

## Timothy Scott McClintock, Ph.D.

Dept. of Physiology  
University of Kentucky College of Medicine  
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### **EDUCATION:**

07/92 - 12/93                      Postdoctoral Associate (Molecular Neurobiology)  
Howard Hughes Medical Institute  
Department of Internal Medicine  
Yale University School of Medicine  
Advisor: Michael R. Lerner, M.D., Ph.D.

07/89 - 06/92                      Postdoctoral Fellow (Molecular Neurobiology)  
Howard Hughes Medical Institute  
Section of Molecular Neurobiology  
Yale University School of Medicine  
Advisor: Michael R. Lerner, M.D., Ph.D.

08/84 - 05/89                      Ph.D. (Neurophysiology)  
Department of Zoology  
University of Florida  
Major Professor: Barry W. Ache, Ph.D.

08/82 - 07/84                      M.S. (Ethology)  
Department of Biological Sciences  
Florida State University  
Major Professor: William F. Herrnkind, Ph.D.

09/78 - 06/82                      B.S. (Zoology, with High Honors)  
Department of Zoology  
Michigan State University

### **Education from non-degree granting institutions:**

05/85 - 06/85                      Biophysics of Neural Function  
The Marine Biological Laboratory

06/81 - 07/81

Tropical Marine Invertebrates  
The Bermuda Biological Station

**FACULTY APPOINTMENTS:**

07/04 - present

Professor  
Department of Physiology  
University of Kentucky

05/23 – 04/24

Visiting Scientist  
Monell Chemical Senses Center

07/03 – 12/22

Louis Boyarsky Professor  
Department of Physiology  
University of Kentucky

07/07 – 06/10

Vice-Chair  
Department of Physiology  
University of Kentucky

07/03 – 08/04

Visiting Professor  
The Rockefeller University

01/00 – 12/12

Faculty Associate  
Spinal Cord and Brain Injury Research Center  
University of Kentucky

07/00 – 06/03

Thomas Skinner Professor  
Department of Physiology  
University of Kentucky

07/99 - 2004

Associate Professor  
Department of Physiology  
University of Kentucky

01/94 - 06/99

Assistant Professor  
Department of Physiology  
University of Kentucky

## RESEARCH INTERESTS:

1. The physiology and pharmacology of odorant receptors.
2. The molecular biology and physiology of cells in the olfactory epithelium, the communication between these cells, and their ability to defend themselves against stress.
3. How Alzheimer's Disease risk factors damage olfactory sensory neurons.
4. The control of expression of odorant receptor genes.
5. Functional genomics and transcriptional control of adult neurogenesis and neural replacement in the olfactory system.

## PUBLICATIONS

### Review Articles and Book Chapters

1. 2022. Derby CD, **McClintock TS**, Caprio J. Understanding responses to chemical mixtures: Looking forward from the past. *Chem Senses*. 47:bjac002. doi:10.1093/chemse/bjac002. PMID: 35226060.
2. 2020. **McClintock, TS**, N Khan, X Chao, and JR Martens. Maturation of the olfactory sensory neuron and its cilia. *Chem Senses*, 45, DOI: [10.1093/chemse/bjaa070](https://doi.org/10.1093/chemse/bjaa070).
3. 2020. **McClintock, TS**. Mammalian Odorant Receptor Gene Regulation. In: Fritsch, B. (Ed.) and Meyerhof, W. (Volume Editor), *The Senses: A Comprehensive Reference*, vol. 3. Elsevier, Academic Press, Cambridge, MA. pp. 536–544.
4. 2020. **McClintock, TS**, N Khan, X Chao, and JR Martens. Maturation of the olfactory sensory neuron and its cilia. *Chem Senses*, 45, DOI: [10.1093/chemse/bjaa070](https://doi.org/10.1093/chemse/bjaa070).
5. 2019. **McClintock, TS**. Mammalian Odorant Receptor Gene Regulation. In: *The Senses, A Comprehensive Reference*. 2<sup>nd</sup> Edition. Academic Press, Cambridge, MA.
6. 2015. **McClintock, TS**. Odorant receptor gene choice. *ChemoSense*, 16:3-13.

7. 2015. **McClintock, TS**. Olfactory insights from transcriptional profiling. In: *Reference Module in Biomedical Sciences*. doi: 10.1016/B978-0-12-801238-3.04708-5. Elsevier, Amsterdam.
8. 2014. **McClintock, TS**. Olfactory insights from transcriptional profiling. In: *Encyclopedia of Neuroscience*, L Squire, ed, Academic Press, Oxford.
9. 2010. **McClintock, TS**, Achieving singularity in mammalian odorant receptor gene choice. *Chem Senses*, 35:447-457.
10. 2008. **McClintock, TS**, DA Wilson, SD Munger, L Geran, and S Herness. The 15<sup>th</sup> International Symposium on Olfaction and Taste. *Chem Senses*, 33:735-738.
11. 2008. **McClintock, TS** and N. Sammeta. Olfactory insights from transcriptional profiling. In: *Encyclopedia of Neuroscience*, L Squire, ed, Academic Press, Oxford.
12. 2006. **McClintock, TS**, CD Derby, and BW Ache. Lobster Olfactory Genomics. *Integrative and Comparative Biology*, 46:940-947.
13. 2006. **McClintock, TS**, and CD Derby. Shelling Out for Genomics. *Genome Biology*, 7:312.
14. 2003. **McClintock, TS** and N. Sammeta. Trafficking prerogatives of olfactory receptors. *Neuroreport* 14:1547-1552.
15. 2002. **McClintock, TS**. High throughput mRNA Analysis Techniques. *Chemical Senses* 27:289-291.
16. 2002. **McClintock, TS** and F Xu. Molecular physiology of G-proteins in olfactory transduction and CNS neurotransmission. In: *Frontiers in Crustacean Neurobiology.*, Vol. II. K Weise, WD Krenz, J Tautz, H Reichert and B Mulloney, eds., pp. 359-366.
17. 2002. **McClintock, TS**, AA Gimelbrant, and DJ Baro. Molecular biology of crustacea: Unique opportunities in the crustacean nervous system. In: *Frontiers in Crustacean Neurobiology.*, Vol. II. K Weise, WD Krenz, J Tautz, H Reichert and B Mulloney, eds., pp. 232-235.
18. 2000. **McClintock, TS**. Molecular Biology of Olfaction. In: *Neurobiology of taste and smell, 2nd edition*. TE Finger, WL Silver, and D Restrepo, eds. Wiley, Chichester, UK. pp. 179-199.

