, 21(8), 2186-2198. doi:10.1111/j.1460-9568.2005.04036.x
- Montani, G., Tonelli, S., Elsaesser, R., Paysan, J., & Tirindelli, R. (2006). Neuropeptide Y in the olfactory microvillar cells. *The European Journal of Neuroscience*, 24(1), 20-24. doi:10.1111/j.1460-9568.2006.04878.x
- Monte, P., Woodard, C., Ayer, R., Lilly, M., Sun, H., & Carlson, J. (1989). Characterization of the larval olfactory response in *Drosophila* and its genetic basis. *Behavior Genetics*, 19(2), 267-283.
- Montgomery, J. C., Macdonald, F., Baker, C. F., & Carton, A. G. (2002). Hydrodynamic contributions to multimodal guidance of prey capture behavior in fish. *Brain, Behavior and Evolution*, 59(4), 190-198.
- Monti-Bloch, L., & Eyzaguirre, C. (1980). A comparative physiological and pharmacological study of cat and rabbit carotid body chemoreceptors. *Brain Research*, 193(2), 449-470.
- Monti-Bloch, L., & Eyzaguirre, C. (1985). Effects of methionine-enkephalin and substance P on the chemosensory discharge of the cat carotid body. *Brain Research*, 338(2), 297-307.
- Monti-Bloch, L., Stensaas, L. J., & Eyzaguirre, C. (1983). Carotid body grafts induce chemosensitivity in muscle nerve fibers of the cat. *Brain Research*, 270(1), 77-92.
- Mora, O. A., & Cabrera, M. M. (1994). Pheromonal male-induced diestrus and cyclicity in aging intact and young estrogenized female rats. *Biology of Reproduction*, 50(3), 603-606.
- Morales, B., & Bacigalupo, J. (1996). Chemical reception in vertebrate olfaction: evidence for multiple transduction pathways. *Biological Research*, 29(3), 333-341.
- Mori, I., Goshima, F., Ito, H., Koide, N., Yoshida, T., Yokochi, T., Kimura, Y., et al. (2005). The vomeronasal chemosensory system as a route of neuroinvasion by herpes simplex virus. *Virology*, 334(1), 51-58. doi:10.1016/j.virol.2005.01.023
- Mori, I., Goshima, F., Watanabe, D., Ito, H., Koide, N., Yoshida, T., Liu, B., et al. (2006). Herpes simplex virus US3 protein kinase regulates virus-induced apoptosis in olfactory and vomeronasal chemosensory neurons in vivo. *Microbes and Infection / Institut Pasteur*, 8(7), 1806-1812. doi:10.1016/j.micinf.2006.02.018
- Mori, K. (1987). Monoclonal antibodies (2C5 and 4C9) against lactoseries carbohydrates identify subsets of olfactory and vomeronasal receptor cells and their axons in the rabbit. *Brain Research*, 408(1-2), 215-221.
- Morin, L. P., Goodless-Sanchez, N., Smale, L., & Moore, R. Y. (1994). Projections of the suprachiasmatic nuclei, subparaventricular zone and retrochiasmatic area in the golden hamster. *Neuroscience*, 61(2), 391-410.
- Morin-Surun, M. P., Boudinot, E., Dubois, C., Matthes, H. W., Kieffer, B. L., Denavit-Saubié, M.,

- Champagnat, J., et al. (2001). Respiratory function in adult mice lacking the mu-opioid receptor: role of delta-receptors. *The European Journal of Neuroscience*, 13(9), 1703-1710.
- Moroz, L. L. (2006). Localization of putative nitrergic neurons in peripheral chemosensory areas and the central nervous system of *Aplysia californica*. *The Journal of Comparative Neurology*, 495(1), 10-20. doi:10.1002/cne.20842
- Morrison, G. E., & van der Kooy, D. (2001). A mutation in the AMPA-type glutamate receptor, *glr-1*, blocks olfactory associative and nonassociative learning in *Caenorhabditis elegans*. *Behavioral Neuroscience*, 115(3), 640-649.
- Mosqueira, M., & Iturriaga, R. (2002). Carotid body chemosensory excitation induced by nitric oxide: involvement of oxidative metabolism. *Respiratory Physiology & Neurobiology*, 131(3), 175-187.
- Moss, I. R. (2000). Respiratory responses to single and episodic hypoxia during development: mechanisms of adaptation. *Respiration Physiology*, 121(2-3), 185-197.
- Moussaïf, M., & Sze, J. Y. (2009). Intraflagellar transport/Hedgehog-related signaling components couple sensory cilium morphology and serotonin biosynthesis in *Caenorhabditis elegans*. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 29(13), 4065-4075. doi:10.1523/JNEUROSCI.0044-09.2009
- Mukhopadhyay, S., Lu, Y., Qin, H., Lanjuin, A., Shaham, S., & Sengupta, P. (2007). Distinct IFT mechanisms contribute to the generation of ciliary structural diversity in *C. elegans*. *The EMBO Journal*, 26(12), 2966-2980. doi:10.1038/sj.emboj.7601717
- Mulligan, E., & Lahiri, S. (1987). Cat carotid body chemoreceptor responses before and after nicotine receptor blockade with alpha-bungarotoxin. *Journal of the Autonomic Nervous System*, 18(1), 25-31.
- Munger, S. D., Leinders-Zufall, T., & Zufall, F. (2009). Subsystem organization of the mammalian sense of smell. *Annual Review of Physiology*, 71, 115-140. doi:10.1146/annurev.physiol.70.113006.100608
- Murakami, M., Koga, M., & Ohshima, Y. (2001). DAF-7/TGF-beta expression required for the normal larval development in *C. elegans* is controlled by a presumed guanylyl cyclase DAF-11. *Mechanisms of Development*, 109(1), 27-35.
- Muramoto, K., Hashimoto, M., & Kaba, H. (2007). Target regulation of V2R expression and functional maturation in vomeronasal sensory neurons in vitro. *The European Journal of Neuroscience*, 26(12), 3382-3394. doi:10.1111/j.1460-9568.2007.05954.x
- Murayama, T., Toh, Y., Ohshima, Y., & Koga, M. (2005). The *dyf-3* gene encodes a novel protein required for sensory cilium formation in *Caenorhabditis elegans*. *Journal of Molecular Biology*, 346(3), 677-687. doi:10.1016/j.jmb.2004.12.005
- Murphey, R. K., Possidente, D., Pollack, G., & Merritt, D. J. (1989). Modality-specific axonal projections in the CNS of the flies *Phormia* and *Drosophila*. *The Journal of Comparative Neurology*, 290(2), 185-200. doi:10.1002/cne.902900203
- Musielak, M., Walski, M., & Pokorski, M. (1997). Ultrastructural manifestation of pharmacologic inhibition of the activities of lipases and proteases in the cat carotid body. *Roczniki Akademii Medycznej W Białymstoku (1995)*, 42 Suppl 2, 170-174.
- Müller, T. (1996). Morphological differences among nerve fiber endings in the rat oral mucosa as revealed by methylene blue staining. *Histology and Histopathology*, 11(3), 659-666.
- Müller, U. (1994). Ca²⁺/calmodulin-dependent nitric oxide synthase in *Apis mellifera* and *Drosophila melanogaster*. *The European Journal of Neuroscience*, 6(8), 1362-1370.
- Müller, U. (1997). The nitric oxide system in insects. *Progress in Neurobiology*, 51(3), 363-381.
- Müller, U., & Hildebrandt, H. (1995). The nitric oxide/cGMP system in the antennal lobe of *Apis mellifera* is implicated in integrative processing of chemosensory stimuli. *The European Journal of Neuroscience*, 7(11), 2240-2248.

- Nacher, J., Lanuza, E., & McEwen, B. S. (2002). Distribution of PSA-NCAM expression in the amygdala of the adult rat. *Neuroscience*, *113*(3), 479-484.
- Nagai, T. (1993). Fluorescent dye (DiI) reveals the sensory cells in the lingual epithelium: a confocal laser scanning microscopic study. *The Japanese Journal of Physiology*, *43 Suppl 1*, S179-181.
- Nagai, T., Koyama, H., Hoff, K. S., & Hillyard, S. D. (1999). Desert toads discriminate salt taste with chemosensory function of the ventral skin. *The Journal of Comparative Neurology*, *408*(1), 125-136.
- Nagnan-Le Meillour, P., Cain, A. H., Jacquin-Joly, E., François, M. C., Ramachandran, S., Maida, R., & Steinbrecht, R. A. (2000). Chemosensory proteins from the proboscis of mamestra brassicae. *Chemical Senses*, *25*(5), 541-553.
- Nakagawa, T., & Vosshall, L. B. (2009). Controversy and consensus: noncanonical signaling mechanisms in the insect olfactory system. *Current Opinion in Neurobiology*, *19*(3), 284-292. doi:10.1016/j.conb.2009.07.015
- Nakamura, H., Ito, I., Kojima, S., Fujito, Y., Suzuki, H., & Ito, E. (1999). Histological characterization of lip and tentacle nerves in *Lymnaea stagnalis*. *Neuroscience Research*, *33*(2), 127-136.
- Nef, P., Heldman, J., Lazard, D., Margalit, T., Jaye, M., Hanukoglu, I., & Lancet, D. (1989). Olfactory-specific cytochrome P-450. cDNA cloning of a novel neuroepithelial enzyme possibly involved in chemoreception. *The Journal of Biological Chemistry*, *264*(12), 6780-6785.
- Nei, M., Niimura, Y., & Nozawa, M. (2008). The evolution of animal chemosensory receptor gene repertoires: roles of chance and necessity. *Nature Reviews. Genetics*, *9*(12), 951-963. doi:10.1038/nrg2480
- Nelson, R. J., Fleming, A. S., Wysocki, C. J., Shinder, T. W., & Zucker, I. (1985). Chemosensory and neural influences on photoperiodic responsiveness of laboratory rats. *Neuroendocrinology*, *40*(4), 285-290.
- Newland, P. L. (1999). Processing of gustatory information by spiking local interneurons in the locust. *Journal of Neurophysiology*, *82*(6), 3149-3159.
- Newland, P. L., & Burrows, M. (1994). Processing of mechanosensory information from gustatory receptors on a hind leg of the locust. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, *174*(4), 399-410.
- Newland, P. L., Rogers, S. M., Gaaboub, I., & Matheson, T. (2000). Parallel somatotopic maps of gustatory and mechanosensory neurons in the central nervous system of an insect. *The Journal of Comparative Neurology*, *425*(1), 82-96.
- Newland, P. L., & Yates, P. (2008). Nitric oxide modulates salt and sugar responses via different signaling pathways. *Chemical Senses*, *33*(4), 347-356. doi:10.1093/chemse/bjm094
- Newman, S. W. (1999). The medial extended amygdala in male reproductive behavior. A node in the mammalian social behavior network. *Annals of the New York Academy of Sciences*, *877*, 242-257.
- Nezlin, L., & Voronezhskaya, E. (1997). GABA-immunoreactive neurones and interactions of GABA with serotonin and FMRFamide in a peripheral sensory ganglion of the pond snail *Lymnaea stagnalis*. *Brain Research*, *772*(1-2), 217-225.
- Nezlin, L. P. (2004). [Structure and electrophysiological properties of bursting neurosecretory cells in a peripheral sensory ganglion of the pond snail *Lymnaea stagnalis*]. *Zhurnal Vyssheĭ Nervnoĭ Deiatelnosti Imeni I P Pavlova*, *54*(5), 632-637.
- Niane, L., Joseph, V., & Bairam, A. (2009). Role of cholinergic-nicotinic receptors on hypoxic chemoreflex during postnatal development in rats. *Respiratory Physiology & Neurobiology*, *169*(3), 323-332. doi:10.1016/j.resp.2009.09.014
- Nicholson, B. (2001). Pheromones cause disease: pheromone/odourant transduction. *Medical Hypotheses*, *57*(3), 361-377. doi:10.1054/mehy.2001.1357
- Nickell, W. T., Pun, R. Y. K., Bargmann, C. I., & Kleene, S. J. (2002). Single ionic channels of two

- Caenorhabditis elegans chemosensory neurons in native membrane. *The Journal of Membrane Biology*, 189(1), 55-66. doi:10.1007/s00232-002-1004-x
- Nie, Y., Hobbs, J. R., Vignes, S., Olson, W. J., Conn, G. L., & Munger, S. D. (2006). Expression and purification of functional ligand-binding domains of T1R3 taste receptors. *Chemical Senses*, 31(6), 505-513. doi:10.1093/chemse/bjj053
- Nie, Y., Vignes, S., Hobbs, J. R., Conn, G. L., & Munger, S. D. (2005). Distinct contributions of T1R2 and T1R3 taste receptor subunits to the detection of sweet stimuli. *Current Biology: CB*, 15(21), 1948-1952. doi:10.1016/j.cub.2005.09.037
- Niimura, Y., & Nei, M. (2006). Evolutionary dynamics of olfactory and other chemosensory receptor genes in vertebrates. *Journal of Human Genetics*, 51(6), 505-517. doi:10.1007/s10038-006-0391-8
- Ninomiya, Y., Kajiura, H., Naito, Y., Mochizuki, K., Katsukawa, H., & Torii, K. (1994). Glossopharyngeal denervation alters responses to nutrients and toxic substances. *Physiology & Behavior*, 56(6), 1179-1184.
- Nishi, K. (1975). The action of 5-hydroxytryptamine on chemoreceptor discharges of the cat's carotid body. *British Journal of Pharmacology*, 55(1), 27-40.
- Nishida, R. (2005). Chemosensory basis of host recognition in butterflies--multi-component system of oviposition stimulants and deterrents. *Chemical Senses*, 30 Suppl 1, i293-294. doi:10.1093/chemse/bjh230
- Nishikawa, M., Nishino, H., Misaka, Y., Kubota, M., Tsuji, E., Satoji, Y., Ozaki, M., et al. (2008). Sexual dimorphism in the antennal lobe of the ant *Camponotus japonicus*. *Zoological Science*, 25(2), 195-204. doi:10.2108/zsj.25.195
- Nishino, H., & Mizunami, M. (2006). Termination profiles of insect chemosensory afferents in the antennal lobe are dependent on their origin on the flagellum. *Neuroreport*, 17(12), 1303-1307. doi:10.1097/01.wnr.0000233086.08087.43
- Nishino, H., & Mizunami, M. (2007). Sensilla position on antennae influences afferent terminal location in glomeruli. *Neuroreport*, 18(17), 1765-1769. doi:10.1097/WNR.0b013e3282f16d71
- Nishino, H., Nishikawa, M., Yokohari, F., & Mizunami, M. (2005). Dual, multilayered somatosensory maps formed by antennal tactile and contact chemosensory afferents in an insect brain. *The Journal of Comparative Neurology*, 493(2), 291-308. doi:10.1002/cne.20757
- Nishio, T., Koike, S., Okano, H., Bamba, H., & Hisa, Y. (2006). Age-related expression of alpha-gustducin in the rat larynx. *The Annals of Otolaryngology, Rhinology, and Laryngology*, 115(5), 387-393.
- Nizhnikov, M. E., Varlinskaya, E. I., & Spear, N. E. (2006). Reinforcing effects of central ethanol injections in newborn rat pups. *Alcoholism, Clinical and Experimental Research*, 30(12), 2089-2096. doi:10.1111/j.1530-0277.2006.00253.x
- Noble, M., Mallaburn, P. S., & Klein, N. (1984). The growth of olfactory neurons in short-term cultures of rat olfactory epithelium. *Neuroscience Letters*, 45(2), 193-198.
- Noé, J., & Breer, H. (1998). Functional and molecular characterization of individual olfactory neurons. *Journal of Neurochemistry*, 71(6), 2286-2293.
- Nolan, K. M., Sarafi-Reinach, T. R., Horne, J. G., Saffer, A. M., & Sengupta, P. (2002). The DAF-7 TGF-beta signaling pathway regulates chemosensory receptor gene expression in *C. elegans*. *Genes & Development*, 16(23), 3061-3073. doi:10.1101/gad.1027702
- Nolte, C., & Martini, R. (1992). Immunocytochemical localization of the L1 and N-CAM cell adhesion molecules and their shared carbohydrate epitope L2/HNK-1 in the developing and differentiated gustatory papillae of the mouse tongue. *Journal of Neurocytology*, 21(1), 19-33.
- Nolte, C. M., & Meredith, M. (2005). mGluR2 activation of medial amygdala input impairs vomeronasal organ-mediated behavior. *Physiology & Behavior*, 86(3), 314-323. doi:10.1016/j.physbeh.2005.08.036

- Nolte, D. L., & Mason, J. R. (1995). Maternal ingestion of ortho-aminoacetophenone during gestation affects intake by offspring. *Physiology & Behavior*, *58*(5), 925-928.
- Nordström, K. J. V., Fredriksson, R., & Schiöth, H. B. (2008). The amphioxus (*Branchiostoma floridae*) genome contains a highly diversified set of G protein-coupled receptors. *BMC Evolutionary Biology*, *8*, 9. doi:10.1186/1471-2148-8-9
- Norlin, E. M., Gussing, F., & Berghard, A. (2003). Vomeronasal phenotype and behavioral alterations in G alpha i2 mutant mice. *Current Biology: CB*, *13*(14), 1214-1219.
- Norris, D. M., & Chu, H. M. (1974). Chemosensory mechanism in *Periplaneta americana*: electroantennogram comparisons of certain quinone feeding inhibitors. *Journal of Insect Physiology*, *20*(9), 1687-1696.
- Northcutt, K. V., Wang, Z., & Lonstein, J. S. (2007). Sex and species differences in tyrosine hydroxylase-synthesizing cells of the rodent olfactory extended amygdala. *The Journal of Comparative Neurology*, *500*(1), 103-115. doi:10.1002/cne.21148
- Northcutt, R. G. (2006). Connections of the lateral and medial divisions of the goldfish telencephalic pallium. *The Journal of Comparative Neurology*, *494*(6), 903-943. doi:10.1002/cne.20853
- Nottebohm, E., Dambly-Chaudière, C., & Ghysen, A. (1992). Connectivity of chemosensory neurons is controlled by the gene *poxn* in *Drosophila*. *Nature*, *359*(6398), 829-832. doi:10.1038/359829a0
- Nottebohm, E., Usui, A., Therianos, S., Kimura, K., Dambly-Chaudière, C., & Ghysen, A. (1994). The gene *poxn* controls different steps of the formation of chemosensory organs in *Drosophila*. *Neuron*, *12*(1), 25-34.
- Nowak, D. (2002). Chemosensory irritation and the lung. *International Archives of Occupational and Environmental Health*, *75*(5), 326-331. doi:10.1007/s00420-002-0317-5
- Nowak, R., Keller, M., Val-Laillet, D., & Lévy, F. (2007). Perinatal visceral events and brain mechanisms involved in the development of mother-young bonding in sheep. *Hormones and Behavior*, *52*(1), 92-98. doi:10.1016/j.yhbeh.2007.03.021
- Nozawa, M., & Nei, M. (2008). Genomic drift and copy number variation of chemosensory receptor genes in humans and mice. *Cytogenetic and Genome Research*, *123*(1-4), 263-269. doi:10.1159/000184716
- Nunes, F., Wolf, M., Hartmann, J., & Paul, R. J. (2005). The ABC transporter PGP-2 from *Caenorhabditis elegans* is expressed in the sensory neuron pair AWA and contributes to lysosome formation and lipid storage within the intestine. *Biochemical and Biophysical Research Communications*, *338*(2), 862-871. doi:10.1016/j.bbrc.2005.10.023
- Nurse, C. A. (1990). Carbonic anhydrase and neuronal enzymes in cultured glomus cells of the carotid body of the rat. *Cell and Tissue Research*, *261*(1), 65-71.
- Nurse, C. A., & Zhang, M. (1999). Acetylcholine contributes to hypoxic chemotransmission in co-cultures of rat type 1 cells and petrosal neurons. *Respiration Physiology*, *115*(2), 189-199.
- Nurse, C. A. (2005). Neurotransmission and neuromodulation in the chemosensory carotid body. *Autonomic Neuroscience: Basic & Clinical*, *120*(1-2), 1-9. doi:10.1016/j.autneu.2005.04.008
- O'Brien, E. K., & Degnan, B. M. (2003). Expression of Pax258 in the gastropod statocyst: insights into the antiquity of metazoan geosensory organs. *Evolution & Development*, *5*(6), 572-578.
- O'Connell, B., Chiszar, D., & Smith, H. M. (1981). Effect of poststrike disturbance on strike-induced chemosensory searching in the prairie rattlesnake (*Crotalus v. viridis*). *Behavioral and Neural Biology*, *32*(3), 343-349.
- O'Halloran, D. M., Fitzpatrick, D. A., McCormack, G. P., McInerney, J. O., & Burnell, A. M. (2006). The molecular phylogeny of a nematode-specific clade of heterotrimeric G-protein alpha-subunit genes. *Journal of Molecular Evolution*, *63*(1), 87-94. doi:10.1007/s00239-005-0215-z
- O'Regan, R. G. (1981). Responses of carotid body chemosensory activity and blood flow to stimulation of sympathetic nerves in the cat. *The Journal of Physiology*, *315*, 81-98.
- O'Regan, R. G., & Acker, H. (1988). Effects of changes in chemoreceptor activity on extracellular K⁺

- and Ca²⁺ activities in the cat carotid body. *Brain Research*, 445(2), 268-279.
- Obeso, A., Almaraz, L., & Gonzalez, C. (1986). Effects of 2-deoxy-D-glucose on in vitro cat carotid body. *Brain Research*, 371(1), 25-36.
- Obeso, A., Gonzalez, C., Dinger, B., & Fidone, S. (1989). Metabolic activation of carotid body glomus cells by hypoxia. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 67(1), 484-487.
- Ogawa, K., & Caprio, J. (2000). Glossopharyngeal taste responses of the channel catfish to binary mixtures of amino acids. *Chemical Senses*, 25(5), 501-506.
- Okamoto, K., Takeuchi, K., & Agata, K. (2005). Neural projections in planarian brain revealed by fluorescent dye tracing. *Zoological Science*, 22(5), 535-546.
- Olender, T., Fuchs, T., Linhart, C., Shamir, R., Adams, M., Kalush, F., Khen, M., et al. (2004). The canine olfactory subgenome. *Genomics*, 83(3), 361-372. doi:10.1016/j.ygeno.2003.08.009
- Oliver, D., Brinkmann, M., Sieger, T., & Thurm, U. (2008). Hydrozoan nematocytes send and receive synaptic signals induced by mechano-chemical stimuli. *The Journal of Experimental Biology*, 211(Pt 17), 2876-2888. doi:10.1242/jeb.018515
- Olsen, D. P., Phu, D., Libby, L. J. M., Cormier, J. A., Montez, K. M., Ryder, E. F., & Politz, S. M. (2007). Chemosensory control of surface antigen switching in the nematode *Caenorhabditis elegans*. *Genes, Brain, and Behavior*, 6(3), 240-252. doi:10.1111/j.1601-183X.2006.00252.x
- Olson, K. S., Trapido-Rosenthal, H. G., & Derby, C. D. (1992). Biochemical characterization of independent olfactory receptor sites for 5'-AMP and taurine in the spiny lobster. *Brain Research*, 583(1-2), 262-270.
- Olsson, S. B., Linn, C. E., Michel, A., Dambroski, H. R., Berlocher, S. H., Feder, J. L., & Roelofs, W. L. (2006). Receptor expression and sympatric speciation: unique olfactory receptor neuron responses in F1 hybrid *Rhagoletis* populations. *The Journal of Experimental Biology*, 209(Pt 19), 3729-3741. doi:10.1242/jeb.02444
- Olsson, S. B., Linn, C. E., & Roelofs, W. L. (2006). The chemosensory basis for behavioral divergence involved in sympatric host shifts II: olfactory receptor neuron sensitivity and temporal firing pattern to individual key host volatiles. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 192(3), 289-300. doi:10.1007/s00359-005-0066-5
- Ono, H., Kuwahara, Y., & Nishida, R. (2004). Hydroxybenzoic acid derivatives in a nonhost rutaceous plant, *Orixajaponica*, deter both oviposition and larval feeding in a rutaceae-feeding swallowtail butterfly, *Papilio xuthus* L. *Journal of Chemical Ecology*, 30(2), 287-301.
- Ono, H., Ozaki, K., & Yoshikawa, H. (2005). Identification of cytochrome P450 and glutathione-S-transferase genes preferentially expressed in chemosensory organs of the swallowtail butterfly, *Papilio xuthus* L. *Insect Biochemistry and Molecular Biology*, 35(8), 837-846. doi:10.1016/j.ibmb.2005.03.013
- Ono, H., & Yoshikawa, H. (2004). Identification of amine receptors from a swallowtail butterfly, *Papilio xuthus* L.: cloning and mRNA localization in foreleg chemosensory organ for recognition of host plants. *Insect Biochemistry and Molecular Biology*, 34(12), 1247-1256. doi:10.1016/j.ibmb.2004.08.009
- Ophir, D., & Lancet, D. (1988). Expression of intermediate filaments and desmoplakin in vertebrate olfactory mucosa. *The Anatomical Record*, 221(3), 754-760. doi:10.1002/ar.1092210311
- Opstad, R., Rogers, S. M., Behmer, S. T., & Simpson, S. J. (2004). Behavioural correlates of phenotypic plasticity in mouthpart chemoreceptor numbers in locusts. *Journal of Insect Physiology*, 50(8), 725-736. doi:10.1016/j.jinsphys.2004.05.010
- Ortega-Sáenz, P., Levitsky, K. L., Marcos-Almaraz, M. T., Bonilla-Henao, V., Pascual, A., & López-Barneo, J. (2010). Carotid body chemosensory responses in mice deficient of TASK channels. *The Journal of General Physiology*, 135(4), 379-392. doi:10.1085/jgp.200910302
- Ortiz, C. O., Etchberger, J. F., Posy, S. L., Frøkjær-Jensen, C., Lockery, S., Honig, B., & Hobert, O. (2006). Searching for neuronal left/right asymmetry: genomewide analysis of nematode