19. 2000. Gimelbrant AA and **McClintock, TS**. The intracellular trafficking of olfactory receptors. In: *Recent Research Developments in Neurochemistry*, Vol 3, part I. Research Signpost, Kerala, India. pp. 39-45.
20. 1996. Lerner, MR, L Golovyan, GF Graminski, K. Harris, L. Huang, CK Jayawickreme, S Karne, **TS McClintock**, MN Potenza, A. Roby-Shemkovitz and M. Quillan. Tools for Investigating Functional Interactions Between Lipid-Derived Autacoids and their Receptors. In: *Am. J. Ther.* 3:280-286.
21. 1993. Lerner, MR, MN Potenza, GF Graminski, **TS McClintock**, CK Jayawickreme and S Karne. A new tool for investigating G protein coupled receptors. In: *The molecular basis of smell and taste transduction*. Wiley, Chichester, UK. pp. 76-87.
22. 1990. Ache, BW and **TS McClintock**. The lobster olfactory receptor cell as a neurobiological model: the action of histamine. In: *Frontiers in Crustacean Neurobiology*. K Weise, WD Krenz, J Tautz, H Reichert and B Mulloney, eds. Birkhäuser Verlag, Basel. pp. 33-39.
23. 1989. Ache, BW, I Schmeidel, **TS McClintock** and PAV Anderson. Activation of lobster olfactory receptor cells by complex stimuli: evidence for multiple conductance pathways. In: *Receptor events and transduction in taste and olfaction*. J Brand, J Teeter, R Cagan and M Kare, eds. Marcel Dekker, NY. pp. 389-403.

### Primary Publications

1. 2023. Wang, Q, T Sengoku, WB Titlow, JL Strange, and **TS McClintock**. Dissociation of Mouse Olfactory Mucosae for Fluorescence-Activated Cell Sorting of Olfactory Sensory Neurons. *Methods in Molecular Biology*. doi: [10.1007/978-1-0716-3425-7\\_9](https://doi.org/10.1007/978-1-0716-3425-7_9) . PMID: 37688728.
2. 2023. Xufang Mu, Shu Liu, Zhuoran Wang, Kai Jiang, **Tim McClintock**, Arnold J. Stromberg, Alejandro V. Tezanos, Eugene S Lee, John A. Curci, Ming C Gong, Zhenheng Guo. Androgen aggravates aortic aneurysms via suppressing PD-1 in mice. bioRxiv 2023.01.22.525073; doi: <https://doi.org/10.1101/2023.01.22.525073>
3. 2022. Zhihui Z, Q Zainuddin, SM. Crivelli, A Elsherbini, L Zhang, P Tripathi, H Qin, E Roush, SD Spassieva, M Nikolova-Karakashian, **TS McClintock**, and E Bieberich. Neutral sphingomyelinase 2 mediates oxidative stress effects on astrocyte

senescence and synaptic plasticity transcripts. *Mol Neurobio*. 59(5):3233-3253. doi: 10.1007/s12035-022-02747-0. PMID: 35294731.

4. 2020. **McClintock, TS**, N Kahn, Y Alimova, M. Aulisio, DY Han, and PB Breheny. Encoding the odor of cigarette smoke. *J. Neurosci*. 40(37):7043-7053. DOI: [10.1523/JNEUROSCI.1144-20.2020](https://doi.org/10.1523/JNEUROSCI.1144-20.2020). PMID: 32801155
5. 2020. **McClintock, TS**, Q Wang, T Sengoku, WB Titlow, and PB Breheny. Mixture and concentration effects of odorant receptor response patterns in vivo. *Chem Senses* doi: 10.1093/chemse/bjaa032. PMID: 32427281
6. 2020. De March CA, WB Titlow, T Sengoku, PB Breheny, H Matsunami, and **TS McClintock**. Modulation of the combinatorial code of odorant receptor response patterns in odorant mixtures. *Mol. Cell. Neurosci*. 104:103469 doi:10.1016/j.mcn.2020.103469 PMID: 32061665
7. 2016. Zhang, G, WB Titlow, SM Biecker, AJ Stromberg, and **TS McClintock**. Lhx2 determines odorant receptor expression frequency in mature olfactory sensory neurons. *eNeuro* Oct 31;3(5) DOI: 10.1523/ENEURO.0230-16.2016. PMID 278225003
8. Kirby, TJ, RM Patel, **TS McClintock**, EE Dupont-Versteegden, CA Peterson, and JJ McCarthy. *In vivo* Myonuclear transcription is responsive to mechanical load and DNA contact but uncoupled from cell size during hypertrophy. *Mol. Biol. Cell* 27:788-798. PMID 26764089
9. 2014. **McClintock TS**, K Adipietro, WB Titlow, P Breheny, A Walsh, P Mombaerts, and H Matsunami. *In vivo* identification of eugenol-responsive and muscone-responsive mouse odorant receptors. *J. Neurosci*. 34:15669-15678. PMID 25411495.
10. 2014. Fischl AM, PM Heron, AJ Stromberg, and **TS McClintock**. Activity-dependent genes in mouse olfactory sensory neurons. *Chem Senses*, 39:439-449. PMID: 24692514
11. 2013. Heron PM, AJ Stromberg, P Breheny, and **TS McClintock**. Molecular events in the cell types of the olfactory epithelium during adult neurogenesis. *Mol Brain*, 6:49. PMID: 2426747
12. 2012. Nickell MD, P Breheny, AJ Stromberg, and **TS McClintock**. Genomics of mature and immature olfactory sensory neurons. *J. Comp. Neurol.*, 520:2608-2629.

13. 2012. Ferrari M, C Folli, **TS McClintock**, M Rossle, R Berni, M Cianci. Structural characterization of recombinant crustacyanin subunits from lobster *Homarus americanus*. *Acta Crystallographica*. 68:846-853.
14. 2010. Sammeta, N, DL Hardin and **TS McClintock**. Uncx regulates and proliferation of neural progenitor cells and neuronal survival in the olfactory epithelium. *Mol. Cell. Neurosci.* 45:398-407.
15. 2010. McIntyre, JC, WB Titlow, and **TS McClintock**. Axon growth and guidance genes identify nascent, immature, and mature olfactory sensory neurons. *J. Neurosci. Res.* 88:3243-3256.
16. 2010. Sammeta, N and **TS McClintock**. Chemical stress induces the unfolded protein response in olfactory sensory neurons. *J. Comp. Neurol.*, 518:1825-1836.
17. 2008. Dickinson PS, Stemmler EA, Barton EE, Cashman CR, Gardner NP, Rus S, Brennan HR, **McClintock TS**, Christie AE. Molecular, mass spectral, and physiological analyses of orckinins and orckinin precursor-related peptides in the lobster *Homarus americanus* and the crayfish *Procambarus clarkii*. *Peptides*, 30:297-317
18. 2008. McIntyre, JC, SC Bose, AJ Stromberg and **TS McClintock**. Emx2 stimulates odorant receptor gene expression. *Chem. Senses*, 33:825-837.
19. 2008. **McClintock, TS**, CE Glasser, SC Bose, and DA Bergman. Tissue expression patterns identify mouse cilia genes. *Physiol. Genomics*, 32:198-206.
20. 2007. Sammeta, N, T-T Yu, SC Bose and **TS McClintock**. Mouse olfactory sensory neurons express 10,000 genes. *J. Comp. Neurol.* 502:1138-1156.
21. 2006. Stepanyan, R, K Day, J Urban, DH Hardin, RS Shetty, CD Derby, BW Ache and **TS McClintock**. Gene expression and specificity in the mature zone of the lobster olfactory organ. *Physiol Genomics*, 25:224-233.
22. 2005. Shetty, R., SC Bose, MD Nickell, JC McIntyre, D Hardin, AM Harris, and **TS McClintock**. Transcriptional changes during neuronal death and replacement in the adult olfactory epithelium. *Mol. Cell. Neurosci.* 30:90-107.
23. 2005. Stepanyan, R, S. Haley and **TS McClintock**. Olfactory specific chymotrypsin-like serine protease from the aesthetasc tegumental gland of the lobster, *Homarus americanus*. *Cell Tiss. Res.* 27:1-10.

24. 2005. Yu, T-T, J McIntyre, SC Bose, D Hardin, MC Owen and **TS McClintock**. Differentially expressed transcripts from phenotypically identified olfactory sensory neurons. *J. Comp. Neurol.* 483:251-262.
25. 2004. Stoss, T, MD Nickell, D Hardin, and **TS McClintock**. A novel epithelial-specific transcript upregulated during neural regeneration in the lobster olfactory organ. *J. Neurobiol.*, 58:355-368.
26. 2004. Stepanyan, R, B Hollins, SE Brock, and **TS McClintock**. Primary culture of lobster (*Homarus americanus*) olfactory sensory neurons. *Chem. Senses*, 29:179-187.
27. 2003. Hollins, B, D Schweder, AA Gimelbrant, and **TS McClintock**. Olfactory enriched transcripts are cell type specific markers in the lobster olfactory organ. *J. Comp. Neurol.* 455:125-138.
28. 2001. Gimelbrant, AA, S Haley, and **TS McClintock**. Olfactory receptor trafficking involves conserved regulatory steps. *J. Biol. Chem.* 276:7285-7290.
29. 2000. **McClintock, TS**, F Xu, and SC Bose. Distribution of G-protein  $\alpha$  subunits and neurotransmitter activation of  $G_{\alpha i}$  and  $G_{\alpha q}$  in the brain of the lobster, *Homarus americanus*. *J. Comp. Neurol.* 422: 402-414.
30. 2000. Hollins, B and **TS McClintock**. A lobster GABA receptor subunit expressed in neural tissues. *J. Neurosci. Res.* 59: 534-541.
31. 1999. Xu, F, SC Bose and **TS McClintock**. A lobster G-protein coupled receptor kinase that associates with membranes and G-proteins in response to odorants and neurotransmitters. *J. Comp. Neurol.* 415: 449-459.
32. 1999. Xu, F and **TS McClintock**. A lobster phospholipase C- $\beta$  that associates with G-proteins in response to odorants. *J. Neurosci.*, 19: 4881-4888.
33. 1999. Gimelbrant, AA, TD Stoss, TM Landers and **TS McClintock**. Truncation releases olfactory receptors from the endoplasmic reticulum of heterologous cells. *J. Neurochem.*, 72: 2301-2311.
34. 1998. Mankad, R, AA Gimelbrant and **TS McClintock**. Consensus Translational Initiation Sites of Marine Invertebrate Phyla. *Biol. Bull.*, 195: 251-254.