- receptor-type guanylyl cyclases. *Genetics*, 173(1), 131-149. doi:10.1534/genetics.106.055749
- Ortiz, C. O., Faumont, S., Takayama, J., Ahmed, H. K., Goldsmith, A. D., Pocock, R., McCormick, K. E., et al. (2009). Lateralized gustatory behavior of *C. elegans* is controlled by specific receptor-type guanylyl cyclases. *Current Biology: CB*, 19(12), 996-1004. doi:10.1016/j.cub.2009.05.043
- Ortiz, F., Iturriaga, R., & Varas, R. (2009). Sustained hypoxia enhances TASK-like current inhibition by acute hypoxia in rat carotid body type-I cells. *Advances in Experimental Medicine and Biology*, 648, 83-88. doi:10.1007/978-90-481-2259-2_9
- Osada, T., Ichikawa, M., & Costanzo, R. M. (1995). Is nestin a marker for chemosensory precursor cells? *Brain Research*, 683(2), 254-257.
- Osadchuk, L. V., Salomacheva, I. N., Bragin, A. V., & Osadchuk, A. V. (2008). [Maturation of sexual behavior in laboratory male mice: a role of genotype]. *Zhurnal Vyssheĭ Nervnoĭ Deiatelnosti Imeni I P Pavlova*, 58(1), 71-79.
- Osanai, S., Buerk, D. G., Mokashi, A., Chugh, D. K., & Lahiri, S. (1997). Cat carotid body chemosensory discharge (in vitro) is insensitive to charybdotoxin. *Brain Research*, 747(2), 324-327.
- Osanai, S., Chugh, D. K., Mokashi, A., & Lahiri, S. (1996). Stimulus interaction between CO and CO₂ in the cat carotid body chemoreception. *Brain Research*, 711(1-2), 56-63.
- Osanai, S., Mokashi, A., Rozanov, C., Buerk, D. G., & Lahiri, S. (1997). Potential role of H₂O₂ in chemoreception in the cat carotid body. *Journal of the Autonomic Nervous System*, 63(1-2), 39-45.
- Osanai, S., Rozanov, C., Mokashi, A., Buerk, D. G., & Lahiri, S. (1997). CO interact with intracellular [H⁺] with and without CO₂-HCO₃⁻ in the cat carotid chemosensory discharge. *Brain Research*, 764(1-2), 221-224.
- Osculati, F., Bentivoglio, M., Castellucci, M., Cinti, S., Zancanaro, C., & Sbarbati, A. (2007). The solitary chemosensory cells and the diffuse chemosensory system of the airway. *European Journal of Histochemistry: EJH*, 51 Suppl 1, 65-72.
- Ostretsova, I. B. (1984). [Membrane phosphodiesterase of cyclic nucleotides in the chemosensory structures of fishes and amphibians]. *Zhurnal Evoliutsionnoĭ Biokhīmii I Fiziologii*, 20(3), 251-256.
- Ostretsova, I. B., Suvorov, S. A., Levko, A. V., & Etingof, R. N. (1984). [The presence of calmodulin in chemosensory structures, its purification and content]. *Biokhīmiiā (Moscow, Russia)*, 49(5), 777-780.
- Otto, D. A., & Hudnell, H. K. (1993). The use of visual and chemosensory evoked potentials in environmental and occupational health. *Environmental Research*, 62(1), 159-171. doi:10.1006/enrs.1993.1100
- Ovchinnikov, A. V. (1986). [Morphologic features of the chemosensory, visual and vestibular pathways of *Helix lucorum*]. *Neiřfiziologiia = Neurophysiology*, 18(1), 7-16.
- Overholt, J. L., Ficker, E., Yang, T., Shams, H., Bright, G. R., & Prabhakar, N. R. (2000). Chemosensing at the carotid body. Involvement of a HERG-like potassium current in glomus cells. *Advances in Experimental Medicine and Biology*, 475, 241-248. doi:10.1007/0-306-46825-5_22
- Owen, W. B., Larsen, J. R., & Pappas, L. G. (1974). Functional units in the labellar chemosensory hairs of the mosquito *Culiseta inornata* (Williston). *The Journal of Experimental Zoology*, 188(2), 235-247. doi:10.1002/jez.1401880211
- Oyarzun, M. J., Iturriaga, R., Donoso, P., Dussaubat, N., Santos, M., Schiappacasse, M. E., Lathrop, M. E., et al. (1991). Factors affecting distribution of alveolar surfactant during resting ventilation. *The American Journal of Physiology*, 261(2 Pt 1), L210-217.
- Ozacmak, V. H., Thorington, G. U., Fletcher, W. H., & Hessinger, D. A. (2001). N-acetylneuraminic acid (NANA) stimulates in situ cyclic AMP production in tentacles of sea anemone (*Aiptasia*

- pallida): possible role in chemosensitization of nematocyst discharge. *The Journal of Experimental Biology*, 204(Pt 11), 2011-2020.
- Ozaki, K., Utoguchi, A., Yamada, A., & Yoshikawa, H. (2008). Identification and genomic structure of chemosensory proteins (CSP) and odorant binding proteins (OBP) genes expressed in foreleg tarsi of the swallowtail butterfly *Papilio xuthus*. *Insect Biochemistry and Molecular Biology*, 38(11), 969-976. doi:10.1016/j.ibmb.2008.07.010
- Ozaki, M., Morisaki, K., Idei, W., Ozaki, K., & Tokunaga, F. (1995). A putative lipophilic stimulant carrier protein commonly found in the taste and olfactory systems. A unique member of the pheromone-binding protein superfamily. *European Journal of Biochemistry / FEBS*, 230(1), 298-308.
- Ozaki, M., Ninomiya, M., Kashihara, Y., & Morita, H. (1986). Destruction and reorganization of the receptor membrane in labellar chemosensory cells of the blowfly. Long-lasting latent action of colchicine. *The Journal of General Physiology*, 87(4), 533-549.
- Ozaki, M., & Wada-Katsumata, A. (2008). [Insect proteins transporting hydrophobic substances: Chemosensory stimulant carrier proteins in insect olfactory and gustatory receptors]. *Tanpakushitsu Kakusan Koso. Protein, Nucleic Acid, Enzyme*, 53(2), 111-118.
- Ozaki, M., Wada-Katsumata, A., Fujikawa, K., Iwasaki, M., Yokohari, F., Satoji, Y., Nisimura, T., et al. (2005). Ant nestmate and non-nestmate discrimination by a chemosensory sensillum. *Science (New York, N.Y.)*, 309(5732), 311-314. doi:10.1126/science.1105244
- Pace, U., & Lancet, D. (1986). Olfactory GTP-binding protein: signal-transducing polypeptide of vertebrate chemosensory neurons. *Proceedings of the National Academy of Sciences of the United States of America*, 83(13), 4947-4951.
- Paczkowski, C., Ivkovich, D., & Stanton, M. E. (1999). Ontogeny of eyeblink conditioning using a visual conditional stimulus. *Developmental Psychobiology*, 35(4), 253-263.
- Page, A. P., Rudin, W., & Maizels, R. M. (1992). Lectin binding to secretory structures, the cuticle and the surface coat of *Toxocara canis* infective larvae. *Parasitology*, 105 (Pt 2), 285-296.
- Page, K. L., & Matheson, T. (2004). Wing hair sensilla underlying aimed hindleg scratching of the locust. *The Journal of Experimental Biology*, 207(Pt 15), 2691-2703. doi:10.1242/jeb.01096
- Palmer, R. K. (2007). The pharmacology and signaling of bitter, sweet, and umami taste sensing. *Molecular Interventions*, 7(2), 87-98. doi:10.1124/mi.7.2.9
- Palmitessa, A., Hess, H. A., Bany, I. A., Kim, Y., Koelle, M. R., & Benovic, J. L. (2005). *Caenorhabditis elegans* arrestin regulates neural G protein signaling and olfactory adaptation and recovery. *The Journal of Biological Chemistry*, 280(26), 24649-24662. doi:10.1074/jbc.M502637200
- Pang, K., Matus, D. Q., & Martindale, M. Q. (2004). The ancestral role of COE genes may have been in chemoreception: evidence from the development of the sea anemone, *Nematostella vectensis* (Phylum Cnidaria; Class Anthozoa). *Development Genes and Evolution*, 214(3), 134-138. doi:10.1007/s00427-004-0383-7
- Pang, L., Miao, Z. H., Dong, L., & Wang, Y. L. (1999). [Hypoxia-induced increase in nerve activity of rabbit carotid body mediated by noradrenaline]. *Sheng Li Xue Bao: [Acta Physiologica Sinica]*, 51(4), 407-412.
- Pang, L., Miao, Z. H., Wang, Y. L., & Dong, L. (1996). [Effects of different natural stimulants on the activity of the rabbits' carotid chemoreceptor]. *Sheng Li Xue Bao: [Acta Physiologica Sinica]*, 48(6), 590-594.
- Panzuto, M., Mauffette, Y., & Alber, P. J. (2002). Developmental, gustatory, and behavioral responses of leafroller larvae, *Choristoneura rosaceana*, to tannic acid and glucose. *Journal of Chemical Ecology*, 28(1), 145-160.
- Papp, S., Lukáts, B., Takács, G., Szalay, C., & Karádi, Z. (2007). Glucose-monitoring neurons in the nucleus accumbens. *Neuroreport*, 18(15), 1561-1565. doi:10.1097/WNR.0b013e3281667eca

- Pappas, L. G., & Larsen, J. R. (1976). Gustatory hairs on the mosquito, *Culiseta inornata*. *The Journal of Experimental Zoology*, *196*(3), 351-360. doi:10.1002/jez.1401960309
- Pardal, R., Ortega-Sáenz, P., Durán, R., & López-Barneo, J. (2007). Glia-like stem cells sustain physiologic neurogenesis in the adult mammalian carotid body. *Cell*, *131*(2), 364-377. doi:10.1016/j.cell.2007.07.043
- Parisian, K., Wages, P., Smith, A., Jarosz, J., Hewitt, A., Leiter, J. C., & Erlichman, J. S. (2004). Ventilatory effects of gap junction blockade in the NTS in awake rats. *Respiratory Physiology & Neurobiology*, *142*(2-3), 127-143. doi:10.1016/j.resp.2004.06.014
- Park, D., McGuire, J. M., Majchrzak, A. L., Ziobro, J. M., & Eisthen, H. L. (2004). Discrimination of conspecific sex and reproductive condition using chemical cues in axolotls (*Ambystoma mexicanum*). *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, *190*(5), 415-427. doi:10.1007/s00359-004-0510-y
- Park, K. H., Hernandez, L., Cai, S., Wang, Y., & Sesti, F. (2005). A family of K⁺ channel ancillary subunits regulate taste sensitivity in *Caenorhabditis elegans*. *The Journal of Biological Chemistry*, *280*(23), 21893-21899. doi:10.1074/jbc.M502732200
- Park, S. K., Mann, K. J., Lin, H., Starostina, E., Kolski-Andreaco, A., & Pikielny, C. W. (2006). A *Drosophila* protein specific to pheromone-sensing gustatory hairs delays males' copulation attempts. *Current Biology: CB*, *16*(11), 1154-1159. doi:10.1016/j.cub.2006.04.028
- Parker, M. R., Young, B. A., & Kardong, K. V. (2008). The forked tongue and edge detection in snakes (*Crotalus oreganus*): an experimental test. *Journal of Comparative Psychology (Washington, D.C.: 1983)*, *122*(1), 35-40. doi:10.1037/0735-7036.122.1.35
- Parry, C. M., Erkner, A., & le Coutre, J. (2004). Divergence of T2R chemosensory receptor families in humans, bonobos, and chimpanzees. *Proceedings of the National Academy of Sciences of the United States of America*, *101*(41), 14830-14834. doi:10.1073/pnas.0404894101
- Partosoedarso, E. R., Young, R. L., & Blackshaw, L. A. (2001). GABA(B) receptors on vagal afferent pathways: peripheral and central inhibition. *American Journal of Physiology. Gastrointestinal and Liver Physiology*, *280*(4), G658-668.
- Pascual, O., Denavit-Saubié, M., Dumas, S., Kietzmann, T., Ghilini, G., Mallet, J., & Pequignot, J. M. (2001). Selective cardiorespiratory and catecholaminergic areas express the hypoxia-inducible factor-1alpha (HIF-1alpha) under in vivo hypoxia in rat brainstem. *The European Journal of Neuroscience*, *14*(12), 1981-1991.
- Passe, D. H., & Walker, J. C. (1985). Odor psychophysics in vertebrates. *Neuroscience and Biobehavioral Reviews*, *9*(3), 431-467.
- Patel, B. A., Arundell, M., Allen, M. C., Gard, P., O'Hare, D., Parker, K., & Yeoman, M. S. (2006). Changes in the properties of the modulatory cerebral giant cells contribute to aging in the feeding system of *Lymnaea*. *Neurobiology of Aging*, *27*(12), 1892-1901. doi:10.1016/j.neurobiolaging.2005.09.041
- Pauli, W., & Berger, S. (1992). Chemosensory and electrophysiological responses in toxicity assessment: investigations with a ciliated protozoan. *Bulletin of Environmental Contamination and Toxicology*, *49*(6), 892-899.
- Pauli, W., & Berger, S. (1997). Toxicological comparisons of *Tetrahymena* species, end points and growth media: supplementary investigations to the pilot ring test. *Chemosphere*, *35*(5), 1043-1052.
- Pause, B. M. (2004). Are androgen steroids acting as pheromones in humans? *Physiology & Behavior*, *83*(1), 21-29. doi:10.1016/j.physbeh.2004.07.019
- Peckol, E. L., Troemel, E. R., & Bargmann, C. I. (2001). Sensory experience and sensory activity regulate chemosensory receptor gene expression in *Caenorhabditis elegans*. *Proceedings of the National Academy of Sciences of the United States of America*, *98*(20), 11032-11038. doi:10.1073/pnas.191352498

- Peden, E. M., & Sweazey, R. D. (1999). Chemical stimulation of the laryngopharynx increases Fos-like immunoreactivity in the rat hypothalamus and amygdala. *Brain Research Bulletin*, 48(6), 629-639.
- Pedersen, P. E., & Benson, T. E. (1986). Projection of septal organ receptor neurons to the main olfactory bulb in rats. *The Journal of Comparative Neurology*, 252(4), 555-562. doi:10.1002/cne.902520411
- Peers, C. (2004). Interactions of chemostimuli at the single cell level: studies in a model system. *Experimental Physiology*, 89(1), 60-65.
- Pelletier, J., & Leal, W. S. (2009a). Genome analysis and expression patterns of odorant-binding proteins from the Southern House mosquito *Culex pipiens quinquefasciatus*. *PloS One*, 4(7), e6237. doi:10.1371/journal.pone.0006237
- Pelletier, J., & Leal, W. S. (2009b). Genome analysis and expression patterns of odorant-binding proteins from the Southern House mosquito *Culex pipiens quinquefasciatus*. *PloS One*, 4(7), e6237. doi:10.1371/journal.pone.0006237
- Pelosi, P., & Maida, R. (1995). Odorant-binding proteins in insects. *Comparative Biochemistry and Physiology. Part B, Biochemistry & Molecular Biology*, 111(3), 503-514.
- Pelosi, P., Zhou, J., Ban, L. P., & Calvello, M. (2006). Soluble proteins in insect chemical communication. *Cellular and Molecular Life Sciences: CMLS*, 63(14), 1658-1676. doi:10.1007/s00018-005-5607-0
- Pelosi, P., Calvello, M., & Ban, L. (2005). Diversity of odorant-binding proteins and chemosensory proteins in insects. *Chemical Senses*, 30 Suppl 1, i291-292. doi:10.1093/chemse/bjh229
- Penn, D., & Potts, W. K. (1998). Untrained mice discriminate MHC-determined odors. *Physiology & Behavior*, 64(3), 235-243.
- Pepino, M. Y., Abate, P., Spear, N. E., & Molina, J. C. (2004). Heightened ethanol intake in infant and adolescent rats after nursing experiences with an ethanol-intoxicated dam. *Alcoholism, Clinical and Experimental Research*, 28(6), 895-905.
- Pequignot, J. M., Spielvogel, H., Caceres, E., Rodriguez, A., Semporé, B., Pequignot, J., & Favier, R. (1997). Influence of gender and endogenous sex steroids on catecholaminergic structures involved in physiological adaptation to hypoxia. *Pflügers Archiv: European Journal of Physiology*, 433(5), 580-586.
- Perkins, L. A., Hedgecock, E. M., Thomson, J. N., & Culotti, J. G. (1986). Mutant sensory cilia in the nematode *Caenorhabditis elegans*. *Developmental Biology*, 117(2), 456-487.
- Perrin, J. S., Araneda, S., Catteau, J., Autran, S., Denavit-Saubié, M., & Pequignot, J. M. (2009). Glial vascular endothelial growth factor overexpression in rat brainstem under tolerable hypoxia: evidence for a central chemosensitivity. *Journal of Neuroscience Research*, 87(1), 79-85. doi:10.1002/jnr.21837
- Pessoa, F. A., Guerra de Queiroz, R., & Ward, R. D. (2001). External morphology of sensory structures of fourth instar larvae of neotropical species of phlebotomine sand flies (Diptera: Psychodidae) under scanning electron microscopy. *Memórias Do Instituto Oswaldo Cruz*, 96(8), 1103-1108.
- Pete, G., Mack, S. O., Haxhiu, M. A., Walbaum, S., & Gauda, E. B. (2002). CO(2)-induced c-Fos expression in brainstem preprotachykinin mRNA containing neurons. *Respiratory Physiology & Neurobiology*, 130(3), 265-274.
- Peters, K. D., Hom, S. M., & Wood, R. I. (2004). Testosterone and chemosensory detection in male Syrian hamster. *Hormones and Behavior*, 46(3), 341-348. doi:10.1016/j.yhbeh.2004.04.004
- Petrulis, A., & Eichenbaum, H. (2003). The perirhinal-entorhinal cortex, but not the hippocampus, is critical for expression of individual recognition in the context of the Coolidge effect. *Neuroscience*, 122(3), 599-607.
- Petrulis, A., & Johnston, R. E. (1999). Lesions centered on the medial amygdala impair scent-marking and sex-odor recognition but spare discrimination of individual odors in female golden

- hamsters. *Behavioral Neuroscience*, 113(2), 345-357.
- Petrulis, A. (2009). Neural mechanisms of individual and sexual recognition in Syrian hamsters (*Mesocricetus auratus*). *Behavioural Brain Research*, 200(2), 260-267. doi:10.1016/j.bbr.2008.10.027
- Pezier, A., Bobkov, Y. V., & Ache, B. W. (2009). The Na⁺/Ca²⁺ exchanger inhibitor, KB-R7943, blocks a nonselective cation channel implicated in chemosensory transduction. *Journal of Neurophysiology*, 101(3), 1151-1159. doi:10.1152/jn.90903.2008
- Pérez, H., & Ruiz, S. (1995). Medullary responses to chemoreceptor activation are inhibited by locus coeruleus and nucleus raphe magnus. *Neuroreport*, 6(10), 1373-1376.
- Pérez, H., Ruiz, S., Inostroza, H., & Perretta, M. (1991). Neonatal capsaicin treatment impairs functional properties of primary olfactory afferents in the rat. *Neuroscience Letters*, 127(2), 251-254.
- Pérez, H., Ruiz, S., Inostroza, H., & Perretta, M. (1992). Substance P depresses bioelectrical responses evoked in the nucleus tractus solitarii: interaction with gamma-aminobutyric acid-ergic neurons. *European Journal of Pharmacology*, 213(3), 435-437.
- Pérez, H., Ruiz, S., Laurido, C., & Hernández, A. (1998). Locus coeruleus-mediated inhibition of chemosensory responses in the rat nucleus tractus solitarius is mediated by alpha2-adrenoreceptors. *Neuroscience Letters*, 249(1), 37-40.
- Pfister, P., & Rodriguez, I. (2005). Olfactory expression of a single and highly variable V1r pheromone receptor-like gene in fish species. *Proceedings of the National Academy of Sciences of the United States of America*, 102(15), 5489-5494. doi:10.1073/pnas.0402581102
- Picimbon, J. F., Dietrich, K., Angeli, S., Scaloni, A., Krieger, J., Breer, H., & Pelosi, P. (2000). Purification and molecular cloning of chemosensory proteins from *Bombyx mori*. *Archives of Insect Biochemistry and Physiology*, 44(3), 120-129. doi:10.1002/1520-6327(200007)44:3<120::AID-ARCH3>3.0.CO;2-H
- Picimbon, J. F., Dietrich, K., Krieger, J., & Breer, H. (2001). Identity and expression pattern of chemosensory proteins in *Heliothis virescens* (Lepidoptera, Noctuidae). *Insect Biochemistry and Molecular Biology*, 31(12), 1173-1181.
- Picone, D., Crescenzi, O., Angeli, S., Marchese, S., Brandazza, A., Ferrara, L., Pelosi, P., et al. (2001). Bacterial expression and conformational analysis of a chemosensory protein from *Schistocerca gregaria*. *European Journal of Biochemistry / FEBS*, 268(17), 4794-4801.
- Pieper, D. R., & Newman, S. W. (1999). Neural pathway from the olfactory bulbs regulating tonic gonadotropin secretion. *Neuroscience and Biobehavioral Reviews*, 23(4), 555-562.
- Pierce-Shimomura, J. T., Faumont, S., Gaston, M. R., Pearson, B. J., & Lockery, S. R. (2001). The homeobox gene *lim-6* is required for distinct chemosensory representations in *C. elegans*. *Nature*, 410(6829), 694-698. doi:10.1038/35070575
- Pittman, D. W., Smith, K. R., Crawley, M. E., Corbin, C. H., Hansen, D. R., Watson, K. J., & Gilbertson, T. A. (2008). Orosensory detection of fatty acids by obesity-prone and obesity-resistant rats: strain and sex differences. *Chemical Senses*, 33(5), 449-460. doi:10.1093/chemse/bjn012
- Pitts, R. J., Fox, A. N., & Zwiebel, L. J. (2004). A highly conserved candidate chemoreceptor expressed in both olfactory and gustatory tissues in the malaria vector *Anopheles gambiae*. *Proceedings of the National Academy of Sciences of the United States of America*, 101(14), 5058-5063. doi:10.1073/pnas.0308146101
- Placyk, J. S., & Graves, B. M. (2002). Prey detection by vomeronasal chemoreception in a plethodontid salamander. *Journal of Chemical Ecology*, 28(5), 1017-1036.
- Pluznick, J. L., Zou, D., Zhang, X., Yan, Q., Rodriguez-Gil, D. J., Eisner, C., Wells, E., et al. (2009). Functional expression of the olfactory signaling system in the kidney. *Proceedings of the National Academy of Sciences of the United States of America*, 106(6), 2059-2064. doi:10.1073/