35. 1998. Xu, F, B Hollins, TM Landers and **TS McClintock**. Molecular cloning of a lobster  $G_{\beta}$ -subunit and  $G_{\beta}$  expression in olfactory receptor neuron dendrites and brain neuropil. *J. Neurobiol.* 36: 525-536.
36. 1997. **McClintock, TS** and MR Lerner. Functional analysis by imaging of melanophore pigment dispersion of chimeric receptors constructed by recombinant polymerase chain reaction. *Brain Res. Prot.* 2:59-68.
37. 1997. Gimelbrant, AA and **TS McClintock**. A nuclear matrix attachment region is highly homologous to a conserved domain of olfactory receptors. *J. Mol. Neurosci.*, 9:1-3.
38. 1997. Xu, F, B Hollins, AM Gress, TM Landers and **TS McClintock**. Molecular cloning and characterization of a lobster  $G_{\alpha_s}$ -protein expressed in neurons of olfactory organ and brain. *J. Neurochem.*, 69: 1793-1800.
39. 1997. **McClintock, TS**, TM Landers, AA Gimelbrant, CK Jayawickreme, LZ Fuller, BA Jackson and MR Lerner. Functional expression of olfactory-adrenergic receptor chimeras and intracellular retention of heterologously expressed olfactory receptors. *Mol. Brain Res.* 48:270-278.
40. 1997. **McClintock, TS**, F Xu, J Quintero, AM Gress and TM Landers. Molecular cloning of a lobster  $G_{\alpha_q}$ -protein expressed in neurons of olfactory organ and brain. *J. Neurochem.*, 68:2248-2254.
41. 1996. **McClintock, TS**, J Rising and MR Lerner. Melanophore pigment dispersion responses to agonists show two patterns of sensitivity to inhibitors of cAMP-dependent protein kinase and protein kinase C. *J Cell. Physiol.* 167:1-7.
42. 1993. **McClintock, TS**, GF Graminski, MN Potenza, CK Jayawickreme, A Roby-Shemkovitz, and MR Lerner. Functional expression of recombinant G-protein coupled receptors monitored by video imaging of pigment movement in melanophores. *Anal. Biochem.* 209:298-305.
43. 1993. Pongracz, F, **TS McClintock**, BW Ache, and GM Shepherd. Signal transmission in lobster olfactory receptor cells: significance of electrotonic structure revealed by a compartmental model. *Neuroscience* 55:325-338.
44. 1992. **McClintock, TS**, AP Byrnes and MR Lerner. Molecular cloning of a G-protein  $\alpha_i$  subunit from the lobster olfactory organ. *Mol. Brain Res.* 14:273-276.

45. 1991. Michel, WC, **TS McClintock**, and BW Ache. Inhibition of lobster olfactory receptor cells by an odor-activated potassium conductance. *J. Neurophysiol.* 65:446-453.
46. 1990. **McClintock, TS** and BW Ache. A nonselective cation channel activated by patch excision from lobster olfactory receptor neurons. *J. Membrane Biol.* 113:115-121.
47. 1989. **McClintock, TS**, and BW Ache. Histamine directly gates a chloride channel in lobster olfactory receptor neurons. *Proc. Natl. Acad. Sci., USA* 86:8137-8141.
48. 1989. **McClintock, TS**, K Schütte and BW Ache. Failure to implicate cyclic-AMP in transduction in lobster olfactory receptor cells. *Chem. Senses* 14:817-827.
49. 1989. **McClintock, TS** and BW Ache. Ionic currents and ion channels of lobster olfactory receptor neurons. *J. Gen. Physiol.* 94:1085-1099.
50. 1989. **McClintock, TS** and BW Ache. Hyperpolarizing receptor potentials in lobster olfactory receptor cells: implications for transduction and mixture suppression. *Chem. Senses* 14:637-647.
51. 1989. Bayer, TA, **TS McClintock**, U Grünert and BW Ache. Histamine induced modulation of olfactory receptor neurones in two species of lobster, P. argus and H. americanus. *J. exp. Biol.* 145:133-146.
52. 1985. **McClintock, TS**. Effects of shell condition and size upon the shell choice behavior of a hermit crab. *J. Exp. Mar. Biol. Ecol.* 88:271-285.

### **SCHOLARSHIPS AND FELLOWSHIPS:**

06/96 - 08/96	Lucy B. Lemann Fellow at the Marine Biological Laboratory
07/89 - 06/92:	NIH postdoctoral National Research Service Award
06/88 - 09/88:	Grass Fellowship in Neurophysiology at the Marine Biological Laboratory
01/86 - 12/88:	NIMH predoctoral National Research Service Award

### **AWARDS AND HONORS:**

2007, 2013:	Holsinger Award for Teaching, Dept. of Physiology, UK
2002:	University of Kentucky Research Professor
2000-04, 06-11, 15-17 20, 23	Charles T. Wethington Research Award, University of Kentucky College of Medicine

2000: Takasago Award for Research in Olfaction, Association for Chemoreception Sciences  
1996: University of Kentucky nominee to NSF Presidential Faculty Fellows Program  
1995: University of Kentucky nominee to Searle Scholars Program  
1982: Phi Beta Kappa  
1982: Candidate for Rhodes Scholarship  
1981: Phi Kappa Phi  
1981-82: Varsity letterman, lacrosse, Michigan State University

## TEACHING

IBS 603 Cell Biology & Signaling (3 credits)  
PGY617 Physiological Genomics (**Course Director**; 2 credits)  
PGY417 Genomics & Epigenetics (**Course Director**; 2 credits)