pnas.0812859106

- Poindron, P., Lévy, F., & Keller, M. (2007). Maternal responsiveness and maternal selectivity in domestic sheep and goats: the two facets of maternal attachment. *Developmental Psychobiology*, *49*(1), 54-70. doi:10.1002/dev.20192
- Pokorski, M., & Lahiri, S. (1983). Relative peripheral and central chemosensory responses to metabolic alkalosis. *The American Journal of Physiology*, *245*(6), R873-880.
- Pokorski, M., & Lahiri, S. (1984). Presynaptic neurotransmitter and chemosensory responses to natural stimuli. *Journal of Applied Physiology: Respiratory, Environmental and Exercise Physiology*, *56*(2), 447-453.
- Polanska, M. A., Yasuda, A., & Harzsch, S. (2007). Immunolocalisation of crustacean-SIFamide in the median brain and eyestalk neuropils of the marbled crayfish. *Cell and Tissue Research*, *330*(2), 331-344. doi:10.1007/s00441-007-0473-8
- Ponce, L. F., Pautassi, R. M., Spear, N. E., & Molina, J. C. (2004). Nursing from an ethanol-intoxicated dam induces short- and long-term disruptions in motor performance and enhances later self-administration of the drug. *Alcoholism, Clinical and Experimental Research*, *28*(7), 1039-1050.
- Poole, R. J., & Hobert, O. (2006). Early embryonic programming of neuronal left/right asymmetry in *C. elegans*. *Current Biology: CB*, *16*(23), 2279-2292. doi:10.1016/j.cub.2006.09.041
- Poran, N. S., Tripoli, R., & Halpern, M. (1993). Nuzzling in the gray short-tailed opossum. II: Familiarity and individual recognition. *Physiology & Behavior*, *53*(5), 969-973.
- Powers, J. B., & Bergondy, M. L. (1983). Androgenic regulation of chemoinvestigatory behaviors in male and female hamsters. *Hormones and Behavior*, *17*(1), 28-44.
- Prabhakar, N. R., Cao, H., Lowe, J. A., & Snider, R. M. (1993). Selective inhibition of the carotid body sensory response to hypoxia by the substance P receptor antagonist CP-96,345. *Proceedings of the National Academy of Sciences of the United States of America*, *90*(21), 10041-10045.
- Prabhakar, N. R., Kumar, G. K., Chang, C. H., Agani, F. H., & Haxhiu, M. A. (1993). Nitric oxide in the sensory function of the carotid body. *Brain Research*, *625*(1), 16-22.
- Pradel, E., Zhang, Y., Pujol, N., Matsuyama, T., Bargmann, C. I., & Ewbank, J. J. (2007). Detection and avoidance of a natural product from the pathogenic bacterium *Serratia marcescens* by *Caenorhabditis elegans*. *Proceedings of the National Academy of Sciences of the United States of America*, *104*(7), 2295-2300. doi:10.1073/pnas.0610281104
- Prasad, B. C., Ye, B., Zackhary, R., Schrader, K., Seydoux, G., & Reed, R. R. (1998). *unc-3*, a gene required for axonal guidance in *Caenorhabditis elegans*, encodes a member of the O/E family of transcription factors. *Development (Cambridge, England)*, *125*(8), 1561-1568.
- Prasad, M., Fearon, I. M., Zhang, M., Laing, M., Vollmer, C., & Nurse, C. A. (2001). Expression of P2X2 and P2X3 receptor subunits in rat carotid body afferent neurones: role in chemosensory signalling. *The Journal of Physiology*, *537*(Pt 3), 667-677.
- Presente, A., Shaw, S., Nye, J. S., & Andres, A. J. (2002). Transgene-mediated RNA interference defines a novel role for notch in chemosensory startle behavior. *Genesis (New York, N.Y.: 2000)*, *34*(1-2), 165-169. doi:10.1002/gene.10149
- Price, R. B., & Anderson, P. A. V. (2006). Chemosensory pathways in the capitata tentacles of the hydroid *Cladonema*. *Invertebrate Neuroscience: IN*, *6*(1), 23-32. doi:10.1007/s10158-005-0015-6
- Pro-Sistiaga, P., Mohedano-Moriano, A., Ubeda-Bañon, I., Del Mar Arroyo-Jimenez, M., Marcos, P., Artacho-Pérula, E., Crespo, C., et al. (2007). Convergence of olfactory and vomeronasal projections in the rat basal telencephalon. *The Journal of Comparative Neurology*, *504*(4), 346-362. doi:10.1002/cne.21455
- Pro-Sistiaga, P., Mohedano-Moriano, A., Ubeda-Bañon, I., de la Rosa-Prieto, C., Saiz-Sanchez, D., & Martínez-Marcos, A. (2008). Projections of olfactory bulbs to the olfactory and vomeronasal cortices. *Neuroreport*, *19*(15), 1541-1544. doi:10.1097/WNR.0b013e32831126ee

- Pujol, N., Link, E. M., Liu, L. X., Kurz, C. L., Alloing, G., Tan, M. W., Ray, K. P., et al. (2001). A reverse genetic analysis of components of the Toll signaling pathway in *Caenorhabditis elegans*. *Current Biology: CB*, *11*(11), 809-821.
- Punzo, F. (2008). Chemosensory recognition of the marbled whiptail lizard, *Aspidoscelis marmorata* (Squamata: Teiidae) to odors of sympatric lizards (*Crotophytus collaris*, *Coleonyx brevis*, *Eumeces obsoletus* and *Uta stansburiana*) that represent different predation risks. *Journal of Environmental Biology / Academy of Environmental Biology, India*, *29*(1), 57-61.
- Putnam, R. W., Conrad, S. C., Gdovin, M. J., Erlichman, J. S., & Leiter, J. C. (2005). Neonatal maturation of the hypercapnic ventilatory response and central neural CO₂ chemosensitivity. *Respiratory Physiology & Neurobiology*, *149*(1-3), 165-179. doi:10.1016/j.resp.2005.03.004
- Pyrski, M., Koo, J. H., Polumuri, S. K., Ruknudin, A. M., Margolis, J. W., Schulze, D. H., & Margolis, F. L. (2007). Sodium/calcium exchanger expression in the mouse and rat olfactory systems. *The Journal of Comparative Neurology*, *501*(6), 944-958. doi:10.1002/cne.21290
- Python, F., & Stocker, R. F. (2002a). Adult-like complexity of the larval antennal lobe of *D. melanogaster* despite markedly low numbers of odorant receptor neurons. *The Journal of Comparative Neurology*, *445*(4), 374-387.
- Python, F., & Stocker, R. F. (2002b). Immunoreactivity against choline acetyltransferase, gamma-aminobutyric acid, histamine, octopamine, and serotonin in the larval chemosensory system of *Drosophila melanogaster*. *The Journal of Comparative Neurology*, *453*(2), 157-167. doi:10.1002/cne.10383
- Radford, C. A., Marsden, I. D., Davison, W., & Taylor, H. H. (2005). Haemolymph glucose concentrations of juvenile rock lobsters, *Jasus edwardsii*, feeding on different carbohydrate diets. *Comparative Biochemistry and Physiology. Part A, Molecular & Integrative Physiology*, *140*(2), 241-249. doi:10.1016/j.cbpb.2005.01.002
- Raethke, N., MacDiarmid, A. B., & Montgomery, J. C. (2004). The role of olfaction during mating in the southern temperate spiny lobster *Jasus edwardsii*. *Hormones and Behavior*, *46*(3), 311-318. doi:10.1016/j.yhbeh.2004.04.005
- Raghu, P., & Hasan, G. (1995). The inositol 1,4,5-triphosphate receptor expression in *Drosophila* suggests a role for IP₃ signalling in muscle development and adult chemosensory functions. *Developmental Biology*, *171*(2), 564-577. doi:10.1006/dbio.1995.1305
- Raible, F., Tessmar-Raible, K., Arboleda, E., Kaller, T., Bork, P., Arendt, D., & Arnone, M. I. (2006). Opsins and clusters of sensory G-protein-coupled receptors in the sea urchin genome. *Developmental Biology*, *300*(1), 461-475. doi:10.1016/j.ydbio.2006.08.070
- Rajashekar, K. P., & Shamprasad, V. R. (2004). Maxillary palp glomeruli and ipsilateral projections in the antennal lobe of *Drosophila melanogaster*. *Journal of Biosciences*, *29*(4), 423-429.
- Ramakrishnan, S., & Wayne, N. L. (2009). Social cues from conspecifics alter electrical activity of gonadotropin-releasing hormone neurons in the terminal nerve via visual signals. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, *297*(1), R135-141. doi:10.1152/ajpregu.00143.2009
- Ramirez, I. (1994). Chemosensory similarities among oils: does viscosity play a role? *Chemical Senses*, *19*(2), 155-168.
- Ramulu, P., & Nathans, J. (2001). Cellular and subcellular localization, N-terminal acylation, and calcium binding of *Caenorhabditis elegans* protein phosphatase with EF-hands. *The Journal of Biological Chemistry*, *276*(27), 25127-25135. doi:10.1074/jbc.M011712200
- Rankin, C. H. (2000). Context conditioning in habituation in the nematode *Caenorhabditis elegans*. *Behavioral Neuroscience*, *114*(3), 496-505.
- Rasmussen, L. E., Lee, T. D., Zhang, A., Roelofs, W. L., & Daves, G. D. (1997). Purification, identification, concentration and bioactivity of (Z)-7-dodecen-1-yl acetate: sex pheromone of the female Asian elephant, *Elephas maximus*. *Chemical Senses*, *22*(4), 417-437.

- Rasmussen, L. E., & Munger, B. L. (1996). The sensorineural specializations of the trunk tip (finger) of the Asian elephant, *Elephas maximus*. *The Anatomical Record*, 246(1), 127-134. doi:10.1002/(SICI)1097-0185(199609)246:1<127::AID-AR14>3.0.CO;2-R
- Rasmussen, L. E., & Schulte, B. A. (1998). Chemical signals in the reproduction of Asian (*Elephas maximus*) and African (*Loxodonta africana*) elephants. *Animal Reproduction Science*, 53(1-4), 19-34.
- Rasmussen, L. E. L., & Greenwood, D. R. (2003). Frontalin: a chemical message of musth in Asian elephants (*Elephas maximus*). *Chemical Senses*, 28(5), 433-446.
- Ray, A., van der Goes van Naters, W., & Carlson, J. R. (2008). A regulatory code for neuron-specific odor receptor expression. *PLoS Biology*, 6(5), e125.
- Rees, C. T., & Spatz, H. C. (1989). Habituation of the landing response of *Drosophila* wild-type and mutants defective in olfactory learning. *Journal of Neurogenetics*, 5(2), 105-118.
- Rehorek, S. J., Firth, B. T., & Hutchinson, M. N. (2000). The structure of the nasal chemosensory system in squamate reptiles. 1. The olfactory organ, with special reference to olfaction in geckos. *Journal of Biosciences*, 25(2), 173-179.
- Reidenbach, M. A., George, N., & Koehl, M. A. R. (2008). Antennule morphology and flicking kinematics facilitate odor sampling by the spiny lobster, *Panulirus argus*. *The Journal of Experimental Biology*, 211(Pt 17), 2849-2858. doi:10.1242/jeb.016394
- Reisenman, C. E., Christensen, T. A., & Hildebrand, J. G. (2005). Chemosensory selectivity of output neurons innervating an identified, sexually isomorphic olfactory glomerulus. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 25(35), 8017-8026. doi:10.1523/JNEUROSCI.1314-05.2005
- Remy, J., & Hobert, O. (2005). An interneuronal chemoreceptor required for olfactory imprinting in *C. elegans*. *Science (New York, N.Y.)*, 309(5735), 787-790. doi:10.1126/science.1114209
- Ren, P., Lim, C. S., Johnsen, R., Albert, P. S., Pilgrim, D., & Riddle, D. L. (1996). Control of *C. elegans* larval development by neuronal expression of a TGF-beta homolog. *Science (New York, N.Y.)*, 274(5291), 1389-1391.
- Restrepo, D., Arellano, J., Oliva, A. M., Schaefer, M. L., & Lin, W. (2004). Emerging views on the distinct but related roles of the main and accessory olfactory systems in responsiveness to chemosensory signals in mice. *Hormones and Behavior*, 46(3), 247-256. doi:10.1016/j.yhbeh.2004.02.009
- Reuter, D., Zierold, K., Schröder, W. H., & Frings, S. (1998). A depolarizing chloride current contributes to chemoelectrical transduction in olfactory sensory neurons in situ. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 18(17), 6623-6630.
- Rey, S., Corthorn, J., Chacón, C., & Iturriaga, R. (2007). Expression and immunolocalization of endothelin peptides and its receptors, ETA and ETB, in the carotid body exposed to chronic intermittent hypoxia. *The Journal of Histochemistry and Cytochemistry: Official Journal of the Histochemistry Society*, 55(2), 167-174. doi:10.1369/jhc.6A7079.2006
- Rey, S., Del Rio, R., Alcayaga, J., & Iturriaga, R. (2004). Chronic intermittent hypoxia enhances cat chemosensory and ventilatory responses to hypoxia. *The Journal of Physiology*, 560(Pt 2), 577-586. doi:10.1113/jphysiol.2004.072033
- Rey, S., Del Rio, R., Alcayaga, J., & Iturriaga, R. (2006). Endothelins in the cat petrosal ganglion and carotid body: effects and immunolocalization. *Brain Research*, 1069(1), 154-158. doi:10.1016/j.brainres.2005.11.051
- Rey, S., Del Rio, R., & Iturriaga, R. (2006). Contribution of endothelin-1 to the enhanced carotid body chemosensory responses induced by chronic intermittent hypoxia. *Brain Research*, 1086(1), 152-159. doi:10.1016/j.brainres.2006.02.082
- Rey, S., Del Rio, R., & Iturriaga, R. (2008). Contribution of endothelin-1 and endothelin A and B receptors to the enhanced carotid body chemosensory responses induced by chronic intermittent

- hypoxia. *Advances in Experimental Medicine and Biology*, 605, 228-232.
- Rey, S., & Iturriaga, R. (2004). Endothelins and nitric oxide: vasoactive modulators of carotid body chemoreception. *Current Neurovascular Research*, 1(5), 465-473.
- Rey, S., Tarvainen, M. P., Karjalainen, P. A., & Iturriaga, R. (2008). Dynamic time-varying analysis of heart rate and blood pressure variability in cats exposed to short-term chronic intermittent hypoxia. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 295(1), R28-37. doi:10.1152/ajpregu.00070.2008
- Reyes, E. P., Fernández, R., Larraín, C., & Zapata, P. (2007a). Effects of combined cholinergic-purinergetic block upon cat carotid body chemoreceptors in vitro. *Respiratory Physiology & Neurobiology*, 156(1), 17-22. doi:10.1016/j.resp.2006.07.007
- Reyes, E. P., Fernández, R., Larraín, C., & Zapata, P. (2007b). Carotid body chemosensory activity and ventilatory chemoreflexes in cats persist after combined cholinergic-purinergetic block. *Respiratory Physiology & Neurobiology*, 156(1), 23-32. doi:10.1016/j.resp.2006.07.006
- Richardson, H. N., Nelson, A. L. A., Ahmed, E. I., Parfitt, D. B., Romeo, R. D., & Sisk, C. L. (2004). Female pheromones stimulate release of luteinizing hormone and testosterone without altering GnRH mRNA in adult male Syrian hamsters (*Mesocricetus auratus*). *General and Comparative Endocrinology*, 138(3), 211-217. doi:10.1016/j.ygcen.2004.06.008
- Riera, C. E., Menozzi-Smarrito, C., Affolter, M., Michlig, S., Munari, C., Robert, F., Vogel, H., et al. (2009). Compounds from Sichuan and Melegueta peppers activate, covalently and non-covalently, TRPA1 and TRPV1 channels. *British Journal of Pharmacology*, 157(8), 1398-1409. doi:10.1111/j.1476-5381.2009.00307.x
- Riesgo-Escovar, J., Woodard, C., Gaines, P., & Carlson, J. (1992). Development and organization of the *Drosophila* olfactory system: an analysis using enhancer traps. *Journal of Neurobiology*, 23(8), 947-964. doi:10.1002/neu.480230803
- Riga, E., Perry, R. N., Barrett, J., & Johnston, M. R. (1995). Investigation of the chemosensory function of amphids of *Syngamus trachea* using electrophysiological techniques. *Parasitology*, 111 (Pt 3), 347-351.
- Rigual, R., Gonzalez, E., Gonzalez, C., & Fidone, S. (1986). Synthesis and release of catecholamines by the cat carotid body in vitro: effects of hypoxic stimulation. *Brain Research*, 374(1), 101-109.
- Rio, R. D., Moya, E. A., Alcayaga, J., & Iturriaga, R. (2009). Evidence for histamine as a new modulator of carotid body chemoreception. *Advances in Experimental Medicine and Biology*, 648, 177-184. doi:10.1007/978-90-481-2259-2_20
- Ritucci, N. A., Erlichman, J. S., Leiter, J. C., & Putnam, R. W. (2005). Response of membrane potential and intracellular pH to hypercapnia in neurons and astrocytes from rat retrotrapezoid nucleus. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 289(3), R851-861. doi:10.1152/ajpregu.00132.2005
- Rivera, L., Gallar, J., Pozo, M. A., & Belmonte, C. (2000). Responses of nerve fibres of the rat saphenous nerve neuroma to mechanical and chemical stimulation: an in vitro study. *The Journal of Physiology*, 527 Pt 2, 305-313.
- Robertson, H. M., Martos, R., Sears, C. R., Todres, E. Z., Walden, K. K., & Nardi, J. B. (1999). Diversity of odourant binding proteins revealed by an expressed sequence tag project on male *Manduca sexta* moth antennae. *Insect Molecular Biology*, 8(4), 501-518.
- Robinson, S. R., Wong, C. H., Robertson, S. S., Nathanielsz, P. W., & Smotherman, W. P. (1995). Behavioral responses of the chronically instrumented sheep fetus to chemosensory stimuli presented in utero. *Behavioral Neuroscience*, 109(3), 551-562.
- Rocha, I., de Oliveira, E. I., Spyer, K. M., & Carvalho, L. S. (2000). Interaction of the Bezold-Jarisch reflex with the urinary bladder function. *Revista Portuguesa De Cardiologia: Órgão Oficial Da Sociedade Portuguesa De Cardiologia = Portuguese Journal of Cardiology: An Official*

Journal of the Portuguese Society of Cardiology, 19(10), 977-988.

- Roda, E., Municchi, E., Conforti, E., Pisu, M. B., Gomulski, L. M., Malacrida, A. R., & Bernocchi, G. (2004). Nitric oxide synthase-dependent NADPH-diaphorase activity in the optic lobes of male and female *Ceratitis capitata* mutants. *European Journal of Histochemistry: EJH*, 48(2), 141-150.
- Rodgers, L. F., Markle, K. L., & Hennessey, T. M. (2008). Responses of the ciliates tetrahymena and paramecium to vertebrate odorants and tastants. *The Journal of Eukaryotic Microbiology*, 55(1), 27-33. doi:10.1111/j.1550-7408.2007.00300.x
- Rodriguez, I., & Boehm, U. (2009). Pheromone sensing in mice. *Results and Problems in Cell Differentiation*, 47, 77-96. doi:10.1007/400_2008_8
- Rogers, R. F., & Matzel, L. D. (1996). Higher-order associative processing in *Hermissenda* suggests multiple sites of neuronal modulation. *Learning & Memory (Cold Spring Harbor, N.Y.)*, 2(6), 279-298.
- Rogers, S. M., Matheson, T., Despland, E., Dodgson, T., Burrows, M., & Simpson, S. J. (2003). Mechanosensory-induced behavioural gregarization in the desert locust *Schistocerca gregaria*. *The Journal of Experimental Biology*, 206(Pt 22), 3991-4002.
- Rogers, S. M., & Newland, P. L. (2002). Gustatory processing in thoracic local circuits of locusts. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 22(18), 8324-8333.
- Rojas, P., Garst-Orozco, J., Baban, B., de Santiago-Castillo, J. A., Covarrubias, M., & Salkoff, L. (2008). Cumulative activation of voltage-dependent KVS-1 potassium channels. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 28(3), 757-765. doi:10.1523/JNEUROSCI.3825-07.2008
- Rollmann, S. M., Mackay, T. F. C., & Anholt, R. R. H. (2005). Pinocchio, a novel protein expressed in the antenna, contributes to olfactory behavior in *Drosophila melanogaster*. *Journal of Neurobiology*, 63(2), 146-158. doi:10.1002/neu.20123
- Romagnolo, B., Jiang, M., Kiraly, M., Breton, C., Begley, R., Wang, J., Lund, J., et al. (2002). Downstream targets of let-60 Ras in *Caenorhabditis elegans*. *Developmental Biology*, 247(1), 127-136. doi:10.1006/dbio.2002.0692
- Rombaux, P., Mouraux, A., Bertrand, B., Guerit, J. M., & Hummel, T. (2006). Assessment of olfactory and trigeminal function using chemosensory event-related potentials. *Neurophysiologie Clinique = Clinical Neurophysiology*, 36(2), 53-62. doi:10.1016/j.neucli.2006.03.005
- Romeo, R. D., Richardson, H. N., & Sisk, C. L. (2002). Puberty and the maturation of the male brain and sexual behavior: recasting a behavioral potential. *Neuroscience and Biobehavioral Reviews*, 26(3), 381-391.
- Roper, S. D. (1989). The cell biology of vertebrate taste receptors. *Annual Review of Neuroscience*, 12, 329-353. doi:10.1146/annurev.ne.12.030189.001553
- Roper, S. D. (1992). The microphysiology of peripheral taste organs. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 12(4), 1127-1134.
- Roper, S. D., & McBride, D. W. (1989). Distribution of ion channels on taste cells and its relationship to chemosensory transduction. *The Journal of Membrane Biology*, 109(1), 29-39.
- Roper, S. D. (2007). Signal transduction and information processing in mammalian taste buds. *Pflügers Archiv: European Journal of Physiology*, 454(5), 759-776. doi:10.1007/s00424-007-0247-x
- de la Rosa-Prieto, C., Ubeda-Banon, I., Mohedano-Moriano, A., Pro-Sistiaga, P., Saiz-Sanchez, D., Insausti, R., & Martinez-Marcos, A. (2009). Subicular and CA1 hippocampal projections to the accessory olfactory bulb. *Hippocampus*, 19(2), 124-129. doi:10.1002/hipo.20495
- Roslinski, D. L., Bhatnagar, K. P., Burrows, A. M., & Smith, T. D. (2000). Comparative morphology and histochemistry of glands associated with the vomeronasal organ in humans, mouse lemurs, and voles. *The Anatomical Record*, 260(1), 92-101.

- Roux, J. C., Pequignot, J. M., Dumas, S., Pascual, O., Ghilini, G., Pequignot, J., Mallet, J., et al. (2000). O₂-sensing after carotid chemodenervation: hypoxic ventilatory responsiveness and upregulation of tyrosine hydroxylase mRNA in brainstem catecholaminergic cells. *The European Journal of Neuroscience*, *12*(9), 3181-3190.
- Roy, A., Mokashi, A., Rozanov, C., Daudu, P. A., & Lahiri, S. (2001). Reduced glutathione, dithiothreitol and cytochrome P-450 inhibitors do not influence hypoxic chemosensory responses in the rat carotid body. *Brain Research*, *889*(1-2), 131-137.
- Roy, A., Rozanov, C., Buerk, D. G., Mokashi, A., & Lahiri, S. (1998). Suppression of glomus cell K⁺ conductance by 4-aminopyridine is not related to [Ca²⁺]_i, dopamine release and chemosensory discharge from carotid body. *Brain Research*, *785*(2), 228-235.
- Roy, A., Rozanov, C., Iturriaga, R., Mokashi, A., & Lahiri, S. (1997). Acid-sensing by carotid body is inhibited by blockers of voltage-sensitive Ca²⁺ channels. *Brain Research*, *769*(2), 396-399.
- Roy, A., Rozanov, C., Mokashi, A., & Lahiri, S. (2000). Redox-based inhibition of K⁺ channel/current is not related to hypoxic chemosensory responses in rat carotid body. *Advances in Experimental Medicine and Biology*, *475*, 645-653. doi:10.1007/0-306-46825-5_63
- Roy, A., Baby, S. M., Wilson, D. F., & Lahiri, S. (2007). Rat carotid body chemosensory discharge and glomus cell HIF-1 alpha expression in vitro: regulation by a common oxygen sensor. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, *293*(2), R829-836. doi:10.1152/ajpregu.00882.2006
- Roy, A., Li, J., Baby, S. M., Mokashi, A., Buerk, D. G., & Lahiri, S. (2004). Effects of iron-chelators on ion-channels and HIF-1 alpha in the carotid body. *Respiratory Physiology & Neurobiology*, *141*(2), 115-123. doi:10.1016/j.resp.2004.03.010
- Rozanov, C., Buerk, D. G., Chugh, D., Mokashi, A., & Lahiri, S. (1998). Inhibition of dopamine release with simultaneous chemosensory excitation by hypercapnia with and without [Ca²⁺]₀ in the cat carotid body. *Journal of the Autonomic Nervous System*, *69*(2-3), 184-189.
- Rozanov, C., Roy, A., Mokashi, A., Daudu, P., & Lahiri, S. (2001). Barium-stimulated chemosensory activity may not reflect inhibition of background voltage-insensitive K⁺ channels in the rat carotid body. *Brain Research*, *897*(1-2), 1-8.
- Rozanov, C., Roy, A., Mokashi, A., Wilson, D. F., Lahiri, S., & Acker, H. (1999). Chemosensory response to high pCO₂ is blocked by cadmium, a voltage-sensitive calcium channel blocker. *Brain Research*, *833*(1), 101-107.
- Rózsa, K. S. (2000). Modulation in firing pattern and oscillation in nerve cells of *Lymnaea* during network reconstruction. *Acta Biologica Hungarica*, *51*(2-4), 211-230.
- Rubio, V. C., Sánchez-Vázquez, F. J., & Madrid, J. A. (2005). Fish macronutrient selection through post-ingestive signals: effect of selective macronutrient deprivation. *Physiology & Behavior*, *84*(4), 651-657. doi:10.1016/j.physbeh.2005.02.014
- Rubio, V. C., Sánchez-Vázquez, F. J., Zamora, S., & Madrid, J. A. (2008). Endogenous modification of macronutrient selection pattern in sea bass (*Dicentrarchus labrax*, L.). *Physiology & Behavior*, *95*(1-2), 32-35. doi:10.1016/j.physbeh.2008.03.006
- Ruebenbauer, A., Schlyter, F., Hansson, B. S., Löfstedt, C., & Larsson, M. C. (2008). Genetic variability and robustness of host odor preference in *Drosophila melanogaster*. *Current Biology: CB*, *18*(18), 1438-1443. doi:10.1016/j.cub.2008.08.062
- Rumsey, W. L., Iturriaga, R., Spergel, D., Lahiri, S., & Wilson, D. F. (1991). Optical measurements of the dependence of chemoreception on oxygen pressure in the cat carotid body. *The American Journal of Physiology*, *261*(4 Pt 1), C614-622.
- Runold, M., Cherniack, N. S., & Prabhakar, N. R. (1990). Effect of adenosine on chemosensory activity of the cat aortic body. *Respiration Physiology*, *80*(2-3), 299-306.
- Ruth, P., Schmidtberg, H., Westermann, B., & Schipp, R. (2002). The sensory epithelium of the tentacles and the rhinophore of *Nautilus pompilius* L. (cephalopoda, nautiloidea). *Journal of*

- Morphology*, 251(3), 239-255. doi:10.1002/jmor.1086
- Rünnenburger, K., Breer, H., & Boekhoff, I. (2002). Selective G protein beta gamma-subunit compositions mediate phospholipase C activation in the vomeronasal organ. *European Journal of Cell Biology*, 81(10), 539-547.
- Rützler, M., Lu, T., & Zwiebel, L. J. (2006). Galpha encoding gene family of the malaria vector mosquito *Anopheles gambiae*: expression analysis and immunolocalization of AGalphaq and AGalphao in female antennae. *The Journal of Comparative Neurology*, 499(4), 533-545. doi:10.1002/cne.21083
- Sachs, B. D. (1995). Placing erection in context: the reflexogenic-psychogenic dichotomy reconsidered. *Neuroscience and Biobehavioral Reviews*, 19(2), 211-224.
- Saidu, S. P., Weeraratne, S. D., Valentine, M., Delay, R., & Van Houten, J. L. (2009). Role of plasma membrane calcium ATPases in calcium clearance from olfactory sensory neurons. *Chemical Senses*, 34(4), 349-358. doi:10.1093/chemse/bjp008
- Sambongi, Y., Takeda, K., Wakabayashi, T., Ueda, I., Wada, Y., & Futai, M. (2000). *Caenorhabditis elegans* senses protons through amphid chemosensory neurons: proton signals elicit avoidance behavior. *Neuroreport*, 11(10), 2229-2232.
- Samoïlov, V. O., & Ponomarenko, G. N. (1985). [Chemoreceptor function and metabolism of the carotid body in the rat]. *Zhurnal Evoliutsionnoï Biokhīmii I Fiziologii*, 21(5), 516-521.
- Sampedro, C., Font, E., & Desfilis, E. (2008). Size variation and cell proliferation in chemosensory brain areas of a lizard (*Podarcis hispanica*): effects of sex and season. *The European Journal of Neuroscience*, 28(1), 87-98. doi:10.1111/j.1460-9568.2008.06287.x
- Sampson, S. R. (1971). Effects of mecamylamine on responses of carotid body chemoreceptors in vivo to physiological and pharmacological stimuli. *The Journal of Physiology*, 212(3), 655-666.
- Sampson, S. R., & Vidruk, E. H. (1977). Hyperpolarizing effects of dopamine on chemoreceptor nerve endings from cat and rabbit carotid bodies in vitro. *The Journal of Physiology*, 268(1), 211-221.
- Samuelsen, C. L., & Meredith, M. (2009). The vomeronasal organ is required for the male mouse medial amygdala response to chemical-communication signals, as assessed by immediate early gene expression. *Neuroscience*, 164(4), 1468-1476. doi:10.1016/j.neuroscience.2009.09.030
- Samuelsen, C. L., & Meredith, M. (2009). Categorization of biologically relevant chemical signals in the medial amygdala. *Brain Research*, 1263, 33-42. doi:10.1016/j.brainres.2009.01.048
- Sandahl, J. F., Baldwin, D. H., Jenkins, J. J., & Scholz, N. L. (2007). A sensory system at the interface between urban stormwater runoff and salmon survival. *Environmental Science & Technology*, 41(8), 2998-3004.
- Sanders, S., & Spear, N. E. (2007). Ethanol acceptance is high during early infancy and becomes still higher after previous ethanol ingestion. *Alcoholism, Clinical and Experimental Research*, 31(7), 1148-1158. doi:10.1111/j.1530-0277.2007.00400.x
- Sarafi-Reinach, T. R., Melkman, T., Hobert, O., & Sengupta, P. (2001). The *lin-11* LIM homeobox gene specifies olfactory and chemosensory neuron fates in *C. elegans*. *Development (Cambridge, England)*, 128(17), 3269-3281.
- Sarafi-Reinach, T. R., & Sengupta, P. (2000). The forkhead domain gene *unc-130* generates chemosensory neuron diversity in *C. elegans*. *Genes & Development*, 14(19), 2472-2485.
- Sato, K., Pellegrino, M., Nakagawa, T., Nakagawa, T., Vosshall, L. B., & Touhara, K. (2008). Insect olfactory receptors are heteromeric ligand-gated ion channels. *Nature*, 452(7190), 1002-1006. doi:10.1038/nature06850
- Satoh, G. (2005). A trajectory of increasing activity and the elaboration of chemosensory modality: a new perspective on vertebrate origins. *Zoological Science*, 22(6), 613-626.
- Sawyer, T. F., Hengehold, A. K., & Perez, W. A. (1984). Chemosensory and hormonal mediation of social memory in male rats. *Behavioral Neuroscience*, 98(5), 908-913.
- Sánchez-Gracia, A., Vieira, F. G., & Rozas, J. (2009). Molecular evolution of the major chemosensory

- gene families in insects. *Heredity*, 103(3), 208-216. doi:10.1038/hdy.2009.55
- Sbarbati, A., Crescimanno, C., Benati, D., & Osculati, F. (1998). Solitary chemosensory cells in the developing chemoreceptorial epithelium of the vallate papilla. *Journal of Neurocytology*, 27(9), 631-635.
- Sbarbati, A., Crescimanno, C., Bernardi, P., & Osculati, F. (1999). Alpha-gustducin-immunoreactive solitary chemosensory cells in the developing chemoreceptorial epithelium of the rat vallate papilla. *Chemical Senses*, 24(5), 469-472.
- Sbarbati, A., Crescimanno, C., Merigo, F., Benati, D., Bernardi, P., Bertini, M., & Osculati, F. (2001). A brief survey of the modifications in sensory-secretory organs of the neonatal rat tongue. *Biology of the Neonate*, 80(1), 1-6.
- Sbarbati, A., & Osculati, F. (2003). Solitary chemosensory cells in mammals? *Cells, Tissues, Organs*, 175(1), 51-55. doi:10.1159/000073437
- Sbarbati, A., & Osculati, F. (2005a). The taste cell-related diffuse chemosensory system. *Progress in Neurobiology*, 75(4), 295-307. doi:10.1016/j.pneurobio.2005.03.001
- Sbarbati, A., & Osculati, F. (2005b). A new fate for old cells: brush cells and related elements. *Journal of Anatomy*, 206(4), 349-358. doi:10.1111/j.1469-7580.2005.00403.x
- Sbarbati, A., Merigo, F., Benati, D., Tizzano, M., Bernardi, P., Crescimanno, C., & Osculati, F. (2004). Identification and characterization of a specific sensory epithelium in the rat larynx. *The Journal of Comparative Neurology*, 475(2), 188-201. doi:10.1002/cne.20172
- Sbarbati, A., Merigo, F., Benati, D., Tizzano, M., Bernardi, P., & Osculati, F. (2004). Laryngeal chemosensory clusters. *Chemical Senses*, 29(8), 683-692. doi:10.1093/chemse/bjh071
- Sbarbati, A., Tizzano, M., Merigo, F., Benati, D., Nicolato, E., Boschi, F., Cecchini, M. P., et al. (2009). Acyl homoserine lactones induce early response in the airway. *Anatomical Record (Hoboken, N.J.: 2007)*, 292(3), 439-448. doi:10.1002/ar.20866
- Schaal, B., & Orgeur, P. (1992). Olfaction in utero: can the rodent model be generalized? *The Quarterly Journal of Experimental Psychology. B, Comparative and Physiological Psychology*, 44(3-4), 245-278.
- Schackwitz, W. S., Inoue, T., & Thomas, J. H. (1996). Chemosensory neurons function in parallel to mediate a pheromone response in *C. elegans*. *Neuron*, 17(4), 719-728.
- Schiffman, S. S. (1983). Taste and smell in disease (second of two parts). *The New England Journal of Medicine*, 308(22), 1337-1343.
- Schild, D., & Restrepo, D. (1998). Transduction mechanisms in vertebrate olfactory receptor cells. *Physiological Reviews*, 78(2), 429-466.
- Schmidt, M. (1997). Distribution of presumptive chemosensory afferents with FMRFamide- or substance P-like immunoreactivity in decapod crustaceans. *Brain Research*, 746(1-2), 71-84.
- Schmidt, M., Van Ekeris, L., & Ache, B. W. (1992). Antennular projections to the midbrain of the spiny lobster. I. Sensory innervation of the lateral and medial antennular neuropils. *The Journal of Comparative Neurology*, 318(3), 277-290. doi:10.1002/cne.903180305
- Schmidt, M. (2007). The olfactory pathway of decapod crustaceans--an invertebrate model for life-long neurogenesis. *Chemical Senses*, 32(4), 365-384. doi:10.1093/chemse/bjm008
- Schmitt, P., Pequignot, J., Garcia, C., Pujol, J. F., & Pequignot, J. M. (1993). Regional specificity of the long-term regulation of tyrosine hydroxylase in some catecholaminergic rat brainstem areas. I. Influence of long-term hypoxia. *Brain Research*, 611(1), 53-60.
- Schnauffer, C., Breer, H., & Fleischer, J. (2009). Outgrowing olfactory axons contain the Reelin receptor VLDLR and navigate through the Reelin-rich cribriform mesenchyme. *Cell and Tissue Research*, 337(3), 393-406. doi:10.1007/s00441-009-0762-5
- Scholey, J. M., Ou, G., Snow, J., & Gunnarson, A. (2004). Intraflagellar transport motors in *Caenorhabditis elegans* neurons. *Biochemical Society Transactions*, 32(Pt 5), 682-684. doi:10.1042/BST0320682

- Scholey, J. M. (2003). Intraflagellar transport. *Annual Review of Cell and Developmental Biology*, 19, 423-443. doi:10.1146/annurev.cellbio.19.111401.091318
- Schubert, S. N., Houck, L. D., Feldhoff, P. W., Feldhoff, R. C., & Woodley, S. K. (2006). Effects of androgens on behavioral and vomeronasal responses to chemosensory cues in male terrestrial salamanders (*Plethodon shermani*). *Hormones and Behavior*, 50(3), 469-476. doi:10.1016/j.yhbeh.2006.06.014
- Schubert, S. N., Houck, L. D., Feldhoff, P. W., Feldhoff, R. C., & Woodley, S. K. (2008). The effects of sex on chemosensory communication in a terrestrial salamander (*Plethodon shermani*). *Hormones and Behavior*, 54(2), 270-277. doi:10.1016/j.yhbeh.2008.03.009
- Schubert, S. N., Wack, C. L., Houck, L. D., Feldhoff, P. W., Feldhoff, R. C., & Woodley, S. K. (2009). Exposure to pheromones increases plasma corticosterone concentrations in a terrestrial salamander. *General and Comparative Endocrinology*, 161(2), 271-275. doi:10.1016/j.ygcen.2009.01.013
- Schubiger, M., Carré, C., Antoniewski, C., & Truman, J. W. (2005). Ligand-dependent de-repression via EcR/USP acts as a gate to coordinate the differentiation of sensory neurons in the *Drosophila* wing. *Development (Cambridge, England)*, 132(23), 5239-5248. doi:10.1242/dev.02093
- Schultz, H. D. (2001). Cardiac vagal chemosensory afferents. Function in pathophysiological states. *Annals of the New York Academy of Sciences*, 940, 59-73.
- Schulz, K. M., Richardson, H. N., Romeo, R. D., Morris, J. A., Lookingland, K. J., & Sisk, C. L. (2003). Medial preoptic area dopaminergic responses to female pheromones develop during puberty in the male Syrian hamster. *Brain Research*, 988(1-2), 139-145.
- Schuppe, H., Cuttle, M., & Newland, P. L. (2007). Nitric oxide modulates sodium taste via a cGMP-independent pathway. *Developmental Neurobiology*, 67(2), 219-232. doi:10.1002/dneu.20343
- Schuster, F. L., & Levandowsky, M. (1996). Chemosensory responses of *Acanthamoeba castellanii*: visual analysis of random movement and responses to chemical signals. *The Journal of Eukaryotic Microbiology*, 43(2), 150-158.
- Schwanzel-Fukuda, M., & Pfaff, D. W. (1987). Passive immunization of fetal rats with antiserum to luteinizing hormone-releasing hormone (LHRH) or transection of the central roots of the nervus terminalis does not affect rat pups' preference for home nest. *Physiology & Behavior*, 41(6), 613-619.
- Schwarz, D., Robertson, H. M., Feder, J. L., Varala, K., Hudson, M. E., Ragland, G. J., Hahn, D. A., et al. (2009). Sympatric ecological speciation meets pyrosequencing: sampling the transcriptome of the apple maggot *Rhagoletis pomonella*. *BMC Genomics*, 10, 633. doi:10.1186/1471-2164-10-633
- Schwarzenbacher, K., Fleischer, J., & Breer, H. (2005). Formation and maturation of olfactory cilia monitored by odorant receptor-specific antibodies. *Histochemistry and Cell Biology*, 123(4-5), 419-428. doi:10.1007/s00418-005-0790-5
- Schwarzenbacher, K., Fleischer, J., & Breer, H. (2006). Odorant receptor proteins in olfactory axons and in cells of the cribriform mesenchyme may contribute to fasciculation and sorting of nerve fibers. *Cell and Tissue Research*, 323(2), 211-219. doi:10.1007/s00441-005-0073-4
- Schwenk, K. (1993). The evolution of chemoreception in squamate reptiles: a phylogenetic approach. *Brain, Behavior and Evolution*, 41(3-5), 124-137.
- Schwerdtfeger, W. K. (1978). The structure of teleost epidermis with special reference to new qualitative and quantitative data from the guppy, *Poecilia reticulata* Peters. *Zeitschrift Für Mikroskopisch-Anatomische Forschung*, 92(1), 193-205.
- Scott, K., Brady, R., Cravchik, A., Morozov, P., Rzhetsky, A., Zuker, C., & Axel, R. (2001). A chemosensory gene family encoding candidate gustatory and olfactory receptors in *Drosophila*. *Cell*, 104(5), 661-673.

- Scott, R. H., O'Brien, K., Roberts, L., Mordue, W., & Mordue Luntz, J. (1999). Extracellular and intracellular actions of azadirachtin on the electrophysiological properties of cultured rat DRG neurones. *Comparative Biochemistry and Physiology. Part C, Pharmacology, Toxicology & Endocrinology*, 123(1), 85-93.
- Seehuus, S., Krekling, T., & Amdam, G. V. (2006). Cellular senescence in honey bee brain is largely independent of chronological age. *Experimental Gerontology*, 41(11), 1117-1125. doi:10.1016/j.exger.2006.08.004
- Sekerková, G., Freeman, D., Mugnaini, E., & Bartles, J. R. (2005). Espin cytoskeletal proteins in the sensory cells of rodent taste buds. *Journal of Neurocytology*, 34(3-5), 171-182. doi:10.1007/s11068-005-8352-2
- Sekerková, G., Zheng, L., Loomis, P. A., Changyaleket, B., Whitlon, D. S., Mugnaini, E., & Bartles, J. R. (2004). Espins are multifunctional actin cytoskeletal regulatory proteins in the microvilli of chemosensory and mechanosensory cells. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 24(23), 5445-5456. doi:10.1523/JNEUROSCI.1279-04.2004
- Sen, A., Reddy, G. V., & Rodrigues, V. (2003). Combinatorial expression of Prospero, Seven-up, and Elav identifies progenitor cell types during sense-organ differentiation in the Drosophila antenna. *Developmental Biology*, 254(1), 79-92.
- Sengupta, P., Colbert, H. A., & Bargmann, C. I. (1994). The *C. elegans* gene *odr-7* encodes an olfactory-specific member of the nuclear receptor superfamily. *Cell*, 79(6), 971-980.
- Sengupta, P., Colbert, H. A., Kimmel, B. E., Dwyer, N., & Bargmann, C. I. (1993). The cellular and genetic basis of olfactory responses in *Caenorhabditis elegans*. *Ciba Foundation Symposium*, 179, 235-244; discussion 244-250.
- Sengupta, P. (2002). Chemosensation: tasting with the tail. *Current Biology: CB*, 12(11), R386-388.
- Sengupta, P. (2007). Generation and modulation of chemosensory behaviors in *C. elegans*. *Pflügers Archiv: European Journal of Physiology*, 454(5), 721-734. doi:10.1007/s00424-006-0196-9
- Serani, A., Lavados, M., & Zapata, P. (1983). Cardiovascular responses to hypoxia in the spontaneously breathing cat: reflexes originating from carotid and aortic bodies. *Archivos De Biología Y Medicina Experimentales*, 16(1), 29-41.
- Serani, A., & Zapata, P. (1981). Relative contribution of carotid and aortic bodies to cyanide-induced ventilatory responses in the cat. *Archives Internationales De Pharmacodynamie Et De Thérapie*, 252(2), 284-297.
- Serdiuk, S. E., Komissarov, I. V., & Gmiro, V. E. (1993). [The role of the chemosensory systems in the inhibitory regulation of cholinergic transmission in the small intestine]. *Fiziologicheskii Zhurnal*, 39(1), 54-61.
- Serova, O. N. (1993). [The peptidergic mechanisms controlling specialized appetites and taste afferentation]. *Zhurnal Vyssheĭ Nervnoĭ Deiatelnosti Imeni I P Pavlova*, 43(2), 358-370.
- Serova, O. N., Solov'eva, N. A., Lagutina, L. V., & Obukhova, M. F. (1996). Formation of taste aversion and preference in protein synthesis inhibition in rats. *Neuroscience and Behavioral Physiology*, 26(5), 477-481.
- Serova, O. N., Solov'eva, N. A., Lagutina, L. V., & Obukhova, M. F. (1995). [The formation of taste aversion and preference under conditions of protein synthesis inhibition in rats]. *Zhurnal Vyssheĭ Nervnoĭ Deiatelnosti Imeni I P Pavlova*, 45(4), 742-747.
- Shaham, S. (2010). Chemosensory organs as models of neuronal synapses. *Nature Reviews. Neuroscience*, 11(3), 212-217. doi:10.1038/nrn2740
- Shakir, M. A., Miwa, J., & Siddiqui, S. S. (1993). A role of ADF chemosensory neurones in dauer formation behaviour in *C. elegans*. *Neuroreport*, 4(10), 1151-1154.
- Shapiro, L. S., EE, P. L., & Halpern, M. (1995). Lectin histochemical identification of carbohydrate moieties in opossum chemosensory systems during development, with special emphasis on VVA-identified subdivisions in the accessory olfactory bulb. *Journal of Morphology*, 224(3),

331-349. doi:10.1002/jmor.1052240307

- Shapiro, L. S., & Halpern, M. (1998). Development of NADPH-diaphorase expression in chemosensory systems of the opossum, *Monodelphis domestica*. *Brain Research. Developmental Brain Research*, *111*(1), 51-63.
- Shapiro, L. S., Roland, R. M., & Halpern, M. (1997). Development of olfactory marker protein and N-CAM expression in chemosensory systems of the opossum, *Monodelphis domestica*. *Journal of Morphology*, *234*(2), 109-129. doi:10.1002/(SICI)1097-4687(199711)234:2<109::AID-JMOR1>3.0.CO;2-7
- Shapiro, L. S., Roland, R. M., Li, C. S., & Halpern, M. (1996). Vomeronasal system involvement in response to conspecific odors in adult male opossums, *Monodelphis domestica*. *Behavioural Brain Research*, *77*(1-2), 101-113.
- Sharp, J. W., Magrum, L. J., & Gietzen, D. W. (2002). Role of MAP kinase in signaling indispensable amino acid deficiency in the brain. *Brain Research. Molecular Brain Research*, *105*(1-2), 11-18.
- Sharp, J. W., Ross-Inta, C. M., Hao, S., Rudell, J. B., & Gietzen, D. W. (2006). Co-localization of phosphorylated extracellular signal-regulated protein kinases 1/2 (ERK1/2) and phosphorylated eukaryotic initiation factor 2alpha (eIF2alpha) in response to a threonine-devoid diet. *The Journal of Comparative Neurology*, *494*(3), 485-494. doi:10.1002/cne.20817
- Shaver, S. W., Pang, J. J., Wall, K. M., Sposito, N. M., & Gross, P. M. (1991). Subregional topography of capillaries in the dorsal vagal complex of rats: I. Morphometric properties. *The Journal of Comparative Neurology*, *306*(1), 73-82. doi:10.1002/cne.903060106
- Shen, P., & Cai, H. N. (2001). *Drosophila* neuropeptide F mediates integration of chemosensory stimulation and conditioning of the nervous system by food. *Journal of Neurobiology*, *47*(1), 16-25.
- Sheng, J., & Ding, X. (1996). Identification of human genes related to olfactory-specific CYP2G1. *Biochemical and Biophysical Research Communications*, *218*(2), 570-574. doi:10.1006/bbrc.1996.0101
- Shi, P., & Zhang, J. (2009). Extraordinary diversity of chemosensory receptor gene repertoires among vertebrates. *Results and Problems in Cell Differentiation*, *47*, 1-23. doi:10.1007/400_2008_4
- Shigeno, S., Sasaki, T., & Haszprunar, G. (2007). Central nervous system of *Chaetoderma japonicum* (Caudofoveata, Aplacophora): implications for diversified ganglionic plans in early molluscan evolution. *The Biological Bulletin*, *213*(2), 122-134.
- Shimatani, Y., Grabauskiene, S., & Bradley, R. M. (2002). Long-term recording from the chorda tympani nerve in rats. *Physiology & Behavior*, *76*(1), 143-149.
- Shimokawa, N., Dikic, I., Sugama, S., & Koibuchi, N. (2005). Molecular responses to acidosis of central chemosensitive neurons in brain. *Cellular Signalling*, *17*(7), 799-808. doi:10.1016/j.cellsig.2005.01.004
- Shirahata, M., Hirasawa, S., Okumura, M., Mendoza, J. A., Okumura, A., Balbir, A., & Fitzgerald, R. S. (2004). Identification of M1 and M2 muscarinic acetylcholine receptors in the cat carotid body chemosensory system. *Neuroscience*, *128*(3), 635-644. doi:10.1016/j.neuroscience.2004.06.068
- Shiraishi, A., & Kuwabara, M. (1970). The effects of amino acids on the labellar hair chemosensory cells of the fly. *The Journal of General Physiology*, *56*(6), 768-782.
- Shiraiwa, T. (2008). Multimodal chemosensory integration through the maxillary palp in *Drosophila*. *PloS One*, *3*(5), e2191. doi:10.1371/journal.pone.0002191
- Shrestha, R., Hayakawa, T., Das, G., Thapa, T. P., & Tsukamoto, Y. (1995). Distribution of taste buds on the epiglottis of the rat and house shrew, with special reference to air and food pathways. *Okajimas Folia Anatomica Japonica*, *72*(2-3), 137-148.
- Shuvalova, N. E., & Zaitseva, O. V. (1988). [Morphologic characteristics and responses of the neurons of the right parietal ganglion in *Lymnaea stagnalis* to stimulation of the sensory structures].