### **NEW COURSE DEVELOPMENT:**

2021 IBS 608 Genomics & Bioinformatics Tools (Founding Course Director)  
2014 IBS 603 Cell Biology & Signaling  
2012 PGY 417 Genomics & Epigenetics (Founding Course Director)  
2004 PGY 617 Physiological Genomics (Founding Course Director)  
2000 IBS 604 Cell Signaling (Founding Course Director)  
1997 PGY 690 Readings in Cellular and Molecular Physiology  
1995 PGY 590 Cellular and Molecular Physiology

## TRAINING

### **A. POSTDOCTORAL FELLOWS:**

01/96 - 07/00 Alexander A. Gimelbrant, Ph.D. (Moscow State Univ.) currently Assistant Professor, Department of Cancer Biology, Dana Farber Cancer Institute; Department of Genetics, Harvard University.  
10/96 – 12/01 Bettye Hollins, Ph.D. (Medical College of Georgia) currently Research Associate., Medical College of Georgia  
02/00 - 2005 Ruben Stepanyan, Ph.D. (Armenian Acad. of Science) currently Assistant Professor, Cleveland Clinic  
09/00 – 08/01 Parul Lakhani, Ph.D. (Baylor Univ.) currently medical resident, Univ. of Maryland Hospital  
12/01 – 01/09 Neeraja Sammeta, Ph.D. (Hyderabad Univ.)

currently Field Application Specialist, Roche Custom Biotech  
01/02 – 06/05 Ranjit Shetty, Ph.D. (University of Kentucky)  
currently Scientist, Harvard University  
05/02 – 05/04 Tun-Tzu Yu, Ph.D. (University of Kansas)  
07/04 – 06/07 Daniel Bergman, Ph.D. (Bowling Green State University)  
currently Professor and Chair of Biology, Grand Valley State University  
02/09 – 02/10 Guangfan Zhang, Ph.D. (University of Kentucky)  
currently dentist, Kansas City, MO  
10/09 – 10/13 Paula Heron, Ph.D. (University of Kentucky)  
currently Analyst, Office of Naval Intelligence  
11/19 – 10/21 Naazneen Khan, Ph.D. (National Institute of Malaria Research, New Delhi, India) Currently postdoctoral fellow, IUPU Medical School

## **GRADUATE/UNDERGRADUATE STUDENTS:**

### **A. GRADUATE STUDENTS, MAJOR PROFESSOR:**

Fuqiang Xu, Ph.D, Ph.D (Graduated 1998). Associate Professor, Institute of Physics and Mathematics, Chinese Academy of Science at Wuhan, China

Jeremy McIntyre. Ph.D. (Graduated 2010). Assistant Professor, Department of Neuroscience, University of Florida

### **B. GRADUATE STUDENTS, CO-MAJOR PROFESSOR:**

Valerie Reeves (Ph.D. 2012). Postdoctoral Fellow, University of Pittsburgh  
Sandra J. Kuhlman (Ph.D. 2002). Professor, Carnegie Mellon University

### **C. ADVISORY COMMITTEE MEMBERSHIP (DEPARTMENT OF PHYSIOLOGY):**

Abigail Dragich, PhD candidate  
Anthony DeSana, graduated 2023  
Tyona Golden, MS, graduated 2019  
Shadan Hadi, MS, graduated 2018  
Cheavar Blair, Ph.D. Graduated 2017  
Anish Patel, MS, graduated 2017  
Wen Yuan, MD/PhD, graduated 2017  
Michael Grossheim, (Ph.D. candidate)  
Tyler Kirby, Ph.D., graduated 2015  
Ryan Griggs, graduated 2015

Alejandra Velez-Ortega, Graduated 2015  
Eva Bach, Ph.D., Graduated 2013  
Shawn Crump, Ph.D., Graduated 2012  
I-Fang Ling, Ph.D., Graduated 2009  
Guangfan Zhang, Ph.D., Graduated 2008  
Paula Heron, Ph.D, Graduated 2008  
Karrie Greer, MD/Ph.D Graduated 2007  
Radhika Vaishnav, Ph.D. Graduated 2007  
Emily (Helfrich) Bradshaw, Graduated 2008  
Aaron Borders, Ph.D. Graduated 2007  
Haiyan Zhu, Ph.D. Graduated 2006  
Kristine Ziembe, MD/Ph.D. Graduated 2007  
Kristina Rutkute Ph.D. Graduated 2007  
Rangaraj K. Gopalraj, Ph.D. Graduated 2008  
Kevin Kwong, Ph.D. Graduated 2003  
Adrian McCollum, Ph.D. Graduated 2003  
Shane Bruckner, Ph.D. Graduated 2002  
Jorge Quintero, Ph.D. Graduated 2001  
Eric Kilpatrick, Ph.D. Graduated 2001  
Yi Zhang, Ph.D. Graduated 1999

**D. ADVISORY COMMITTEE MEMBERSHIP (OTHER DEPARTMENTS):**

Henry Richburg, Dept. of Neuroscience, graduated 2021  
Dan Starnes, Plant and Soil Sciences, College of Agriculture, graduated 2016.  
Michael Mienaltowski, Vet. Sciences, Graduated, 2008  
James Monaghan, Biology, Graduated 2008  
Swatee Day, Clinical Sciences, Graduated, 2006  
Sihui Long, Dept. of Chemistry, Graduated, 2006  
Greg Graf, Animal Science, M.S. (Graduated 1995, Animal Science)

**E. ADVISORY COMMITTEE MEMBERSHIP (OTHER INSTITUTIONS):**

Tizeta Tadesse, Georgia State University (Ph.D. 2012)

**F. DISSERTATION EXAMINER:**

Craig Roberts, Ph.D., 2008, Neuroscience Program, Univ. of Miami (FL)  
Jessica L. MacDonald, Ph.D., 2007, Neuroscience, Univ. of British Columbia  
R. Daniel Johnson, Ph. D., 2002, Dept. of Chemistry, University of Kentucky  
J. Mark Quillan, Ph.D., 1995, Dept. of Pharmacology, Yale University