- Zhurnal Evoliutsionnoĭ Biokhimii I Fiziologii*, 24(5), 708-714.
- Signor, D., & Scholey, J. M. (2000). Microtubule-based transport along axons, dendrites and axonemes. *Essays in Biochemistry*, 35, 89-102.
- Signor, D., Wedaman, K. P., Orozco, J. T., Dwyer, N. D., Bargmann, C. I., Rose, L. S., & Scholey, J. M. (1999). Role of a class DHC1b dynein in retrograde transport of IFT motors and IFT raft particles along cilia, but not dendrites, in chemosensory neurons of living *Caenorhabditis elegans*. *The Journal of Cell Biology*, 147(3), 519-530.
- Signor, D., Wedaman, K. P., Rose, L. S., & Scholey, J. M. (1999). Two heteromeric kinesin complexes in chemosensory neurons and sensory cilia of *Caenorhabditis elegans*. *Molecular Biology of the Cell*, 10(2), 345-360.
- Siju, K. P., Hansson, B. S., & Ignell, R. (2008). Immunocytochemical localization of serotonin in the central and peripheral chemosensory system of mosquitoes. *Arthropod Structure & Development*, 37(4), 248-259. doi:10.1016/j.asd.2007.12.001
- Silverman, J. D., & Kruger, L. (1989). Calcitonin-gene-related-peptide-immunoreactive innervation of the rat head with emphasis on specialized sensory structures. *The Journal of Comparative Neurology*, 280(2), 303-330. doi:10.1002/cne.902800211
- Silvotti, L., Giannini, G., & Tirindelli, R. (2005). The vomeronasal receptor V2R2 does not require escort molecules for expression in heterologous systems. *Chemical Senses*, 30(1), 1-8. doi:10.1093/chemse/bjh250
- Simonik, D. K., Robinson, S. R., & Smotherman, W. P. (1993). Cocaine alters behavior in the rat fetus. *Behavioral Neuroscience*, 107(5), 867-875.
- Singewald, N., Kouvelas, D., Kaehler, S. T., Sinner, C., & Philippu, A. (2000). Peripheral chemoreceptor activation enhances 5-hydroxytryptamine release in the locus coeruleus of conscious rats. *Neuroscience Letters*, 289(1), 17-20.
- Singh, P. B. (1998). The present status of the 'carrier hypothesis' for chemosensory recognition of genetic individuality. *Genetica*, 104(3), 231-233.
- Sipos, M. L., Wysocki, C. J., Nyby, J. G., Wysocki, L., & Nemura, T. A. (1995). An ephemeral pheromone of female house mice: perception via the main and accessory olfactory systems. *Physiology & Behavior*, 58(3), 529-534.
- Siwicki, K. K., Riccio, P., Ladewski, L., Marcillac, F., Darteville, L., Cross, S. A., & Ferveur, J. (2005). The role of cuticular pheromones in courtship conditioning of *Drosophila* males. *Learning & Memory (Cold Spring Harbor, N.Y.)*, 12(6), 636-645. doi:10.1101/lm.85605
- Sklar, P. B., Anholt, R. R., & Snyder, S. H. (1986). The odorant-sensitive adenylate cyclase of olfactory receptor cells. Differential stimulation by distinct classes of odorants. *The Journal of Biological Chemistry*, 261(33), 15538-15543.
- Skog, M. (2009). Male but not female olfaction is crucial for intermolt mating in European lobsters (*Homarus gammarus* L.). *Chemical Senses*, 34(2), 159-169. doi:10.1093/chemse/bjn073
- Slev, P. R., Nelson, A. C., & Potts, W. K. (2006). Sensory neurons with MHC-like peptide binding properties: disease consequences. *Current Opinion in Immunology*, 18(5), 608-616. doi:10.1016/j.coi.2006.07.012
- Smadja, C., & Butlin, R. K. (2009). On the scent of speciation: the chemosensory system and its role in pre-mating isolation. *Heredity*, 102(1), 77-97. doi:10.1038/hdy.2008.55
- Smale, L., Nelson, R. J., & Zucker, I. (1985). Neuroendocrine responsiveness to oestradiol and male urine in neonatally androgenized prairie voles (*Microtus ochrogaster*). *Journal of Reproduction and Fertility*, 74(2), 491-496.
- Small, D. M., & Prescott, J. (2005). Odor/taste integration and the perception of flavor. *Experimental Brain Research. Experimentelle Hirnforschung. Expérimentation Cérébrale*, 166(3-4), 345-357. doi:10.1007/s00221-005-2376-9
- Smith, M. T., Pencea, V., Wang, Z., Luskin, M. B., & Insel, T. R. (2001). Increased number of BrdU-

- labeled neurons in the rostral migratory stream of the estrous prairie vole. *Hormones and Behavior*, 39(1), 11-21. doi:10.1006/hbeh.2000.1630
- Smith, T. D., Siegel, M. I., & Bhatnagar, K. P. (2001). Reappraisal of the vomeronasal system of catarrhine primates: ontogeny, morphology, functionality, and persisting questions. *The Anatomical Record*, 265(4), 176-192.
- Smith, T. D., Alport, L. J., Burrows, A. M., Bhatnagar, K. P., Dennis, J. C., Tuladhar, P., & Morrison, E. E. (2007). Perinatal size and maturation of the olfactory and vomeronasal neuroepithelia in lorisooids and lemuroids. *American Journal of Primatology*, 69(1), 74-85. doi:10.1002/ajp.20328
- Smith, T. D., & Bhatnagar, K. P. (2004). Microsmatic primates: reconsidering how and when size matters. *Anatomical Record. Part B, New Anatomist*, 279(1), 24-31. doi:10.1002/ar.b.20026
- Smith, T. D., Bhatnagar, K. P., Bonar, C. J., Shimp, K. L., Mooney, M. P., & Siegel, M. I. (2003). Ontogenetic characteristics of the vomeronasal organ in *Saguinus geoffroyi* and *Leontopithecus rosalia*, with comparisons to other primates. *American Journal of Physical Anthropology*, 121(4), 342-353. doi:10.1002/ajpa.10165
- Smith, T. D., Bhatnagar, K. P., Shimp, K. L., Kinzinger, J. H., Bonar, C. J., Burrows, A. M., Mooney, M. P., et al. (2002). Histological definition of the vomeronasal organ in humans and chimpanzees, with a comparison to other primates. *The Anatomical Record*, 267(2), 166-176. doi:10.1002/ar.10095
- Smolowitz, R. M., Schultz, M. E., & Stegeman, J. J. (1992). Cytochrome P4501A induction in tissues, including olfactory epithelium, of topminnows (*Poeciliopsis* spp.) by waterborne benzo[a]pyrene. *Carcinogenesis*, 13(12), 2395-2402.
- Smotherman, W. P. (1982). In utero chemosensory experience alters taste preferences and corticosterone responsiveness. *Behavioral and Neural Biology*, 36(1), 61-68.
- Smotherman, W. P., Arnold, H. M., & Robinson, S. R. (1993). Responses to ecologically relevant stimuli in the rat fetus: interactive effects of milk and an artificial nipple. *Developmental Psychobiology*, 26(6), 359-374. doi:10.1002/dev.420260606
- Smotherman, W. P., & Robinson, S. R. (1990a). Rat fetuses respond to chemical stimuli in gas phase. *Physiology & Behavior*, 47(5), 863-868.
- Smotherman, W. P., & Robinson, S. R. (1990b). Olfactory bulb transection alters fetal behavior after chemosensory but not tactile stimulation. *Brain Research. Developmental Brain Research*, 57(2), 175-180.
- Smotherman, W. P., & Robinson, S. R. (1991). Conditioned activation of fetal behavior. *Physiology & Behavior*, 50(1), 73-77.
- Smotherman, W. P., & Robinson, S. R. (1992a). Habituation in the rat fetus. *The Quarterly Journal of Experimental Psychology. B, Comparative and Physiological Psychology*, 44(3-4), 215-230.
- Smotherman, W. P., & Robinson, S. R. (1992b). Dimethyl disulfide mimics the effects of milk on fetal behavior and responsiveness to cutaneous stimuli. *Physiology & Behavior*, 52(4), 761-765.
- Smotherman, W. P., & Robinson, S. R. (1993). Habituation to chemosensory stimuli in the rat fetus: effects of endogenous kappa opioid activity. *Behavioral Neuroscience*, 107(4), 611-617.
- Smotherman, W. P., Robinson, S. R., Ronca, A. E., Alberts, J. R., & Hepper, P. G. (1991). Heart rate response of the rat fetus and neonate to a chemosensory stimulus. *Physiology & Behavior*, 50(1), 47-52.
- Sneddon, H., Hadden, R., & Hepper, P. G. (1998). Chemosensory learning in the chicken embryo. *Physiology & Behavior*, 64(2), 133-139.
- Snell, T. W., Shearer, T. L., Smith, H. A., Kubanek, J., Gribble, K. E., & Welch, D. B. M. (2009). Genetic determinants of mate recognition in *Brachionus manjavacas* (Rotifera). *BMC Biology*, 7, 60. doi:10.1186/1741-7007-7-60
- Snow, M. I., & Larsen, P. L. (2000). Structure and expression of daf-12: a nuclear hormone receptor with three isoforms that are involved in development and aging in *Caenorhabditis elegans*.

- Biochimica Et Biophysica Acta*, 1494(1-2), 104-116.
- Snyder, D. A., Rivers, A. M., Yokoe, H., Menco, B. P., & Anholt, R. R. (1991). Olfactomedin: purification, characterization, and localization of a novel olfactory glycoprotein. *Biochemistry*, 30(38), 9143-9153.
- Soares, E. S., Stapleton, J. R., Rodriguez, A., Fitzsimmons, N., Oliveira, L., Nicoletis, M. A. L., & Simon, S. A. (2007). Behavioral and neural responses to gustatory stimuli delivered non-contingently through intra-oral cannulas. *Physiology & Behavior*, 92(4), 629-642. doi:10.1016/j.physbeh.2007.05.038
- Sobottka, B., Eggert, F., Ferstl, R., & Müller-Ruchholtz, W. (1989). [Changed chemosensory identity following experimental bone marrow transplantation: recognition by another species]. *Zeitschrift Für Experimentelle Und Angewandte Psychologie*, 36(4), 654-664.
- Sokolchik, I., Tanabe, T., Baldi, P. F., & Sze, J. Y. (2005). Polymodal sensory function of the *Caenorhabditis elegans* OCR-2 channel arises from distinct intrinsic determinants within the protein and is selectively conserved in mammalian TRPV proteins. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 25(4), 1015-1023. doi:10.1523/JNEUROSCI.3107-04.2005
- Soliz, J., Soulage, C., Borter, E., van Patot, M. T., & Gassmann, M. (2008). Ventilatory responses to acute and chronic hypoxia are altered in female but not male Paskin-deficient mice. *American Journal of Physiology. Regulatory, Integrative and Comparative Physiology*, 295(2), R649-658. doi:10.1152/ajpregu.00876.2007
- Soto, C. R., Arroyo, J., & Alcayaga, J. (2002). Effects of bicarbonate buffer on acetylcholine-, adenosine 5'triphosphate-, and cyanide-induced responses in the cat petrosal ganglion in vitro. *Biological Research*, 35(3-4), 359-364.
- Soulage, C., Pascual, O., Roux, J., Denavit-Saubié, M., & Pequignot, J. (2004). Chemosensory inputs and neural remodeling in carotid body and brainstem catecholaminergic cells. *Advances in Experimental Medicine and Biology*, 551, 53-58.
- Soulier, V., Cottet-Emard, J. M., Pequignot, J., Hanchin, F., Peyrin, L., & Pequignot, J. M. (1992). Differential effects of long-term hypoxia on norepinephrine turnover in brain stem cell groups. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 73(5), 1810-1814.
- Soulier, V., Dalmaz, Y., Cottet-Emard, J. M., Lagercrantz, H., & Pequignot, J. M. (1997). Long-term influence of neonatal hypoxia on catecholamine activity in carotid bodies and brainstem cell groups of the rat. *The Journal of Physiology*, 498 (Pt 2), 523-530.
- Soulier, V., Gestreau, C., Borghini, N., Dalmaz, Y., Cottet-Emard, J. M., & Pequignot, J. M. (1997). Peripheral chemosensitivity and central integration: neuroplasticity of catecholaminergic cells under hypoxia. *Comparative Biochemistry and Physiology. Part A, Physiology*, 118(1), 1-7.
- Spehr, J., Hagendorf, S., Weiss, J., Spehr, M., Leinders-Zufall, T., & Zufall, F. (2009). Ca²⁺-calmodulin feedback mediates sensory adaptation and inhibits pheromone-sensitive ion channels in the vomeronasal organ. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 29(7), 2125-2135. doi:10.1523/JNEUROSCI.5416-08.2009
- Spehr, J., Spehr, M., Hatt, H., & Wetzel, C. H. (2004). Subunit-specific P2X-receptor expression defines chemosensory properties of trigeminal neurons. *The European Journal of Neuroscience*, 19(9), 2497-2510. doi:10.1111/j.0953-816X.2004.03329.x
- Spehr, M., Spehr, J., Ukhanov, K., Kelliher, K. R., Leinders-Zufall, T., & Zufall, F. (2006). Parallel processing of social signals by the mammalian main and accessory olfactory systems. *Cellular and Molecular Life Sciences: CMLS*, 63(13), 1476-1484. doi:10.1007/s00018-006-6109-4
- Spergel, D. (1993). Metabolic substrate dependence of carotid chemosensory responses to stop-flow evoked hypoxia and to nicotine. *Advances in Experimental Medicine and Biology*, 337, 221-225.
- Spergel, D., & Lahiri, S. (1993). Differential modulation by extracellular ATP of carotid chemosensory

- responses. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 74(6), 3052-3056.
- Spergel, D., Lahiri, S., & Wilson, D. F. (1992). Dependence of carotid chemosensory responses on metabolic substrates. *Brain Research*, 596(1-2), 80-88.
- Spiegel, C. N., Oliveira, S. M. P., Brazil, R. P., & Soares, M. J. (2005). Structure and distribution of sensilla on maxillary palps and labella of *Lutzomyia longipalpis* (Diptera: Psychodidae) sand flies. *Microscopy Research and Technique*, 66(6), 321-330. doi:10.1002/jemt.20180
- Spyer, K. M., McQueen, D. S., Dashwood, M. R., Sykes, R. M., Daly, M. B., & Muddle, J. R. (1991). Localization of [¹²⁵I]endothelin binding sites in the region of the carotid bifurcation and brainstem of the cat: possible baro- and chemoreceptor involvement. *Journal of Cardiovascular Pharmacology*, 17 Suppl 7, S385-389.
- Spyer, K. M., Dale, N., & Gourine, A. V. (2004). ATP is a key mediator of central and peripheral chemosensory transduction. *Experimental Physiology*, 89(1), 53-59.
- Stacey, M. T., Mead, K. S., & Koehl, M. A. R. (2002). Molecule capture by olfactory antennules: mantis shrimp. *Journal of Mathematical Biology*, 44(1), 1-30.
- Stahlbaum, C. C., & Houpt, K. A. (1989). The role of the Flehmen response in the behavioral repertoire of the stallion. *Physiology & Behavior*, 45(6), 1207-1214.
- Staples, L. G., Hunt, G. E., van Nieuwenhuijzen, P. S., & McGregor, I. S. (2008). Rats discriminate individual cats by their odor: possible involvement of the accessory olfactory system. *Neuroscience and Biobehavioral Reviews*, 32(7), 1209-1217. doi:10.1016/j.neubiorev.2008.05.011
- Stapleton, J. R., Lavine, M. L., Wolpert, R. L., Nicolelis, M. A. L., & Simon, S. A. (2006). Rapid taste responses in the gustatory cortex during licking. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 26(15), 4126-4138. doi:10.1523/JNEUROSCI.0092-06.2006
- Starich, T. A., Herman, R. K., Kari, C. K., Yeh, W. H., Schackwitz, W. S., Schuyler, M. W., Collet, J., et al. (1995). Mutations affecting the chemosensory neurons of *Caenorhabditis elegans*. *Genetics*, 139(1), 171-188.
- Starostina, E., Xu, A., Lin, H., & Pikielny, C. W. (2009). A *Drosophila* protein family implicated in pheromone perception is related to Tay-Sachs GM2-activator protein. *The Journal of Biological Chemistry*, 284(1), 585-594. doi:10.1074/jbc.M806474200
- Stea, A., Alexander, S. A., & Nurse, C. A. (1991). Effects of pHi and pHe on membrane currents recorded with the perforated-patch method from cultured chemoreceptors of the rat carotid body. *Brain Research*, 567(1), 83-90.
- Stea, A., Alexander, S. A., & Nurse, C. A. (1993). Effects of chemosensory stimulation membrane currents recorded with the perforated-patch method from cultured rat glomus cells. *Advances in Experimental Medicine and Biology*, 337, 227-233.
- Stea, A., Jackson, A., & Nurse, C. A. (1992). Hypoxia and N⁶,O^{2'}-dibutyryladenine 3',5'-cyclic monophosphate, but not nerve growth factor, induce Na⁺ channels and hypertrophy in chromaffin-like arterial chemoreceptors. *Proceedings of the National Academy of Sciences of the United States of America*, 89(20), 9469-9473.
- Stea, A., & Nurse, C. A. (1989). Chloride channels in cultured glomus cells of the rat carotid body. *The American Journal of Physiology*, 257(2 Pt 1), C174-181.
- Stea, A., & Nurse, C. A. (1991). Whole-cell and perforated-patch recordings from O₂-sensitive rat carotid body cells grown in short- and long-term culture. *Pflügers Archiv: European Journal of Physiology*, 418(1-2), 93-101.
- Stea, A., & Nurse, C. A. (1992). Whole-cell currents in two subpopulations of cultured rat petrosal neurons with different tetrodotoxin sensitivities. *Neuroscience*, 47(3), 727-736.
- Stensmyr, M. C. (2009). *Drosophila sechellia* as a model in chemosensory neuroecology. *Annals of the New York Academy of Sciences*, 1170, 468-475. doi:10.1111/j.1749-6632.2009.03911.x

- Stepanyan, R., Day, K., Urban, J., Hardin, D. L., Shetty, R. S., Derby, C. D., Ache, B. W., et al. (2006). Gene expression and specificity in the mature zone of the lobster olfactory organ. *Physiological Genomics*, 25(2), 224-233. doi:10.1152/physiolgenomics.00276.2005
- Sternini, C. (2007). Taste receptors in the gastrointestinal tract. IV. Functional implications of bitter taste receptors in gastrointestinal chemosensing. *American Journal of Physiology. Gastrointestinal and Liver Physiology*, 292(2), G457-461. doi:10.1152/ajpgi.00411.2006
- Stetak, A., Gutierrez, P., & Hajnal, A. (2008). Tissue-specific functions of the *Caenorhabditis elegans* p120 Ras GTPase activating protein GAP-3. *Developmental Biology*, 323(2), 166-176. doi:10.1016/j.ydbio.2008.08.026
- Steullet, P., Dudar, O., Flavus, T., Zhou, M., & Derby, C. D. (2001). Selective ablation of antennular sensilla on the Caribbean spiny lobster *Panulirus argus* suggests that dual antennular chemosensory pathways mediate odorant activation of searching and localization of food. *The Journal of Experimental Biology*, 204(Pt 24), 4259-4269.
- Steullet, P., Krützfeldt, D. R., Hamidani, G., Flavus, T., Ngo, V., & Derby, C. D. (2002). Dual antennular chemosensory pathways mediate odor-associative learning and odor discrimination in the Caribbean spiny lobster *Panulirus argus*. *The Journal of Experimental Biology*, 205(Pt 6), 851-867.
- Stewart, R., & Lane, R. P. (2007). V1R promoters are well conserved and exhibit common putative regulatory motifs. *BMC Genomics*, 8, 253. doi:10.1186/1471-2164-8-253
- Sticken, J., & Dehnhardt, G. (2000). Salinity discrimination in harbour seals: a sensory basis for spatial orientation in the marine environment? *Die Naturwissenschaften*, 87(11), 499-502.
- Stocker, R. F. (1994). The organization of the chemosensory system in *Drosophila melanogaster*: a review. *Cell and Tissue Research*, 275(1), 3-26.
- Stocker, R. F. (2008). Design of the larval chemosensory system. *Advances in Experimental Medicine and Biology*, 628, 69-81. doi:10.1007/978-0-387-78261-4_5
- Stornetta, R. L., Moreira, T. S., Takakura, A. C., Kang, B. J., Chang, D. A., West, G. H., Brunet, J. F., et al. (2006). Expression of *Phox2b* by brainstem neurons involved in chemosensory integration in the adult rat. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 26(40), 10305-10314. doi:10.1523/JNEUROSCI.2917-06.2006
- Strandh, M., Johansson, T., Ahren, D., & Löfstedt, C. (2008). Transcriptional analysis of the pheromone gland of the turnip moth, *Agrotis segetum* (Noctuidae), reveals candidate genes involved in pheromone production. *Insect Molecular Biology*, 17(1), 73-85. doi:10.1111/j.1365-2583.2008.00782.x
- Strandh, M., Johansson, T., & Löfstedt, C. (2009). Global transcriptional analysis of pheromone biosynthesis-related genes in the female turnip moth, *Agrotis segetum* (Noctuidae) using a custom-made cDNA microarray. *Insect Biochemistry and Molecular Biology*, 39(7), 484-489. doi:10.1016/j.ibmb.2009.04.002
- Straub, V. A., Styles, B. J., Ireland, J. S., O'Shea, M., & Benjamin, P. R. (2004). Central localization of plasticity involved in appetitive conditioning in *Lymnaea*. *Learning & Memory (Cold Spring Harbor, N.Y.)*, 11(6), 787-793. doi:10.1101/lm.77004
- Stroband, H. W., Dekens, M. P., te Kronnie, G., Schipper, H., & Samallo, J. (1998). The carp homeobox gene *Ovx1* shows early expression during gastrulation and subsequently in the vagal lobe, the facial lobe and the ventral telencephalon. *Development Genes and Evolution*, 208(1), 56-59.
- Strohl, K. P. (2003). Periodic breathing and genetics. *Respiratory Physiology & Neurobiology*, 135(2-3), 179-185.
- Strotmann, J., & Breer, H. (1991). Generation of monoclonal antibodies detecting specific epitopes in olfactory and respiratory epithelia. *Cell and Tissue Research*, 266(2), 247-258.
- Strotmann, J., Wanner, I., Krieger, J., Raming, K., & Breer, H. (1992). Expression of odorant receptors in spatially restricted subsets of chemosensory neurones. *Neuroreport*, 3(12), 1053-1056.

- Strotmann, J., Levai, O., Fleischer, J., Schwarzenbacher, K., & Breer, H. (2004). Olfactory receptor proteins in axonal processes of chemosensory neurons. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 24(35), 7754-7761. doi:10.1523/JNEUROSCI.2588-04.2004
- Strotmann, J., & Breer, H. (2006). Formation of glomerular maps in the olfactory system. *Seminars in Cell & Developmental Biology*, 17(4), 402-410. doi:10.1016/j.semedb.2006.04.010
- Strünker, T., Weyand, I., Bönigk, W., Van, Q., Loogen, A., Brown, J. E., Kashikar, N., et al. (2006). A K⁺-selective cGMP-gated ion channel controls chemosensation of sperm. *Nature Cell Biology*, 8(10), 1149-1154. doi:10.1038/ncb1473
- Su, X., Zhang, W. Y., & Ho, S. Y. (1991). [Effect of adenosine on carotid chemoreceptor activity in the rabbit]. *Sheng Li Xue Bao: [Acta Physiologica Sinica]*, 43(3), 291-295.
- Subrakova, S. A., Liubimova, Z. V., Marinova, T. I., & Nikitina, A. A. (1991). [Role of pain component in the organization of chemosensory taste reaction]. *Biulleten' Eksperimental'noĭ Biologii I Meditsiny*, 112(8), 205-208.
- Sullivan, J. M., & Beltz, B. S. (2001). Development and connectivity of olfactory pathways in the brain of the lobster *Homarus americanus*. *The Journal of Comparative Neurology*, 441(1), 23-43.
- Sullivan, P. A., von Seckendorff Hoff, K., & Hillyard, S. D. (2000). Effects of anion substitution on hydration behavior and water uptake of the red-spotted toad, *Bufo punctatus*: is there an anion paradox in amphibian skin? *Chemical Senses*, 25(2), 167-172.
- Sullivan, S. L. (2002). Mammalian chemosensory receptors. *Neuroreport*, 13(1), A9-17.
- Suzuki, H., Thiele, T. R., Faumont, S., Ezcurra, M., Lockery, S. R., & Schafer, W. R. (2008). Functional asymmetry in *Caenorhabditis elegans* taste neurons and its computational role in chemotaxis. *Nature*, 454(7200), 114-117. doi:10.1038/nature06927
- Swaney, W. T., & Keverne, E. B. (2009). The evolution of pheromonal communication. *Behavioural Brain Research*, 200(2), 239-247. doi:10.1016/j.bbr.2008.09.039
- Swann, J. M. (1997). Gonadal steroids regulate behavioral responses to pheromones by actions on a subdivision of the medial preoptic nucleus. *Brain Research*, 750(1-2), 189-194.
- Swann, J. M., Wang, J., & Govek, E. K. (2003). The MPN mag: introducing a critical area mediating pheromonal and hormonal regulation of male sexual behavior. *Annals of the New York Academy of Sciences*, 1007, 199-210.
- Sze, J. Y., Zhang, S., Li, J., & Ruvkun, G. (2002). The *C. elegans* POU-domain transcription factor UNC-86 regulates the *tph-1* tryptophan hydroxylase gene and neurite outgrowth in specific serotonergic neurons. *Development (Cambridge, England)*, 129(16), 3901-3911.
- Szucsik, J. C., Witte, D. P., Li, H., Pixley, S. K., Small, K. M., & Potter, S. S. (1997). Altered forebrain and hindbrain development in mice mutant for the *Gsh-2* homeobox gene. *Developmental Biology*, 191(2), 230-242. doi:10.1006/dbio.1997.8733
- Tabish, M., Siddiqui, Z. K., Nishikawa, K., & Siddiqui, S. S. (1995). Exclusive expression of *C. elegans* *osm-3* kinesin gene in chemosensory neurons open to the external environment. *Journal of Molecular Biology*, 247(3), 377-389.
- Takahashi, T., Osanai, S., Nakano, H., Ohsaki, Y., & Kikuchi, K. (2005). Doxapram stimulates the carotid body via a different mechanism than hypoxic chemotransduction. *Respiratory Physiology & Neurobiology*, 147(1), 1-9. doi:10.1016/j.resp.2005.01.005
- Takami, S., Getchell, M. L., Yamagishi, M., Albers, K. M., & Getchell, T. V. (1995). Enhanced extrinsic innervation of nasal and oral chemosensory mucosae in keratin 14-NGF transgenic mice. *Cell and Tissue Research*, 282(3), 481-491.
- Takami, S., Yukimatsu, M., Matsumura, G., & Nishiyama, F. (2001). Vomeronasal epithelial cells of human fetuses contain immunoreactivity for G proteins, Go(alpha) and Gi(alpha 2). *Chemical Senses*, 26(5), 517-522.
- Takami, S. (2002). Recent progress in the neurobiology of the vomeronasal organ. *Microscopy*

Research and Technique, 58(3), 228-250. doi:10.1002/jemt.10094

- Talavera, K., Gees, M., Karashima, Y., Meseguer, V. M., Vanoirbeek, J. A. J., Damann, N., Everaerts, W., et al. (2009). Nicotine activates the chemosensory cation channel TRPA1. *Nature Neuroscience*, 12(10), 1293-1299. doi:10.1038/nn.2379
- Talluri, S., Bhatt, A., & Smith, D. P. (1995). Identification of a *Drosophila* G protein alpha subunit (dGq alpha-3) expressed in chemosensory cells and central neurons. *Proceedings of the National Academy of Sciences of the United States of America*, 92(25), 11475-11479.
- Tamura, C. S., & Ritter, R. C. (1994). Intestinal capsaicin transiently attenuates suppression of sham feeding by oleate. *The American Journal of Physiology*, 267(2 Pt 2), R561-568.
- Tanaka, N. K., Awasaki, T., Shimada, T., & Ito, K. (2004). Integration of chemosensory pathways in the *Drosophila* second-order olfactory centers. *Current Biology: CB*, 14(6), 449-457. doi:10.1016/j.cub.2004.03.006
- Tang, Y., & Ward, R. D. (1998). Stomodaeal valve ultrastructure in the sandfly *Lutzomyia longipalpis* (Diptera: Psychodidae). *Medical and Veterinary Entomology*, 12(2), 132-135.
- Tareilus, E., Noé, J., & Breer, H. (1995). Calcium signals in olfactory neurons. *Biochimica Et Biophysica Acta*, 1269(2), 129-138.
- Tarozzo, G., Cappello, P., De Andrea, M., Walters, E., Margolis, F. L., Oestreicher, B., & Fasolo, A. (1998). Prenatal differentiation of mouse vomeronasal neurones. *The European Journal of Neuroscience*, 10(1), 392-396.
- Tatsumi, K., Pickett, C. K., & Weil, J. V. (1995). Decreased carotid body hypoxic sensitivity in chronic hypoxia: role of dopamine. *Respiration Physiology*, 101(1), 47-57.
- Taylor, B. E., Harris, M. B., Coates, E. L., Gdovin, M. J., & Leiter, J. C. (2003). Central CO₂ chemoreception in developing bullfrogs: anomalous response to acetazolamide. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 94(3), 1204-1212. doi:10.1152/jappphysiol.00558.2002
- Taylor, R., & Roper, S. (1994). Ca(2+)-dependent Cl⁻ conductance in taste cells from *Necturus*. *Journal of Neurophysiology*, 72(1), 475-478.
- Tegoni, M., Campanacci, V., & Cambillau, C. (2004). Structural aspects of sexual attraction and chemical communication in insects. *Trends in Biochemical Sciences*, 29(5), 257-264. doi:10.1016/j.tibs.2004.03.003
- Teng, M. S., Dekkers, M. P. J., Ng, B. L., Rademakers, S., Jansen, G., Fraser, A. G., & McCafferty, J. (2006). Expression of mammalian GPCRs in *C. elegans* generates novel behavioural responses to human ligands. *BMC Biology*, 4, 22. doi:10.1186/1741-7007-4-22
- Teng, S. X., Mo, C. W., & Li, T. L. (1965). [Studies on the chemosensory function of the carotid sinus regions]. *Sheng Li Xue Bao: [Acta Physiologica Sinica]*, 28(3), 328-336.
- Thammana, P. (1980). Phosphorylated proteins in *Drosophila* membranes. *Basic Life Sciences*, 16, 323-329.
- Thiele, T. R., Faumont, S., & Lockery, S. R. (2009). The neural network for chemotaxis to tastants in *Caenorhabditis elegans* is specialized for temporal differentiation. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 29(38), 11904-11911. doi:10.1523/JNEUROSCI.0594-09.2009
- Thomas, C. J., & Woods, R. L. (2003). Guanylyl cyclase receptors mediate cardiopulmonary vagal reflex actions of ANP. *Hypertension*, 41(2), 279-285.
- Thomas, J. H. (1993). Chemosensory regulation of development in *C. elegans*. *BioEssays: News and Reviews in Molecular, Cellular and Developmental Biology*, 15(12), 791-797. doi:10.1002/bies.950151204
- Thomas, J. H., Birnby, D. A., & Vowels, J. J. (1993). Evidence for parallel processing of sensory information controlling dauer formation in *Caenorhabditis elegans*. *Genetics*, 134(4), 1105-1117.

- Thomas, J. H., & Robertson, H. M. (2008). The Caenorhabditis chemoreceptor gene families. *BMC Biology*, 6, 42. doi:10.1186/1741-7007-6-42
- Thomas, M. L., & Simmons, L. W. (2008). Cuticular hydrocarbons are heritable in the cricket *Teleogryllus oceanicus*. *Journal of Evolutionary Biology*, 21(3), 801-806. doi:10.1111/j.1420-9101.2008.01514.x
- Thomas, T., Ralevic, V., Gadd, C. A., & Spyer, K. M. (1999). Central CO₂ chemoreception: a mechanism involving P₂ purinoceptors localized in the ventrolateral medulla of the anaesthetized rat. *The Journal of Physiology*, 517 (Pt 3), 899-905.
- Thomas, T., & Spyer, K. M. (2000). ATP as a mediator of mammalian central CO₂ chemoreception. *The Journal of Physiology*, 523 Pt 2, 441-447.
- Thompson, G. W., Collier, K., Ardell, J. L., Kember, G., & Armour, J. A. (2000). Functional interdependence of neurons in a single canine intrinsic cardiac ganglionated plexus. *The Journal of Physiology*, 528(Pt 3), 561-571.
- Thompson, R. N., Napier, A., & Wekesa, K. S. (2007). Chemosensory cues from the lacrimal and preputial glands stimulate production of IP₃ in the vomeronasal organ and aggression in male mice. *Physiology & Behavior*, 90(5), 797-802. doi:10.1016/j.physbeh.2007.01.008
- Thompson, S. R., Brandenburg, R. L., & Roberson, G. T. (2007). Entomopathogenic fungi detection and avoidance by mole crickets (Orthoptera: Gryllotalpidae). *Environmental Entomology*, 36(1), 165-172.
- Thorens, B., & Larsen, P. J. (2004). Gut-derived signaling molecules and vagal afferents in the control of glucose and energy homeostasis. *Current Opinion in Clinical Nutrition and Metabolic Care*, 7(4), 471-478.
- Thorne, N., & Amrein, H. (2008). Atypical expression of *Drosophila* gustatory receptor genes in sensory and central neurons. *The Journal of Comparative Neurology*, 506(4), 548-568. doi:10.1002/cne.21547
- Thorne, N., Chromey, C., Bray, S., & Amrein, H. (2004). Taste perception and coding in *Drosophila*. *Current Biology: CB*, 14(12), 1065-1079. doi:10.1016/j.cub.2004.05.019
- Tian, H., & Ma, M. (2004). Molecular organization of the olfactory septal organ. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 24(38), 8383-8390. doi:10.1523/JNEUROSCI.2222-04.2004
- Tian, L., Hires, S. A., Mao, T., Huber, D., Chiappe, M. E., Chalasani, S. H., Petreanu, L., et al. (2009). Imaging neural activity in worms, flies and mice with improved GCaMP calcium indicators. *Nature Methods*, 6(12), 875-881. doi:10.1038/nmeth.1398
- Tissing, O., & den Otter, C. J. (1967). A simple high input impedance A.C. preamplifier suitable for electrophysiological studies of insect contact chemosensory hairs. *Medical & Biological Engineering*, 5(2), 179-180.
- Tissot, M., Gendre, N., Hawken, A., Störtkuhl, K. F., & Stocker, R. F. (1997). Larval chemosensory projections and invasion of adult afferents in the antennal lobe of *Drosophila*. *Journal of Neurobiology*, 32(3), 281-297.
- Tizzano, M., Merigo, F., & Sbarbati, A. (2006). Evidence of solitary chemosensory cells in a large mammal: the diffuse chemosensory system in *Bos taurus* airways. *Journal of Anatomy*, 209(3), 333-337. doi:10.1111/j.1469-7580.2006.00617.x
- Tobata-Kudo, H., Higo, H., Koga, M., & Tada, I. (2000). Effects of various treatments on the chemokinetic behavior of third-stage larvae of *Strongyloides ratti* on a sodium chloride gradient. *Parasitology Research*, 86(11), 865-869.
- Tomaselli, S., Crescenzi, O., Sanfelice, D., Ab, E., Wechselberger, R., Angeli, S., Scaloni, A., et al. (2006). Solution structure of a chemosensory protein from the desert locust *Schistocerca gregaria*. *Biochemistry*, 45(35), 10606-10613. doi:10.1021/bi060998w
- Tompkins, L., Cardoso, M. J., White, F. V., & Sanders, T. G. (1979). Isolation and analysis of

- chemosensory behavior mutants in *Drosophila melanogaster*. *Proceedings of the National Academy of Sciences of the United States of America*, 76(2), 884-887.
- Torbati, D., Sherpa, A. K., Lahiri, S., Mokashi, A., Albertine, K. H., & DiGiulio, C. (1993). Hyperbaric oxygenation alters carotid body ultrastructure and function. *Respiration Physiology*, 92(2), 183-196.
- Torrealba, F., Bustos, G., & Montero, V. M. (1996). Glutamate in the glomus cells of the cat carotid body: immunocytochemistry and in vitro release. *Neurochemistry International*, 28(5-6), 625-631.
- Torrealba, F., & Correa, R. (1995). Ultrastructure of calcitonin gene-related peptide-immunoreactive, unmyelinated afferents to the cat carotid body: a case of volume transmission. *Neuroscience*, 64(3), 777-785.
- Touhara, K. (2002). Odor discrimination by G protein-coupled olfactory receptors. *Microscopy Research and Technique*, 58(3), 135-141. doi:10.1002/jemt.10131
- Touhara, K. (2007). Molecular biology of peptide pheromone production and reception in mice. *Advances in Genetics*, 59, 147-171. doi:10.1016/S0065-2660(07)59006-1
- Touhara, K. (2008). Sexual communication via peptide and protein pheromones. *Current Opinion in Pharmacology*, 8(6), 759-764. doi:10.1016/j.coph.2008.09.001
- Touhara, K., & Vosshall, L. B. (2009). Sensing odorants and pheromones with chemosensory receptors. *Annual Review of Physiology*, 71, 307-332. doi:10.1146/annurev.physiol.010908.163209
- Tousson, E., & Hustert, R. (2000). Central projections from contact chemoreceptors of the locust ovipositor and adjacent cuticle. *Cell and Tissue Research*, 302(2), 285-294.
- Toyoshima, K., & Shimamura, A. (1982). Comparative study of ultrastructures of the lateral-line organs and the palatal taste organs in the African clawed toad, *Xenopus laevis*. *The Anatomical Record*, 204(4), 371-381. doi:10.1002/ar.1092040411
- Tranquillo, R. T. (1991). Chemotactic movement of single cells. *ASGSB Bulletin: Publication of the American Society for Gravitational and Space Biology*, 4(2), 75-85.
- Tranquillo, R. T., & Alt, W. (1996). Stochastic model of receptor-mediated cytomorphology and dynamic morphology of leukocytes. *Journal of Mathematical Biology*, 34(4), 361-412.
- Tranquillo, R. T., & Lauffenburger, D. A. (1986). Consequences of chemosensory phenomena for leukocyte chemotactic orientation. *Cell Biophysics*, 8(1), 1-46.
- Trapido-Rosenthal, H. G., Carr, W. E., & Gleeson, R. A. (1987). Biochemistry of an olfactory purinergic system: dephosphorylation of excitatory nucleotides and uptake of adenosine. *Journal of Neurochemistry*, 49(4), 1174-1182.
- Trapido-Rosenthal, H. G., Carr, W. E., & Gleeson, R. A. (1990). Ectonucleotidase activities associated with the olfactory organ of the spiny lobster. *Journal of Neurochemistry*, 55(1), 88-96.
- Trapido-Rosenthal, H. G., & Morse, D. E. (1986). Availability of chemosensory receptors is down-regulated by habituation of larvae to a morphogenetic signal. *Proceedings of the National Academy of Sciences of the United States of America*, 83(20), 7658-7662.
- Trapp, S., Aller, M. I., Wisden, W., & Gourine, A. V. (2008). A role for TASK-1 (KCNK3) channels in the chemosensory control of breathing. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, 28(35), 8844-8850. doi:10.1523/JNEUROSCI.1810-08.2008
- Triballeau, N., Van Name, E., Laslier, G., Cai, D., Paillard, G., Sorensen, P. W., Hoffmann, R., et al. (2008). High-potency olfactory receptor agonists discovered by virtual high-throughput screening: molecular probes for receptor structure and olfactory function. *Neuron*, 60(5), 767-774. doi:10.1016/j.neuron.2008.11.014
- Triemstra, J. L., Nagatani, S., & Wood, R. I. (2005). Chemosensory cues are essential for mating-induced dopamine release in MPOA of male Syrian hamsters. *Neuropsychopharmacology: Official Publication of the American College of Neuropsychopharmacology*, 30(8), 1436-1442. doi:10.1038/sj.npp.1300685

- Trinh, K., & Storm, D. R. (2003). Vomeronasal organ detects odorants in absence of signaling through main olfactory epithelium. *Nature Neuroscience*, 6(5), 519-525. doi:10.1038/nn1039
- Troemel, E. R. (1999). Chemosensory signaling in *C. elegans*. *BioEssays: News and Reviews in Molecular, Cellular and Developmental Biology*, 21(12), 1011-1020. doi:10.1002/(SICI)1521-1878(199912)22:1<1011::AID-BIES5>3.0.CO;2-V
- Troemel, E. R., Chou, J. H., Dwyer, N. D., Colbert, H. A., & Bargmann, C. I. (1995). Divergent seven transmembrane receptors are candidate chemosensory receptors in *C. elegans*. *Cell*, 83(2), 207-218.
- Tsai, P., Maldonado, T. A., & Lunden, J. B. (2003). Localization of gonadotropin-releasing hormone in the central nervous system and a peripheral chemosensory organ of *Aplysia californica*. *General and Comparative Endocrinology*, 130(1), 20-28.
- Tsalik, E. L., & Hobert, O. (2003). Functional mapping of neurons that control locomotory behavior in *Caenorhabditis elegans*. *Journal of Neurobiology*, 56(2), 178-197. doi:10.1002/neu.10245
- Tsie, M. S., Rawson, P. D., & Lindsay, S. M. (2008). Immunolocalization of a Galphaq protein to the chemosensory organs of *Dipolydora quadrilobata* (polychaeta: spionidae). *Cell and Tissue Research*, 333(3), 469-480. doi:10.1007/s00441-008-0660-2
- Tsuchihara, K., Ueno, K., Yamanaka, A., Isono, K., Endo, K., Nishida, R., Yoshihara, K., et al. (2000). A putative binding protein for lipophilic substances related to butterfly oviposition. *FEBS Letters*, 478(3), 299-303.
- Tsuchihara, K., Fujikawa, K., Ishiguro, M., Yamada, T., Tada, C., Ozaki, K., & Ozaki, M. (2005). An odorant-binding protein facilitates odorant transfer from air to hydrophilic surroundings in the blowfly. *Chemical Senses*, 30(7), 559-564. doi:10.1093/chemse/bji049
- Tsunozaki, M., Chalasani, S. H., & Bargmann, C. I. (2008). A behavioral switch: cGMP and PKC signaling in olfactory neurons reverses odor preference in *C. elegans*. *Neuron*, 59(6), 959-971. doi:10.1016/j.neuron.2008.07.038
- Tubbiola, M. L., & Wysocki, C. J. (1997). FOS immunoreactivity after exposure to conspecific or heterospecific urine: where are chemosensory cues sorted? *Physiology & Behavior*, 62(4), 867-870.
- Tunstall, N. E., Sirey, T., Newcomb, R. D., & Warr, C. G. (2007). Selective pressures on *Drosophila* chemosensory receptor genes. *Journal of Molecular Evolution*, 64(6), 628-636. doi:10.1007/s00239-006-0151-6
- Uchida, O., Nakano, H., Koga, M., & Ohshima, Y. (2003). The *C. elegans* che-1 gene encodes a zinc finger transcription factor required for specification of the ASE chemosensory neurons. *Development (Cambridge, England)*, 130(7), 1215-1224.
- Ueno, K., Ohta, M., Morita, H., Mikuni, Y., Nakajima, S., Yamamoto, K., & Isono, K. (2001). Trehalose sensitivity in *Drosophila* correlates with mutations in and expression of the gustatory receptor gene Gr5a. *Current Biology: CB*, 11(18), 1451-1455.
- Urade, Y., & Hayaishi, O. (1999). Prostaglandin D2 and sleep regulation. *Biochimica Et Biophysica Acta*, 1436(3), 606-615.
- Ustinova, E. E., Barrett, C. J., Sun, S. Y., & Schultz, H. D. (2000). Oxidative stress impairs cardiac chemoreflexes in diabetic rats. *American Journal of Physiology. Heart and Circulatory Physiology*, 279(5), H2176-2187.
- Valdés, V., Mosqueira, M., Rey, S., Del Rio, R., & Iturriaga, R. (2003). Inhibitory effects of NO on carotid body: contribution of neural and endothelial nitric oxide synthase isoforms. *American Journal of Physiology. Lung Cellular and Molecular Physiology*, 284(1), L57-68. doi:10.1152/ajplung.00494.2001
- Van Houten, J. (1992). Chemosensory transduction in eukaryotic microorganisms. *Annual Review of Physiology*, 54, 639-663. doi:10.1146/annurev.ph.54.030192.003231
- Van Houten, J. L., Yang, W. Q., & Bergeron, A. (2000). Chemosensory signal transduction in

- paramecium. *The Journal of Nutrition*, 130(4S Suppl), 946S-9S.
- Vanario-Alonso, C. E., O'Hara, E., McGinnis, W., & Pick, L. (1995). Targeted ribozymes reveal a conserved function of the *Drosophila* paired gene in sensory organ development. *Mechanisms of Development*, 53(3), 323-328.
- Vandersal, N. D. (2008). Rapid spatial learning in a velvet ant (*Dasymutilla coccineohirta*). *Animal Cognition*, 11(3), 563-567. doi:10.1007/s10071-008-0145-4
- Varas, R., Alcayaga, J., & Iturriaga, R. (2003). Carotid chemosensory neurons in the petrosal ganglia are excited by ACh and ATP. *Advances in Experimental Medicine and Biology*, 536, 321-326.
- Varlinskaya, E. I., Petrov, E. S., Robinson, S. R., & Smotherman, W. P. (1994). Behavioral effects of centrally administered arginine vasopressin in the rat fetus. *Behavioral Neuroscience*, 108(2), 395-409.
- Vasiliauskas, D., Johnston, R., & Desplan, C. (2009). Maintaining a stochastic neuronal cell fate decision. *Genes & Development*, 23(4), 385-390. doi:10.1101/gad.1780509
- Vavaiya, K. V., & Briski, K. P. (2008a). Effects of caudal fourth ventricular lactate infusion on hypoglycemia-associated MCT2, GLUT3, GLUT4, GCK, and sulfonylurea receptor-1 gene expression in the ovariectomized female rat LHA and VMH: impact of estradiol. *Journal of Molecular Neuroscience: MN*, 34(2), 121-129. doi:10.1007/s12031-007-9020-z
- Vavaiya, K. V., & Briski, K. P. (2008b). Effects of caudal hindbrain lactate infusion on insulin-induced hypoglycemia and neuronal substrate transporter glucokinase and sulfonylurea receptor-1 gene expression in the ovariectomized female rat dorsal vagal complex: Impact of estradiol. *Journal of Neuroscience Research*, 86(3), 694-701. doi:10.1002/jnr.21530
- Vedin, V., Eriksson, B., & Berghard, A. (2010). Organization of the chemosensory neuroepithelium of the vomeronasal organ of the Scandinavian moose *Alces alces*. *Brain Research*, 1306, 53-61. doi:10.1016/j.brainres.2009.10.012
- Vehovszky, A., Szabó, H., & Elliott, C. J. H. (2004). Octopamine-containing (OC) interneurons enhance central pattern generator activity in sucrose-induced feeding in the snail *Lymnaea*. *Journal of Comparative Physiology. A, Neuroethology, Sensory, Neural, and Behavioral Physiology*, 190(10), 837-846. doi:10.1007/s00359-004-0539-y
- Verna, A., Baretts, A., & Salat, C. (1984). Distribution of sympathetic nerve endings within the rabbit carotid body: a histochemical and ultrastructural study. *Journal of Neurocytology*, 13(6), 849-865.
- Vieira, F. G., Sánchez-Gracia, A., & Rozas, J. (2007). Comparative genomic analysis of the odorant-binding protein family in 12 *Drosophila* genomes: purifying selection and birth-and-death evolution. *Genome Biology*, 8(11), R235. doi:10.1186/gb-2007-8-11-r235
- Vielma, A., Ardiles, A., Delgado, L., & Schmachtenberg, O. (2008). The elusive crypt olfactory receptor neuron: evidence for its stimulation by amino acids and cAMP pathway agonists. *The Journal of Experimental Biology*, 211(Pt 15), 2417-2422. doi:10.1242/jeb.018796
- VijayRaghavan, K., Kaur, J., Paranjape, J., & Rodrigues, V. (1992). The east gene of *Drosophila melanogaster* is expressed in the developing embryonic nervous system and is required for normal olfactory and gustatory responses of the adult. *Developmental Biology*, 154(1), 23-36.
- Villella, A., & Hall, J. C. (2008). Neurogenetics of courtship and mating in *Drosophila*. *Advances in Genetics*, 62, 67-184. doi:10.1016/S0065-2660(08)00603-2
- Vitt, L. J., Pianka, E. R., Cooper, W. E., & Schwenk, K. (2003). History and the global ecology of squamate reptiles. *The American Naturalist*, 162(1), 44-60. doi:10.1086/375172
- Vogt, R. G., Prestwich, G. D., & Riddiford, L. M. (1988). Sex pheromone receptor proteins. Visualization using a radiolabeled photoaffinity analog. *The Journal of Biological Chemistry*, 263(8), 3952-3959.
- Vogt, R. G. (2002). Odorant binding protein homologues of the malaria mosquito *Anopheles gambiae*; possible orthologues of the OS-E and OS-F OBPs OF *Drosophila melanogaster*. *Journal of*

Chemical Ecology, 28(11), 2371-2376.