**G. UNDERGRADUATE TRAINEES:**

2022-23 Samantha Schnabel, University of Kentucky  
 2020-24 Evan Meredith, University of Kentucky  
 2019-21 Sophie J. Clark, University of Kentucky  
 2017-18 Mackenzie Nevill, University of Kentucky  
 2015-16 Austin Horstman, University of Kentucky  
 2014 Colby Hall, University of Kentucky  
 2013- Stephanie Biecker\*, University of Kentucky  
 2006-10 Adrian M. Fischl\*, Univ. of Kentucky (M.D. resident, SUNY Stony Brook)  
 2006-07 Vinay Srinivasan, University of Kentucky (M.D., UK)  
 2006-07 Chad Glasser\*, University of Kentucky (Pharmacist, UK)  
 2006 Luke Fife, Transylvania University  
 2005 Lauren Hampton, University of Kentucky (M.D., UK)  
 2002-2003 Michael Owen\*, University of Kentucky (M.D., UK)  
 2002: Laurie Meszaros, University of Kentucky  
 2002: Stephanie Erin Brock\*, Univ. of Kentucky (Ph.D., Univ. Louisville)  
 2002: Jessica Menk, University of Kentucky  
 2001- 2002 Megan Flynn, University of Kentucky  
 2001: Justin Nickel, Berea College (Postdoctoral Fellow, UK)  
 2001: Amanda G. Schell, Berea College (Nursing, Vanderbilt)  
 1999 - 2000: Michael Sparks, University of Kentucky  
 1997: Raj Mankad\*, Northwestern Univ. (M.D., UK)  
 1995: Shantie D. Harkisoon, Transylvania Univ. (M.D., UK)  
 \*, author on refereed paper.

#### H. HIGH SCHOOL TRAINEES:

2017: James Brandewie, Paul Lawrence Dunbar H.S., Lexington, KY  
 2002: Anisa Chen, Paul Lawrence Dunbar H.S., Lexington, KY  
 1995: Ryan Adkins, Tates Creek High School, Lexington, KY.  
 1993: Joshua P. Rising, Choate Academy, Wallingford, Connecticut

### NATIONAL and INTERNATIONAL SERVICE:

#### A. Elected or Appointed Positions

2020 - President, International Society of Neurogastronomy  
 2020 - Member, Advisory Board, Florida State University Chemosensory Sciences Training Program  
 Elections Committee, Association for Chemoreception Sciences  
 2020 - Member, Advisory Board, Florida State University Chemosensory Sciences Training Program

2019 -	President, International Society of Neurogastronomy
2018	President-elect, International Society of Neurogastronomy
2016 - 2020	Program Committee, International Society of Neurogastronomy
2014 - 17	Co-Chair, Long Range Planning Committee, Association for Chemoreception Sciences
2016	AMC Search Committee, Association for Chemoreception Sciences
2015	Founding Members Committee, International Society of Neurogastronomy
2013 - 14	Senior Advisor, Association for Chemoreception Sciences
2011 - 13	Website Advisory Group, Society for Neuroscience (ad hoc)
2011	President, Association for Chemoreception Sciences
2010	President-elect, Association for Chemoreception Sciences
2010 - 14	Executive Committee, Association for Chemoreception Sciences
2010	Chair, Awards Committee, Association for Chemoreception Sciences
2009 - 11	Elections Committee, Association for Chemoreception Sciences
2007 - 10	Long Range Planning Committee, Association for Chemoreception Sciences
2007 - 08	Membership Enhancement and Planning Survey Committee, Society for Neuroscience (ad hoc)
2006 - 08	Chairman, Membership and Chapters Committee, Society for Neuroscience
2005 - 08	Government and Public Affairs Committee, Society for Neuroscience (ex officio)
2005	Chairman, Chapters Committee, Society for Neuroscience
2004	Program Chair, 26th meeting of the Association for Chemoreception Sciences
2003 - 05	Chapters Committee, Society for Neuroscience
2003 - 05	Program Committee, the Association for Chemoreception Sciences
2003 - 04	Executive Committee, Association for Chemoreception Sciences
2003 - 05	Program Committee, CNS section, American Physiological Society

### **B. Editorial Boards**

2001 - 2007	<i>Chemical Senses</i>
2001 - 2003	<i>Physiological Genomics</i>

### **C. Editorships**

2008 - present	Executive Editor, <i>Chemical Senses</i>
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#### **D. Grant Review Panels**

2/24 Reviewer, NIDCD CDRC Panel  
6/23 Reviewer, NIH ZRG1 ICN-S 02 M, Member Conflicts Panel  
2/21 Reviewer, NIDCD IRG/SRG ZDC1 SRB-R (38) Panel  
2/19 Reviewer, Chemosensory Systems Panel  
2/19 Reviewer, Chemosensory Systems Panel  
12/18 Reviewer, Common Fund DP5 panel  
2/18 Reviewer, NIDCD 2018/05 ZDC1 SRB-Y (53) Panel  
6/17 Reviewer, NIDCD SEP/SRG 2017/10 ZDC1 SRB-Y (58) Panel  
07/16 Chairman, NIDCD SEP/SRG 2016/01 ZDC1 SRB-X (61) Panel  
02/16 Chairman, NIDCD SEP/SRG 2016/01 ZDC1 SRB-Y (56) Panel  
10/15 Chairman, NIDCD SEP/SRG 2016/01 ZDC1 SRB-Y (53) Panel  
1/15 *Ad hoc* reviewer, National Science Foundation  
3/14 Chairman, NIH ZRG1 BST-M (50) R Panel  
2/14 Reviewer, NIH ZRG1 IFCN-B (02) M Panel  
10/13 Chairman, NIDCD ZDC1 SRB-Y55 Panel  
09/11 Reviewer, Molecular Neurogenetics Panel  
02/11 Reviewer, ZDC1 SRB-Q 67 Panel  
10/10 Reviewer, ZDC1 SRB-Q 65 Panel  
05/10 Reviewer, ZRG1 BDCN-A 55R Panel  
01/10 Chairman, SRG 2010/05 ZDC1 SRB-Q (69) Panel  
06/09 Reviewer, NIDCD CDRC Panel  
03/09 Reviewer, NIDCD ZDC1 SRB Q62 Panel  
09/08 Reviewer, NIH Molecular Neuropharmacology and Signaling Panel  
02/08 Reviewer, NIH ZRG1 IFCN-K (02) M Member Conflict Panel  
06/07 Reviewer, NIH Molecular Neuropharmacology and Signaling Panel  
03/07 Reviewer, ZRG1 IFCN-F (03) (M) Member Conflict Panel  
11/06 Reviewer, NIH ZRG1 IFCN-K (02) Special Emphases Panel  
10/06 Reviewer, NIH Molecular Neuropharmacology and Signaling Panel  
6/02 – 6/06 Member, NIH SCS (formerly IFCN-4) panel  
5/06 *Ad hoc* reviewer, Canadian Institutes of Health Research  
04/05 Reviewer, NINDS PPG Special Emphases Panel  
11/03 Reviewer NIDCD ZDC1 SRB-0 (28) Special Emphases Panel  
2/00 - 2/02 Temporary Member, NIH IFCN-4 panel  
11/01 Reviewer NIDCD ZDC1 SRB-0 (28) Special Emphases Panel  
10/01 *Ad hoc* reviewer, NIDCD CDRC panel  
06/01 *Ad hoc* reviewer, NIDCD CDRC panel  
08/00 Reviewer, NIDCD ZDC1 SRB-0 (26) Special Emphases Panel  
07/00 Reviewer, NIMH ZMH1 BRB-P (02) Study Section



03/00 *Ad hoc* reviewer, National Science Foundation  
01/99 Reviewer, NIH IFCN-6 SBIR panel  
05/98 Reviewer, NIH Hearing Research Special Emphases Panel  
04/97 *Ad hoc* reviewer, National Science Foundation  
02/96 *Ad hoc* reviewer, NIH CMS study section  
10/95 *Ad hoc* reviewer, National Science Foundation  
04/95 *Ad hoc* reviewer, National Science Foundation  
03/92 Reviewer, Grass Foundation Technical Review Committee

### **E. Consulting**

2008 American Association for the Advancement of Science Research Competitiveness Program Expert Panel. Arkansas INBRE site review.

2006 American Association for the Advancement of Science Research Competitiveness Program Expert Panel. Oklahoma INBRE site review.

2003 American Association for the Advancement of Science Research Competitiveness Program Expert Panel. Oklahoma Biomedical Research Infrastructure Network site review.

2001 American Association for the Advancement of Science Research Competitiveness Program Expert Panel. University of Vermont, Vermont Genetics Network site review.

### **G. Organization of Symposia and Conferences**

09/23 "Global Symposium on Ketogenic Therapies", San Diego, CA

04/22 "International Society for Neurogastronomy meeting", Bonita Springs, FL

07/21 "International Society for Neurogastronomy meeting", virtual

06/20 "International Society for Neurogastronomy meeting", Portland, OR.  
(canceled)

06/19 "International Society for Neurogastronomy meeting", New Orleans, LA.

03/18 "International Society for Neurogastronomy meeting", Lexington, KY.

- 12/16 "International Society for Neurogastronomy meeting", Lexington, KY.
- 11/15 "International Society for Neurogastronomy meeting", Lexington, KY.
- 02/06 "Neurogenomics", University of Kentucky, Lexington, KY.
- 04/05 "Chemosensory Receptors", AChemS meeting, Sarasota, FL. Peter Mombaerts and Leslie Vosshall, co-organizers.
- 12/04 "Neurogenomics", University of Kentucky, Lexington, KY.
- 04/04 "Chemosensory Receptors", Sarasota, FL. AChemS satellite conference. Peter Mombaerts, co-organizer.
- 04/04 "Receptors: Choosing Genes, Targeting Axons and Detecting Chemicals" at the Association for Chemoreception Sciences meeting, Sarasota, FL. Leslie Vosshall, co-organizer.
- 12/03 "Neurogenomics", University of Kentucky, Lexington, KY.
- 04/03 "Hanging by a Thread, Protein Scaffolds and Cell Signaling" at the Association for Chemoreception Sciences meeting, Sarasota, FL. Judith Van Houten, co-organizer.
- 12/02 "Aquatic and Invertebrate Systems" at the Australian Association for ChemoSensory Science meeting, Heron Island, Queensland.
- 12/01 "Neurogenomics", University of Kentucky, Lexington, KY.
- 04/01 "Functional Genomics in Neural Systems" at the Association for Chemoreception Sciences meeting, Sarasota, FL.