- Vogt, R. G., Miller, N. E., Litvack, R., Fandino, R. A., Sparks, J., Staples, J., Friedman, R., et al. (2009). The insect SNMP gene family. *Insect Biochemistry and Molecular Biology*, 39(7), 448-456. doi:10.1016/j.ibmb.2009.03.007
- Volonté, C., Amadio, S., Cavaliere, F., D'Ambrosi, N., Vacca, F., & Bernardi, G. (2003). Extracellular ATP and neurodegeneration. *Current Drug Targets. CNS and Neurological Disorders*, 2(6), 403-412.
- Vosshall, L. B. (2001). The molecular logic of olfaction in *Drosophila*. *Chemical Senses*, 26(2), 207-213.
- Vosshall, L. B. (2008). Scent of a fly. *Neuron*, 59(5), 685-689. doi:10.1016/j.neuron.2008.08.014
- Vosshall, L. B., & Stensmyr, M. C. (2005). Wake up and smell the pheromones. *Neuron*, 45(2), 179-181. doi:10.1016/j.neuron.2005.01.001
- Vosshall, L. B., & Stocker, R. F. (2007). Molecular architecture of smell and taste in *Drosophila*. *Annual Review of Neuroscience*, 30, 505-533. doi:10.1146/annurev.neuro.30.051606.094306
- Vowels, J. J., & Thomas, J. H. (1992). Genetic analysis of chemosensory control of dauer formation in *Caenorhabditis elegans*. *Genetics*, 130(1), 105-123.
- Vowels, J. J., & Thomas, J. H. (1994). Multiple chemosensory defects in *daf-11* and *daf-21* mutants of *Caenorhabditis elegans*. *Genetics*, 138(2), 303-316.
- Wacht, S., Lunau, K., & Hansen, K. (2000). Chemosensory control of pollen ingestion in the hoverfly *Eristalis tenax* by labellar taste hairs. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, 186(2), 193-203.
- Wacker, I., Schwarz, V., Hedgecock, E. M., & Hutter, H. (2003). *zag-1*, a Zn-finger homeodomain transcription factor controlling neuronal differentiation and axon outgrowth in *C. elegans*. *Development (Cambridge, England)*, 130(16), 3795-3805.
- Waggoner, L. E., Hardaker, L. A., Golik, S., & Schafer, W. R. (2000). Effect of a neuropeptide gene on behavioral states in *Caenorhabditis elegans* egg-laying. *Genetics*, 154(3), 1181-1192.
- Wakabayashi, T., Kimura, Y., Ohba, Y., Adachi, R., Satoh, Y., & Shingai, R. (2009). In vivo calcium imaging of OFF-responding ASK chemosensory neurons in *C. elegans*. *Biochimica Et Biophysica Acta*, 1790(8), 765-769. doi:10.1016/j.bbagen.2009.03.032
- Waldmann, M., Thompson, G. W., Kember, G. C., Ardell, J. L., & Armour, J. A. (2006). Stochastic behavior of atrial and ventricular intrinsic cardiac neurons. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, 101(2), 413-419. doi:10.1152/jappphysiol.01346.2005
- Walensky, L. D., Roskams, A. J., Lefkowitz, R. J., Snyder, S. H., & Ronnett, G. V. (1995). Odorant receptors and desensitization proteins colocalize in mammalian sperm. *Molecular Medicine (Cambridge, Mass.)*, 1(2), 130-141.
- Walters, E., Grillo, M., Tarozzo, G., Stein-Izsak, C., Corbin, J., Bocchiaro, C., & Margolis, F. L. (1996). Proximal regions of the olfactory marker protein gene promoter direct olfactory neuron-specific expression in transgenic mice. *Journal of Neuroscience Research*, 43(2), 146-160. doi:10.1002/(SICI)1097-4547(19960115)43:2<146::AID-JNR3>3.0.CO;2-G
- Walters, E. T., Carew, T. J., & Kandel, E. R. (1979). Classical conditioning in *Aplysia californica*. *Proceedings of the National Academy of Sciences of the United States of America*, 76(12), 6675-6679.
- Walters, E. T., Carew, T. J., & Kandel, E. R. (1981). Associative Learning in *Aplysia*: evidence for conditioned fear in an invertebrate. *Science (New York, N.Y.)*, 211(4481), 504-506.
- Wang, H., Zhao, H., Tai, F., & Zhang, Y. (2008). Postembryonic development of the olfactory and vomeronasal organs in the frog *Rana chensinensis*. *Zoological Science*, 25(5), 503-508. doi:10.2108/zsj.25.503
- Wang, J., & Swann, J. M. (2006). The magnocellular medial preoptic nucleus I. Sources of afferent input. *Neuroscience*, 141(3), 1437-1456. doi:10.1016/j.neuroscience.2006.04.079

- Wang, M., & Hampson, D. R. (2006). An evaluation of automated in silico ligand docking of amino acid ligands to Family C G-protein coupled receptors. *Bioorganic & Medicinal Chemistry*, *14*(6), 2032-2039. doi:10.1016/j.bmc.2005.10.052
- Wang, M., Yao, Y., Kuang, D., & Hampson, D. R. (2006). Activation of family C G-protein-coupled receptors by the tripeptide glutathione. *The Journal of Biological Chemistry*, *281*(13), 8864-8870. doi:10.1074/jbc.M512865200
- Wang, W. J., Cheng, G. F., Dinger, B. G., & Fidone, S. J. (1989). Effects of hypoxia on cyclic nucleotide formation in rabbit carotid body in vitro. *Neuroscience Letters*, *105*(1-2), 164-168.
- Wang, W. J., Cheng, G. F., Yoshizaki, K., Dinger, B., & Fidone, S. (1991). The role of cyclic AMP in chemoreception in the rabbit carotid body. *Brain Research*, *540*(1-2), 96-104.
- Wang, W. J., He, L., Chen, J., Dinger, B., & Fidone, S. (1993). Mechanisms underlying chemoreceptor inhibition induced by atrial natriuretic peptide in rabbit carotid body. *The Journal of Physiology*, *460*, 427-441.
- Wang, Y., Fontanini, A., & Katz, D. B. (2006). Temporary basolateral amygdala lesions disrupt acquisition of socially transmitted food preferences in rats. *Learning & Memory (Cold Spring Harbor, N.Y.)*, *13*(6), 794-800. doi:10.1101/lm.397006
- Wang, Z. Z., Bredt, D. S., Fidone, S. J., & Stensaas, L. J. (1993). Neurons synthesizing nitric oxide innervate the mammalian carotid body. *The Journal of Comparative Neurology*, *336*(3), 419-432. doi:10.1002/cne.903360308
- Wang, Z. Z., Dinger, B., Fidone, S. J., & Stensaas, L. J. (1998). Changes in tyrosine hydroxylase and substance P immunoreactivity in the cat carotid body following chronic hypoxia and denervation. *Neuroscience*, *83*(4), 1273-1281.
- Wang, Z. Z., Dinger, B. G., Stensaas, L. J., & Fidone, S. J. (1995). The role of nitric oxide in carotid chemoreception. *Biological Signals*, *4*(3), 109-116.
- Wang, Z. Z., He, L., Chen, J., Dinger, B., Stensaas, L., & Fidone, S. (1999). Protein phosphorylation signaling mechanisms in carotid body chemoreception. *Biological Signals and Receptors*, *8*(6), 366-374.
- Wang, Z. Z., He, L., Stensaas, L. J., Dinger, B. G., & Fidone, S. J. (1991). Localization and in vitro actions of atrial natriuretic peptide in the cat carotid body. *Journal of Applied Physiology (Bethesda, Md.: 1985)*, *70*(2), 942-946.
- Wang, Z., Balet Sindreu, C., Li, V., Nudelman, A., Chan, G. C., & Storm, D. R. (2006). Pheromone detection in male mice depends on signaling through the type 3 adenylyl cyclase in the main olfactory epithelium. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *26*(28), 7375-7379. doi:10.1523/JNEUROSCI.1967-06.2006
- Wanner, K. W., Isman, M. B., Feng, Q., Plettner, E., & Theilmann, D. A. (2005). Developmental expression patterns of four chemosensory protein genes from the Eastern spruce budworm, *Chroistoneura fumiferana*. *Insect Molecular Biology*, *14*(3), 289-300. doi:10.1111/j.1365-2583.2005.00559.x
- Wanner, K. W., Nichols, A. S., Walden, K. K. O., Brockmann, A., Luetje, C. W., & Robertson, H. M. (2007). A honey bee odorant receptor for the queen substance 9-oxo-2-decenoic acid. *Proceedings of the National Academy of Sciences of the United States of America*, *104*(36), 14383-14388. doi:10.1073/pnas.0705459104
- Wanner, K. W., Willis, L. G., Theilmann, D. A., Isman, M. B., Feng, Q., & Plettner, E. (2004). Analysis of the insect os-d-like gene family. *Journal of Chemical Ecology*, *30*(5), 889-911.
- Watanabe, U., Shimura, T., Sako, N., Kitagawa, J., Shingai, T., Watanabe, E., Noda, M., et al. (2003). A comparison of voluntary salt-intake behavior in Nax-gene deficient and wild-type mice with reference to peripheral taste inputs. *Brain Research*, *967*(1-2), 247-256.
- Weber, M., Pehl, U., Breer, H., & Strotmann, J. (2002). Olfactory receptor expressed in ganglia of the autonomic nervous system. *Journal of Neuroscience Research*, *68*(2), 176-184.

- Wei, C. J., Linster, C., & Cleland, T. A. (2006). Dopamine D(2) receptor activation modulates perceived odor intensity. *Behavioral Neuroscience*, *120*(2), 393-400. doi:10.1037/0735-7044.120.2.393
- Weissburg, M. J. (1999). Tuning breadth and sex-specific sensitivity in chemosensory neurons of male and female *Uca pugnax*. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, *185*(3), 229-238.
- Weissburg, M. J. (2000). The fluid dynamical context of chemosensory behavior. *The Biological Bulletin*, *198*(2), 188-202.
- Weissburg, M. J. (2001). Sex, sensitivity, and second messengers: differential effect of cyclic nucleotide mediated inhibition in the chemosensory system of fiddler crabs. *Journal of Comparative Physiology. A, Sensory, Neural, and Behavioral Physiology*, *187*(6), 489-498.
- Weissburg, M. J., Derby, C. D., Johnson, O., McAlvin, B., & Moffett, J. M. (2001). Transsexual limb transplants in fiddler crabs and expression of novel sensory capabilities. *The Journal of Comparative Neurology*, *440*(4), 311-320.
- Weissburg, M. J., Doall, M. H., & Yen, J. (1998). Following the invisible trail: kinematic analysis of mate-tracking in the copepod *Temora longicornis*. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, *353*(1369), 701-712. doi:10.1098/rstb.1998.0236
- Weissburg, M. J., James, C. P., Smee, D. L., & Webster, D. R. (2003). Fluid mechanics produces conflicting constraints during olfactory navigation of blue crabs, *Callinectes sapidus*. *The Journal of Experimental Biology*, *206*(Pt 1), 171-180.
- Weissburg, M. J., Pearce, J., Govind, C. K., & Derby, C. D. (1996). Sexually dimorphic patterns of neural organization in the feeding appendages of fiddler crabs. *Cell and Tissue Research*, *286*(1), 155-166.
- Wekesa, K. S., & Anholt, R. R. (1999). Differential expression of G proteins in the mouse olfactory system. *Brain Research*, *837*(1-2), 117-126.
- Wersinger, S. R., & Baum, M. J. (1997a). Sexually dimorphic processing of somatosensory and chemosensory inputs to forebrain luteinizing hormone-releasing hormone neurons in mated ferrets. *Endocrinology*, *138*(3), 1121-1129.
- Wersinger, S. R., & Baum, M. J. (1997b). Sexually dimorphic activation of midbrain tyrosine hydroxylase neurons after mating or exposure to chemosensory cues in the ferret. *Biology of Reproduction*, *56*(6), 1407-1414.
- Wersinger, S. R., Caldwell, H. K., Martinez, L., Gold, P., Hu, S., & Young, W. S. (2007). Vasopressin 1a receptor knockout mice have a subtle olfactory deficit but normal aggression. *Genes, Brain, and Behavior*, *6*(6), 540-551. doi:10.1111/j.1601-183X.2006.00281.x
- Wersinger, S. R., Ginns, E. I., O'Carroll, A., Lolait, S. J., & Young, W. S. (2002). Vasopressin V1b receptor knockout reduces aggressive behavior in male mice. *Molecular Psychiatry*, *7*(9), 975-984. doi:10.1038/sj.mp.4001195
- Wersinger, S. R., & Rissman, E. F. (2000). Oestrogen receptor alpha is essential for female-directed chemo-investigatory behaviour but is not required for the pheromone-induced luteinizing hormone surge in male mice. *Journal of Neuroendocrinology*, *12*(2), 103-110.
- Wersinger, S. R., Kelliher, K. R., Zufall, F., Lolait, S. J., O'Carroll, A., & Young, W. S. (2004). Social motivation is reduced in vasopressin 1b receptor null mice despite normal performance in an olfactory discrimination task. *Hormones and Behavior*, *46*(5), 638-645. doi:10.1016/j.yhbeh.2004.07.004
- Wersinger, S. R., Temple, J. L., Caldwell, H. K., & Young, W. S. (2008). Inactivation of the oxytocin and the vasopressin (Avp) 1b receptor genes, but not the Avp 1a receptor gene, differentially impairs the Bruce effect in laboratory mice (*Mus musculus*). *Endocrinology*, *149*(1), 116-121. doi:10.1210/en.2007-1056

- Westberry, J., & Meredith, M. (2003a). The influence of chemosensory input and gonadotropin releasing hormone on mating behavior circuits in male hamsters. *Brain Research*, 974(1-2), 1-16.
- Westberry, J. M., & Meredith, M. (2003b). Pre-exposure to female chemosignals or intracerebral GnRH restores mating behavior in naive male hamsters with vomeronasal organ lesions. *Chemical Senses*, 28(3), 191-196.
- Whitby-Logan, G. K., Weech, M., & Walters, E. (2004). Zonal expression and activity of glutathione S-transferase enzymes in the mouse olfactory mucosa. *Brain Research*, 995(2), 151-157.
- Whitchurch, C. B., Leech, A. J., Young, M. D., Kennedy, D., Sargent, J. L., Bertrand, J. J., Semmler, A. B. T., et al. (2004). Characterization of a complex chemosensory signal transduction system which controls twitching motility in *Pseudomonas aeruginosa*. *Molecular Microbiology*, 52(3), 873-893. doi:10.1111/j.1365-2958.2004.04026.x
- White, L. D., & Lawson, E. E. (1997). Effects of chronic prenatal hypoxia on tyrosine hydroxylase and phenylethanolamine N-methyltransferase messenger RNA and protein levels in medulla oblongata of postnatal rat. *Pediatric Research*, 42(4), 455-462.
- White, L. D., Lawson, E. E., & Millhorn, D. E. (1994). Ontogeny of the O₂-sensitive pathway in medulla oblongata of postnatal rat. *Respiration Physiology*, 98(2), 123-135.
- Whiteman, N. K., & Pierce, N. E. (2008). Delicious poison: genetics of *Drosophila* host plant preference. *Trends in Ecology & Evolution (Personal Edition)*, 23(9), 473-478. doi:10.1016/j.tree.2008.05.010
- Wicks, S. R., de Vries, C. J., van Luenen, H. G., & Plasterk, R. H. (2000). CHE-3, a cytosolic dynein heavy chain, is required for sensory cilia structure and function in *Caenorhabditis elegans*. *Developmental Biology*, 221(2), 295-307. doi:10.1006/dbio.2000.9686
- Widmayer, P., Heifetz, Y., & Breer, H. (2009). Expression of a pheromone receptor in ovipositor sensilla of the female moth (*Heliothis virescens*). *Insect Molecular Biology*, 18(4), 541-547. doi:10.1111/j.1365-2583.2009.00894.x
- Wilkie, T. M. (1999). G proteins, chemosensory perception, and the *C. elegans* genome project: An attractive story. *BioEssays: News and Reviews in Molecular, Cellular and Developmental Biology*, 21(9), 713-717. doi:10.1002/(SICI)1521-1878(199909)21:9<713::AID-BIES1>3.0.CO;2-6
- Williams, R. H., Jensen, L. T., Verkhatsky, A., Fugger, L., & Burdakov, D. (2007). Control of hypothalamic orexin neurons by acid and CO₂. *Proceedings of the National Academy of Sciences of the United States of America*, 104(25), 10685-10690. doi:10.1073/pnas.0702676104
- Willingham, A. T., & Keil, T. (2004). A tissue specific cytochrome P450 required for the structure and function of *Drosophila* sensory organs. *Mechanisms of Development*, 121(10), 1289-1297. doi:10.1016/j.mod.2004.04.017
- Wilson, D. F., Mokashi, A., Chugh, D., Vinogradov, S., Osanai, S., & Lahiri, S. (1994). The primary oxygen sensor of the cat carotid body is cytochrome a₃ of the mitochondrial respiratory chain. *FEBS Letters*, 351(3), 370-374.
- Winkelbauer, M. E., Schafer, J. C., Haycraft, C. J., Swoboda, P., & Yoder, B. K. (2005). The *C. elegans* homologs of nephrocystin-1 and nephrocystin-4 are cilia transition zone proteins involved in chemosensory perception. *Journal of Cell Science*, 118(Pt 23), 5575-5587. doi:10.1242/jcs.02665
- Winter, M. D., McPherson, M. J., & Atkinson, H. J. (2002). Neuronal uptake of pesticides disrupts chemosensory cells of nematodes. *Parasitology*, 125(Pt 6), 561-565.
- Wirsig-Wiechmann, C. R. (1994). Biocytin: a neuronal tracer compatible with rapid decalcification procedures. *Journal of Neuroscience Methods*, 51(2), 213-216.
- Wirsig-Wiechmann, C. R. (2001). Function of gonadotropin-releasing hormone in olfaction. *The Keio Journal of Medicine*, 50(2), 81-85.

- Wirsig-Wiechmann, C. R., & Jennes, L. (1993). Gonadotropin-releasing hormone agonist binding in tiger salamander nasal cavity. *Neuroscience Letters*, *160*(2), 201-204.
- Wirsig-Wiechmann, C. R., & Wiechmann, A. F. (2001). The prairie vole vomeronasal organ is a target for gonadotropin-releasing hormone. *Chemical Senses*, *26*(9), 1193-1202.
- Wirsig-Wiechmann, C. R., & Holliday, K. R. (2002). The naris muscles in tiger salamander. I. Potential functions and innervation as revealed by biocytin tracing. *Anatomy and Embryology*, *205*(3), 169-179. doi:10.1007/s00429-002-0242-0
- Wirsig-Wiechmann, C. R., Houck, L. D., Feldhoff, P. W., & Feldhoff, R. C. (2002). Pheromonal activation of vomeronasal neurons in plethodontid salamanders. *Brain Research*, *952*(2), 335-344.
- Wirsig-Wiechmann, C. R., Houck, L. D., Wood, J. M., Feldhoff, P. W., & Feldhoff, R. C. (2006). Male pheromone protein components activate female vomeronasal neurons in the salamander *Plethodon shermani*. *BMC Neuroscience*, *7*, 26. doi:10.1186/1471-2202-7-26
- Witt, M., Georgiewa, B., Knecht, M., & Hummel, T. (2002). On the chemosensory nature of the vomeronasal epithelium in adult humans. *Histochemistry and Cell Biology*, *117*(6), 493-509. doi:10.1007/s00418-002-0407-1
- Witt, M., & Hummel, T. (2006). Vomeronasal versus olfactory epithelium: is there a cellular basis for human vomeronasal perception? *International Review of Cytology*, *248*, 209-259. doi:10.1016/S0074-7696(06)48004-9
- Wolf, H. (2008). The pectine organs of the scorpion, *Vaejovis spinigerus*: structure and (glomerular) central projections. *Arthropod Structure & Development*, *37*(1), 67-80. doi:10.1016/j.asd.2007.05.003
- Wolf, M. C., Voigt, R., & Moore, P. A. (2004). Spatial arrangement of odor sources modifies the temporal aspects of crayfish search strategies. *Journal of Chemical Ecology*, *30*(3), 501-517.
- Wolf, R., Wittig, T., Liu, L., Wustmann, G., Eyding, D., & Heisenberg, M. (1998). *Drosophila* mushroom bodies are dispensable for visual, tactile, and motor learning. *Learning & Memory (Cold Spring Harbor, N.Y.)*, *5*(1-2), 166-178.
- Woo, K. L. (2007). Computer-generated animal model stimuli. *Journal of Visualized Experiments: JoVE*, (6), 243. doi:10.3791/243
- Wood, R. I. (1997). Thinking about networks in the control of male hamster sexual behavior. *Hormones and Behavior*, *32*(1), 40-45. doi:10.1006/hbeh.1997.1403
- Wood, R. I., Brabec, R. K., Swann, J. M., & Newman, S. W. (1992). Androgen and estrogen concentrating neurons in chemosensory pathways of the male Syrian hamster brain. *Brain Research*, *596*(1-2), 89-98.
- Wood, R. I., & Coolen, L. M. (1997). Integration of chemosensory and hormonal cues is essential for sexual behaviour in the male Syrian hamster: role of the medial amygdaloid nucleus. *Neuroscience*, *78*(4), 1027-1035.
- Wood, R. I., & Newman, S. W. (1993). Mating activates androgen receptor-containing neurons in chemosensory pathways of the male Syrian hamster brain. *Brain Research*, *614*(1-2), 65-77.
- Wood, R. I., & Newman, S. W. (1995). Integration of chemosensory and hormonal cues is essential for mating in the male Syrian hamster. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *15*(11), 7261-7269.
- Woodard, C., Huang, T., Sun, H., Helfand, S. L., & Carlson, J. (1989). Genetic analysis of olfactory behavior in *Drosophila*: a new screen yields the *ota* mutants. *Genetics*, *123*(2), 315-326.
- Woodard, G. E. (2004). Chemosensory G-protein-coupled receptor signaling in the brain. *International Review of Neurobiology*, *62*, 147-157. doi:10.1016/S0074-7742(04)62005-8
- Woodley, S. K. (2007). Sex steroid hormones and sexual dimorphism of chemosensory structures in a terrestrial salamander (*Plethodon shermani*). *Brain Research*, *1138*, 95-103. doi:10.1016/j.brainres.2006.12.094

- Wootton, E. C., Zubkov, M. V., Jones, D. H., Jones, R. H., Martel, C. M., Thornton, C. A., & Roberts, E. C. (2007). Biochemical prey recognition by planktonic protozoa. *Environmental Microbiology*, 9(1), 216-222. doi:10.1111/j.1462-2920.2006.01130.x
- Wroblewska, J., Whalley, S., Fischetti, M., & Daniel, P. C. (2002). Identification of chemosensory sensilla activating antennular grooming behavior in the Caribbean spiny lobster, *Panulirus argus*. *Chemical Senses*, 27(9), 769-778.
- Wu, M., Haxhiu, M. A., & Johnson, S. M. (2005). Hypercapnic and hypoxic responses require intact neural transmission from the pre-Bötzinger complex. *Respiratory Physiology & Neurobiology*, 146(1), 33-46. doi:10.1016/j.resp.2004.11.005
- Wu, Y., Tirindelli, R., & Ryba, N. J. (1996). Evidence for different chemosensory signal transduction pathways in olfactory and vomeronasal neurons. *Biochemical and Biophysical Research Communications*, 220(3), 900-904. doi:10.1006/bbrc.1996.0503
- Wyatt, C. N., Mustard, K. J., Pearson, S. A., Dallas, M. L., Atkinson, L., Kumar, P., Peers, C., et al. (2007). AMP-activated protein kinase mediates carotid body excitation by hypoxia. *The Journal of Biological Chemistry*, 282(11), 8092-8098. doi:10.1074/jbc.M608742200
- Wysocki, C. J., Kruczek, M., Wysocki, L. M., & Lepri, J. J. (1991). Activation of reproduction in nulliparous and primiparous voles is blocked by vomeronasal organ removal. *Biology of Reproduction*, 45(4), 611-616.
- Wysocki, C. J., & Lepri, J. J. (1991). Consequences of removing the vomeronasal organ. *The Journal of Steroid Biochemistry and Molecular Biology*, 39(4B), 661-669.
- Wysocki, C. J., Nyby, J., Whitney, G., Beauchamp, G. K., & Katz, Y. (1982). The vomeronasal organ: primary role in mouse chemosensory gender recognition. *Physiology & Behavior*, 29(2), 315-327.
- Xia, Y., Wang, G., Buscariollo, D., Pitts, R. J., Wenger, H., & Zwiebel, L. J. (2008). The molecular and cellular basis of olfactory-driven behavior in *Anopheles gambiae* larvae. *Proceedings of the National Academy of Sciences of the United States of America*, 105(17), 6433-6438. doi:10.1073/pnas.0801007105
- Xia, Y., & Zwiebel, L. J. (2006). Identification and characterization of an odorant receptor from the West Nile virus mosquito, *Culex quinquefasciatus*. *Insect Biochemistry and Molecular Biology*, 36(3), 169-176. doi:10.1016/j.ibmb.2005.12.003
- Xu, A., Park, S., D'Mello, S., Kim, E., Wang, Q., & Pikielny, C. W. (2002). Novel genes expressed in subsets of chemosensory sensilla on the front legs of male *Drosophila melanogaster*. *Cell and Tissue Research*, 307(3), 381-392. doi:10.1007/s00441-002-0524-0
- Xu, J., Sornborger, A. T., Lee, J. K., & Shen, P. (2008). *Drosophila* TRPA channel modulates sugar-stimulated neural excitation, avoidance and social response. *Nature Neuroscience*, 11(6), 676-682. doi:10.1038/nn.2119
- Xu, P. X., Zwiebel, L. J., & Smith, D. P. (2003). Identification of a distinct family of genes encoding atypical odorant-binding proteins in the malaria vector mosquito, *Anopheles gambiae*. *Insect Molecular Biology*, 12(6), 549-560.
- Xu, P., Atkinson, R., Jones, D. N. M., & Smith, D. P. (2005). *Drosophila* OBP LUSH is required for activity of pheromone-sensitive neurons. *Neuron*, 45(2), 193-200. doi:10.1016/j.neuron.2004.12.031
- Xu, Y., He, P., Zhang, L., Fang, S., Dong, S., Zhang, Y., & Li, F. (2009). Large-scale identification of odorant-binding proteins and chemosensory proteins from expressed sequence tags in insects. *BMC Genomics*, 10, 632. doi:10.1186/1471-2164-10-632
- Yafremava, L. S., Anthony, C. W., Lane, L., Campbell, J. K., & Gillette, R. (2007). Orienting and avoidance turning are precisely computed by the predatory sea-slug *Pleurobranchaea californica* McFarland. *The Journal of Experimental Biology*, 210(Pt 4), 561-569. doi:10.1242/jeb.02697
- Yamada, A., Nakamura, Y., Sugita, D., Shirotsuki, S., Ohkuri, T., Katsukawa, H., Nonaka, K., et al.

- (2006). Induction of salivary kallikreins by the diet containing a sweet-suppressive peptide, gurmarin, in the rat. *Biochemical and Biophysical Research Communications*, 346(2), 386-392. doi:10.1016/j.bbrc.2006.05.154
- Yamaguchi, M., Yamazaki, K., Beauchamp, G. K., Bard, J., Thomas, L., & Boyse, E. A. (1981). Distinctive urinary odors governed by the major histocompatibility locus of the mouse. *Proceedings of the National Academy of Sciences of the United States of America*, 78(9), 5817-5820.
- Yamamoto, M., & Kondo, H. (1990). Gene expression of a neuronal growth-associated protein, GAP-43, in the paraganglionic carotid body as well as in the autonomic ganglia of normal adult rats. *Neuroscience Letters*, 117(3), 275-279.
- Yamamoto, Y., Ishikawa, R., Omoe, K., & Taniguchi, K. (2008). Expression of inwardly rectifying K⁺ channels in the carotid body of rat. *Histology and Histopathology*, 23(7), 799-806.
- Yamamoto, Y., Ishikawa, R., Omoe, K., Yoshikawa, N., Yamaguchi-Yamada, M., & Taniguchi, K. (2008). Immunohistochemical distribution of inwardly rectifying K⁺ channels in the medulla oblongata of the rat. *The Journal of Veterinary Medical Science / the Japanese Society of Veterinary Science*, 70(3), 265-271.
- Yamauchi, A. (1977). On the recepto endocrine property of granule-containing (GC) cells in the autonomic nervous system. *Archivum Histologicum Japonicum. Nippon Soshikigaku Kiroku*, 40 Suppl, 147-161.
- Yamazaki, K., Beauchamp, G. K., Bard, J., & Boyse, E. A. (1990). Chemosensory identity and the Y chromosome. *Behavior Genetics*, 20(1), 157-165.
- Yamazaki, K., Beauchamp, G. K., Bard, J., Thomas, L., & Boyse, E. A. (1982). Chemosensory recognition of phenotypes determined by the T1a and H-2K regions of chromosome 17 of the mouse. *Proceedings of the National Academy of Sciences of the United States of America*, 79(24), 7828-7831.
- Yamazaki, K., Beauchamp, G. K., Matsuzaki, O., Bard, J., Thomas, L., & Boyse, E. A. (1986). Participation of the murine X and Y chromosomes in genetically determined chemosensory identity. *Proceedings of the National Academy of Sciences of the United States of America*, 83(12), 4438-4440.
- Yamazaki, K., Beauchamp, G. K., Thomas, L., & Boyse, E. A. (1984). Chemosensory identity of H-2 heterozygotes. *The Journal of Molecular and Cellular Immunology: JMCI*, 1(2), 79-82.
- Yamazaki, K., Beauchamp, G. K., Wysocki, C. J., Bard, J., Thomas, L., & Boyse, E. A. (1983). Recognition of H-2 types in relation to the blocking of pregnancy in mice. *Science (New York, N.Y.)*, 221(4606), 186-188.
- Yamazaki, K., Yamaguchi, M., Baranoski, L., Bard, J., Boyse, E. A., & Thomas, L. (1979). Recognition among mice. Evidence from the use of a Y-maze differentially scented by congenic mice of different major histocompatibility types. *The Journal of Experimental Medicine*, 150(4), 755-760.
- Yamazaki, K., & Beauchamp, G. K. (2005). Chemosensory recognition of olfactory individuality. *Chemical Senses*, 30 Suppl 1, i142-143. doi:10.1093/chemse/bjh154
- Yan, Y., & Davis, E. L. (2002). Characterisation of guanylyl cyclase genes in the soybean cyst nematode, *Heterodera glycines*. *International Journal for Parasitology*, 32(1), 65-72.
- Yang, H., Wanner, I. B., Roper, S. D., & Chaudhari, N. (1999). An optimized method for in situ hybridization with signal amplification that allows the detection of rare mRNAs. *The Journal of Histochemistry and Cytochemistry: Official Journal of the Histochemistry Society*, 47(4), 431-446.
- Yang, W. Q., Braun, C., Plattner, H., Purvee, J., & Van Houten, J. L. (1997). Cyclic nucleotides in glutamate chemosensory signal transduction of *Paramecium*. *Journal of Cell Science*, 110 (Pt 20), 2567-2572.

- Yano, J., Fraga, D., Hinrichsen, R., & Van Houten, J. L. (1996). Effects of calmodulin antisense oligonucleotides on chemoresponse in *Paramecium*. *Chemical Senses*, *21*(1), 55-58.
- Yano, J., Rachochoy, V., & Van Houten, J. L. (2003). Glycosyl phosphatidylinositol-anchored proteins in chemosensory signaling: antisense manipulation of *Paramecium tetraurelia* PIG-A gene expression. *Eukaryotic Cell*, *2*(6), 1211-1219.
- Yao, C. A., Ignell, R., & Carlson, J. R. (2005). Chemosensory coding by neurons in the coeloconic sensilla of the *Drosophila* antenna. *The Journal of Neuroscience: The Official Journal of the Society for Neuroscience*, *25*(37), 8359-8367. doi:10.1523/JNEUROSCI.2432-05.2005
- Yarmolinsky, D. A., Zuker, C. S., & Ryba, N. J. P. (2009). Common sense about taste: from mammals to insects. *Cell*, *139*(2), 234-244. doi:10.1016/j.cell.2009.10.001
- Yassin, L., Gillo, B., Kahan, T., Halevi, S., Eshel, M., & Treinin, M. (2001). Characterization of the deg-3/des-2 receptor: a nicotinic acetylcholine receptor that mutates to cause neuronal degeneration. *Molecular and Cellular Neurosciences*, *17*(3), 589-599. doi:10.1006/mcne.2000.0944
- Yasuoka, A., Aihara, Y., Matsumoto, I., & Abe, K. (2004). Phospholipase C-beta 2 as a mammalian taste signaling marker is expressed in the multiple gustatory tissues of medaka fish, *Oryzias latipes*. *Mechanisms of Development*, *121*(7-8), 985-989. doi:10.1016/j.mod.2004.03.009
- Yeh, Y., & Byers, M. R. (1983). Fine structure and axonal transport labeling of intraepithelial sensory nerve endings in anterior hard palate of the rat. *Somatosensory Research*, *1*(1), 1-19.
- Yen, K., & Mobbs, C. V. (2008). Chemosensory and caloric mechanisms influence distinct components of mortality rate. *Experimental Gerontology*, *43*(12), 1058-1060. doi:10.1016/j.exger.2008.08.048
- Yokoe, H., & Anholt, R. R. (1993). Molecular cloning of olfactomedin, an extracellular matrix protein specific to olfactory neuroepithelium. *Proceedings of the National Academy of Sciences of the United States of America*, *90*(10), 4655-4659.
- Yokosuka, M., Matsuoka, M., Ohtani-Kaneko, R., Iigo, M., Hara, M., Hirata, K., & Ichikawa, M. (1999). Female-soiled bedding induced fos immunoreactivity in the ventral part of the premammillary nucleus (PMv) of the male mouse. *Physiology & Behavior*, *68*(1-2), 257-261.
- Yoon, H., Enquist, L. W., & Dulac, C. (2005). Olfactory inputs to hypothalamic neurons controlling reproduction and fertility. *Cell*, *123*(4), 669-682. doi:10.1016/j.cell.2005.08.039
- Yoshie, S., Wakasugi, C., Teraki, Y., Kanazawa, H., Iwanaga, T., & Fujita, T. (1991). Response of the taste receptor cell to the umami-substance stimulus. An electron-microscopic study. *Physiology & Behavior*, *49*(5), 887-889.
- Yoshimura, H., Kato, N., Honjo, M., Sugai, T., Segami, N., & Onoda, N. (2004). Age-dependent emergence of a parieto-insular corticocortical signal flow in developing rats. *Brain Research. Developmental Brain Research*, *149*(1), 45-51. doi:10.1016/j.devbrainres.2003.12.009
- Young, B. A., & Morain, M. (2002). The use of ground-borne vibrations for prey localization in the Saharan sand vipers (*Cerastes*). *The Journal of Experimental Biology*, *205*(Pt 5), 661-665.
- Young, J. M., Massa, H. F., Hsu, L., & Trask, B. J. (2010). Extreme variability among mammalian V1R gene families. *Genome Research*, *20*(1), 10-18. doi:10.1101/gr.098913.109
- Young, J. M., Waters, H., Dong, C., Fülle, H., & Liman, E. R. (2007). Degeneration of the olfactory guanylyl cyclase D gene during primate evolution. *PloS One*, *2*(9), e884. doi:10.1371/journal.pone.0000884
- Youngentob, S. L., & Glendinning, J. I. (2009). Fetal ethanol exposure increases ethanol intake by making it smell and taste better. *Proceedings of the National Academy of Sciences of the United States of America*, *106*(13), 5359-5364. doi:10.1073/pnas.0809804106
- Youngentob, S. L., Kent, P. F., Sheehe, P. R., Molina, J. C., Spear, N. E., & Youngentob, L. M. (2007). Experience-induced fetal plasticity: the effect of gestational ethanol exposure on the behavioral and neurophysiologic olfactory response to ethanol odor in early postnatal and adult rats.

- Behavioral Neuroscience*, 121(6), 1293-1305. doi:10.1037/0735-7044.121.6.1293
- Yu, S., Avery, L., Baude, E., & Garbers, D. L. (1997). Guanylyl cyclase expression in specific sensory neurons: a new family of chemosensory receptors. *Proceedings of the National Academy of Sciences of the United States of America*, 94(7), 3384-3387.
- Yu, Y., Zhang, S., Zhang, L., & Zhao, X. (2009). Developmental expression of odorant-binding proteins and chemosensory proteins in the embryos of *Locusta migratoria*. *Archives of Insect Biochemistry and Physiology*, 71(2), 105-115. doi:10.1002/arch.20303
- Zaitseva, O. V. (1996). [The structural organization of the receptor elements and organs of the land mollusk *Pomatia elegans* (Prosobranchia)]. *Morfologiya (Saint Petersburg, Russia)*, 110(4), 83-89.
- Zaitseva, O. V. (1998). [Principles of the structural organization of the chemosensory system of freshwater gastropod mollusks]. *Morfologiya (Saint Petersburg, Russia)*, 114(5), 7-18.
- Zaitseva, O. V. (2000). [Dominant structural and functional adaptations of distant chemosensory systems in phylogenesis of Gastropoda]. *Rossiiskii Fiziologicheskii Zhurnal Imeni I.M. Sechenova / Rossiiskaia Akademiia Nauk*, 86(8), 995-1006.
- Zahm, D. S., & Munger, B. L. (1983). Fetal development of primate chemosensory corpuscles. I. Synaptic relationships in late gestation. *The Journal of Comparative Neurology*, 213(2), 146-162. doi:10.1002/cne.902130204
- Zahm, D. S., & Munger, B. L. (1985). The innervation of the primate fungiform papilla--development, distribution and changes following selective ablation. *Brain Research*, 356(2), 147-186.
- Zaitseva, O. V. (1994). Structural organization of the sensory systems of the snail. *Neuroscience and Behavioral Physiology*, 24(1), 47-57.
- Zaitseva, O. V. (1999). Principles of the structural organization of the chemosensory systems of freshwater gastropod mollusks. *Neuroscience and Behavioral Physiology*, 29(5), 581-593.
- Zancanaro, C., Caretta, C. M., Merigo, F., Cavaggioni, A., & Osculati, F. (1999). alpha-Gustducin expression in the vomeronasal organ of the mouse. *The European Journal of Neuroscience*, 11(12), 4473-4475.
- Zapata, P. (2007). Is ATP a suitable co-transmitter in carotid body arterial chemoreceptors? *Respiratory Physiology & Neurobiology*, 157(1), 106-115. doi:10.1016/j.resp.2007.01.002
- Zapata, P., & Eyzaguirre, C. (1985). Bioelectric potentials in the carotid body. *Brain Research*, 331(1), 39-50.
- Zapata, P., Larrain, C., Fadic, R., Ramirez, B., & Loyola, H. (1993). Thermal effects upon the chemosensory drive of ventilation. *Advances in Experimental Medicine and Biology*, 337, 371-378.
- Zapata, P., Serani, A., & Lavados, M. (1983). Inhibition in carotid body chemoreceptors mediated by D-2 dopaminergic receptors: antagonism by benzamides. *Neuroscience Letters*, 42(2), 179-184.
- Zapata, P., Stensaas, L. J., & Eyzaguirre, C. (1976). Axon regeneration following a lesion of the carotid nerve: electrophysiological and ultrastructural observations. *Brain Research*, 113(2), 235-253.
- Zapata, P., & Torrealba, F. (1984). Blockade of dopamine-induced chemosensory inhibition by domperidone. *Neuroscience Letters*, 51(3), 359-364.
- Zapata, P., & Zuazo, A. (1980). Respiratory effects of dopamine-induced inhibition of chemosensory inflow. *Respiration Physiology*, 40(1), 79-92.
- Zapata, P., & Zuazo, A. (1982). Reversal of respiratory responses to dopamine after dopamine antagonists. *Respiration Physiology*, 47(2), 239-255.
- Zapata, P., Zuazo, A., & Lladós, F. (1976a). Respiratory and circulatory reflexes induced by nicotine injections: role of carotid body chemoreceptors. *Archives Internationales De Pharmacodynamie Et De Thérapie*, 219(1), 128-139.
- Zapata, P., Zuazo, A., & Lladós, F. (1976b). Acute changes in ventilation and blood pressure induced by inhalation of tobacco smoke. *Archives Internationales De Pharmacodynamie Et De Thérapie*,

219(1), 116-127.

- Zapata, P., Larrain, C., Rivera, M., & Calderon, C. (2009). Cardiovascular responses to hyperoxic withdrawal of arterial chemosensory drive. *Advances in Experimental Medicine and Biology*, 648, 290-297. doi:10.1007/978-90-481-2259-2_33
- Zapata, P., & Larrain, C. (2005). How the carotid body works: different strategies and preparations to solve different problems. *Biological Research*, 38(4), 315-328.
- Zapata, P., Larrain, C., Fernández, R., & Reyes, E. (2003). Cholinergic actions on carotid chemosensory system. *Advances in Experimental Medicine and Biology*, 536, 277-283.
- Zhang, J., & Ding, X. (1998). Identification and characterization of a novel tissue-specific transcriptional activating element in the 5'-flanking region of the CYP2A3 gene predominantly expressed in rat olfactory mucosa. *The Journal of Biological Chemistry*, 273(36), 23454-23462.
- Zhang, M., Zhong, H., Vollmer, C., & Nurse, C. A. (2000). Co-release of ATP and ACh mediates hypoxic signalling at rat carotid body chemoreceptors. *The Journal of Physiology*, 525 Pt 1, 143-158.
- Zhang, M., Buttigieg, J., & Nurse, C. A. (2007). Neurotransmitter mechanisms mediating low-glucose signalling in cocultures and fresh tissue slices of rat carotid body. *The Journal of Physiology*, 578(Pt 3), 735-750. doi:10.1113/jphysiol.2006.121871
- Zhang, M., Clarke, K., Zhong, H., Vollmer, C., & Nurse, C. A. (2009). Postsynaptic action of GABA in modulating sensory transmission in co-cultures of rat carotid body via GABA(A) receptors. *The Journal of Physiology*, 587(Pt 2), 329-344. doi:10.1113/jphysiol.2008.165035
- Zhang, M., Fearon, I. M., Zhong, H., & Nurse, C. A. (2003). Presynaptic modulation of rat arterial chemoreceptor function by 5-HT: role of K⁺ channel inhibition via protein kinase C. *The Journal of Physiology*, 551(Pt 3), 825-842. doi:10.1113/jphysiol.2002.038489
- Zhang, M., & Nurse, C. A. (2004). CO₂/pH chemosensory signaling in co-cultures of rat carotid body receptors and petrosal neurons: role of ATP and ACh. *Journal of Neurophysiology*, 92(6), 3433-3445. doi:10.1152/jn.01099.2003
- Zhang, S., Sokolchik, I., Blanco, G., & Sze, J. Y. (2004). Caenorhabditis elegans TRPV ion channel regulates 5HT biosynthesis in chemosensory neurons. *Development (Cambridge, England)*, 131(7), 1629-1638. doi:10.1242/dev.01047
- Zhang, S., Zhang, Y., Su, H., Gao, X., & Guo, Y. (2009). Identification and expression pattern of putative odorant-binding proteins and chemosensory proteins in antennae of the Microplitis mediator (Hymenoptera: Braconidae). *Chemical Senses*, 34(6), 503-512. doi:10.1093/chemse/bjp027
- Zhang, X., Wilson, R. J., Li, Y., & Kleinhaus, A. L. (2000). Chemical and thermal stimuli have short-lived effects on the retzius cell in the medicinal leech. *Journal of Neurobiology*, 43(3), 304-311.
- Zhang, X., Rodriguez, I., Mombaerts, P., & Firestein, S. (2004). Odorant and vomeronasal receptor genes in two mouse genome assemblies. *Genomics*, 83(5), 802-811. doi:10.1016/j.ygeno.2003.10.009
- Zhang, Y., Hoon, M. A., Chandrashekar, J., Mueller, K. L., Cook, B., Wu, D., Zuker, C. S., et al. (2003). Coding of sweet, bitter, and umami tastes: different receptor cells sharing similar signaling pathways. *Cell*, 112(3), 293-301.
- Zhang, Y., Lu, H., & Bargmann, C. I. (2005). Pathogenic bacteria induce aversive olfactory learning in Caenorhabditis elegans. *Nature*, 438(7065), 179-184. doi:10.1038/nature04216
- Zheng, F., & Lawson, S. N. (1997). Neurokinin A in rat renal afferent neurons and in nerve fibres within smooth muscle and epithelium of rat and guinea-pig renal pelvis. *Neuroscience*, 76(4), 1245-1255.
- Zheng, L. M., Caldani, M., & Jourdan, F. (1988). Immunocytochemical identification of luteinizing hormone-releasing hormone-positive fibres and terminals in the olfactory system of the rat. *Neuroscience*, 24(2), 567-578.

- Zheng, X., Chung, S., Tanabe, T., & Sze, J. Y. (2005). Cell-type specific regulation of serotonergic identity by the *C. elegans* LIM-homeodomain factor LIM-4. *Developmental Biology*, 286(2), 618-628. doi:10.1016/j.ydbio.2005.08.013
- Zheng-Fischhöfer, Q., Schnichels, M., Dere, E., Strotmann, J., Loscher, N., McCulloch, F., Kretz, M., et al. (2007). Characterization of connexin30.3-deficient mice suggests a possible role of connexin30.3 in olfaction. *European Journal of Cell Biology*, 86(11-12), 683-700. doi:10.1016/j.ejcb.2007.01.005
- Zhong, H., & Nurse, C. (1996). Co-cultures of rat petrosal neurons and carotid body type 1 cells. A model for studying chemosensory mechanisms. *Advances in Experimental Medicine and Biology*, 410, 189-193.
- Zhong, H., & Nurse, C. A. (1997). Nicotinic acetylcholine sensitivity of rat petrosal sensory neurons in dissociated cell culture. *Brain Research*, 766(1-2), 153-161.
- Zhong, H., Zhang, M., & Nurse, C. A. (1997). Synapse formation and hypoxic signalling in co-cultures of rat petrosal neurones and carotid body type 1 cells. *The Journal of Physiology*, 503 (Pt 3), 599-612.
- Zhou, D., Wang, C., & van Loon, J. J. A. (2009). Chemosensory basis of behavioural plasticity in response to deterrent plant chemicals in the larva of the Small Cabbage White butterfly *Pieris rapae*. *Journal of Insect Physiology*, 55(9), 788-792. doi:10.1016/j.jinsphys.2009.04.011
- Zhou, J., Kan, Y., Antoniw, J., Pickett, J. A., & Field, L. M. (2006). Genome and EST analyses and expression of a gene family with putative functions in insect chemoreception. *Chemical Senses*, 31(5), 453-465. doi:10.1093/chemse/bjj050
- Zhou, S., Stone, E. A., Mackay, T. F. C., & Anholt, R. R. H. (2009). Plasticity of the chemoreceptor repertoire in *Drosophila melanogaster*. *PLoS Genetics*, 5(10), e1000681. doi:10.1371/journal.pgen.1000681
- Zhou, S., Zhang, S., & Zhang, L. (2009). The chemosensilla on tarsi of *Locusta migratoria* (Orthoptera: Acrididae): distribution, ultrastructure, expression of chemosensory proteins. *Journal of Morphology*, 270(11), 1356-1363. doi:10.1002/jmor.10763
- Zhuang, J. J., Pang, L., & Dong, L. (1997). [Effects of low pH and nicotine on carotid body chemoreceptor activity in the rabbit]. *Sheng Li Xue Bao: [Acta Physiologica Sinica]*, 49(5), 589-593.
- Zimmer, R. K., & Ferrer, R. P. (2007). Neuroecology, chemical defense, and the keystone species concept. *The Biological Bulletin*, 213(3), 208-225.
- Zimmer, R. K., & Zimmer, C. A. (2008). Dynamic scaling in chemical ecology. *Journal of Chemical Ecology*, 34(7), 822-836. doi:10.1007/s10886-008-9486-3
- Zimmermann, G., Wang, L., Vaughan, A. G., Manoli, D. S., Zhang, F., Deisseroth, K., Baker, B. S., et al. (2009). Manipulation of an innate escape response in *Drosophila*: photoexcitation of acj6 neurons induces the escape response. *PloS One*, 4(4), e5100. doi:10.1371/journal.pone.0005100
- Zuazo, A., & Zapata, P. (1980). Regulatory role of carotid nerve afferences upon the frequency and pattern of spontaneous gasp complexes. *Neuroscience Letters*, 16(1), 111-116.
- Zufall, F., & Munger, S. D. (2001). From odor and pheromone transduction to the organization of the sense of smell. *Trends in Neurosciences*, 24(4), 191-193.
- Zufall, F., Kelliher, K. R., & Leinders-Zufall, T. (2002). Pheromone detection by mammalian vomeronasal neurons. *Microscopy Research and Technique*, 58(3), 251-260. doi:10.1002/jemt.10152
- Zupko, K., Poria, Y., & Lancet, D. (1991). Immunolocalization of cytochromes P-450olf1 and P-450olf2 in rat olfactory mucosa. *European Journal of Biochemistry / FEBS*, 196(1), 51-58.
- Zwaal, R. R., Mendel, J. E., Sternberg, P. W., & Plasterk, R. H. (1997). Two neuronal G proteins are involved in chemosensation of the *Caenorhabditis elegans* Dauer-inducing pheromone. *Genetics*, 145(3), 715-727.