## **UNIVERSITY SERVICE:**

### **A. DEPARTMENT OF PHYSIOLOGY:**

- 04/18 – Departmental Education Committee
- 07/08 – 06/14 Departmental Research Committee
- 09/08 - 06/09 Departmental Review Committee
- 07/99 - 06/03 Director of Graduate Studies

01/94 - 05/99	Faculty Search Committee
01/96 - 06/09	Graduate Affairs Committee
01/95 - 07/99	Computing Resources Coordinator
06/96 - 05/97	Seminar Program Coordinator

**B. MEDICAL CENTER:**

12/22 -	IBS Admissions Committee
02/23	COM NRPA grant reviewer
06/13 - 12/14	Physiology Department Chair Search Committee
08/08 - 07/12	Chairman, COM Grant Officers advisory committee
08/01 - 05/02	Physiology Department Chair Search Committee
08/00 - 06/03	Integrated Biomedical Sciences Graduate Committee
07/99 - 06/02	Research and Graduate Education Committee
06/99 - 07/00	Integrated Biomedical Sciences Development Committee
01/97 - 06/02	Molecular Structure and Analysis Facility Users Committee

**C. UNIVERSITY:**

2014 - 2017	Graduate Council, The Graduate School
2013 - 2016	Senate Advisory Committee on Faculty Code
2012	Sturgill Faculty Award selection committee, The Graduate School
2011	The Graduate School, external review committee
2010	College of Health Sciences, Repro. Sci. transition committee
2010	College of Health Sciences, CLS Dept. 6 year review
01/09 - 12/11	University Research Professorship Selection Committee
07/08 - 06/10	Health Care Colleges Council
01/01 - present	DNA Array Core Facility Advisory Committee
07/99 - 06/02	University Appeals Board
08/97 - 99	Behavioral Ecology and Comparative Neurobiology (BEACON) Program Recruiting Committee
01/96 - 01/00	Integrated Neuroscience Program Executive Committee
07/96 - 08/98	UK Chapter of the Society for Neuroscience, Member-at-Large
05/97	UK Graduate Student Research Day Lecture, "Essential Elements of Grant Proposals" (with Dr. Wendy Katz)

**COMMUNITY SERVICE:**

2010 - 2013	Chairman, Eagle Court of Honor Committee, Boy Scouts of America, Troop 1784.
2009	"Neuroscience in 50 minutes", review session for the AP Biology class Woodford County High School

- 2005 Brain Awareness Week workshop, "Fluorescent mice", Woodford County Middle School
- 2005 "Sense of Smell" State of Affairs, public radio, WPFL, Louisville.
- 2002 Career Day, Huntertown Elementary, Woodford County
- 2000 Brain Awareness Week workshop, Northside Elementary, Woodford County
- 1997 - 1998 UK coordinator for Brain Awareness Week
- 1995 Workshop instructor, "Grant Writing for Middle and High School teachers", UK Outreach Center.
- 1994 Kentucky Science Teachers Association meeting lecture "Recombinant DNA Technology"

### **INVITED PRESENTATIONS:**

- 09/23 International Society of Neurogastronomy and International Neurological Ketogenic Society Joint Symposium, San Diego, CA. "The Neurogastronomy of Flavor"
- 06/23 Monell Chemical Senses Center, Philadelphia, PA; "What is an Odor Quality?"
- 04/23 The Neurophysiological Basis of Olfactory Coding, Gainesville, FL; "What is an Odor Quality?"
- 04/23 Association for Chemoreception Sciences annual meeting, Bonita Springs, FL; "Neurogastronomy and the Odorant Receptors"
- 04/22 International Society of Neurogastronomy Symposium, Bonita Springs, FL. "Introduction to the Neurogastronomy of Flavor"
- 10/19 Bluegrass Academy of Nutrition and Dietetics, Lexington, KY. "Neurogastronomy of Flavor"
- 09/18 European ChemoReception Organization meeting, Wurzburg, Germany. "Pharmacology of Odorant Receptor Interactions *In Vivo*"
- 06/18 Leibniz-Institute for Food Systems Biology at the Technical University of Munich, Freising, Germany. "Modifying Perception via the Odorant Receptors"
- 09/17 Sensorium 2017, University of Cincinnati. "Agonism and Antagonism of Odorant Receptor Proteins in Live, Freely-behaving Mice "

- 09/17 Chemosensory Training Program, Florida State University. "Odorant Receptors: Expression and Function"
- 09/17 Florida State University Postdoctoral Association. "Creating Opportunities for Others is the Essence of Leadership and Management"
- 10/16 Dept. of Anatomical Sciences and Neurobiology, University of Louisville. "Odorant Receptors and the Future of Flavor Development"
- 11/15 International Society of Neurogastronomy meeting, Lexington, KY "Receptor Identification: The Future of Flavor Development"
- 08/15 Temple University, Philadelphia, PA "Odorant receptors, the raison d'être of a continuously regenerating neural tissue"
- 8/13 European ChemoReception Organization meeting, Leuven, Belgium, "Control of OR gene expression by Emx2 and Lhx2"
- 8/12 University of Pennsylvania, Department of Neuroscience, "A cellular perspective on gene expression, activity dependence and adult neurogenesis in the olfactory epithelium"
- 10/11 Frankfurt Olfaction Minisymposium, Max Planck Institute of Biophysics, Frankfurt, Germany, "Olfactory Genomics"
- 03/10 Florida Atlantic University, Molecular Biology and Biophysics Program, "Molecular Systems Biology of Neuronal Maturity and Immaturity"
- 12/09 Research Collaborations in Medicine and Engineering, University of Kentucky, "Validated computational mapping of gene expression to specific cell types"
- 04/08 University of Miami, Dept. of Physiology and Biophysics, "Genomics of Neuronal Maturation: The Differentiation of Olfactory Sensory Neurons"
- 05/06 University of Kentucky, KBRIN Program, "Olfactory Genomics"
- 03/06 Georgia State University, Dept. of Biology, "Olfactory Genomics"
- 01/06 Society for Integrative and Comparative Biology Symposium on Genomic and Proteomic Approaches in Crustacean Biology, "Lobster Olfactory Genomics"

- 10/05 Monell Center for Chemical Senses, "Olfactory Genomics"
- 04/05 Centre College, Biochemistry and Molecular Biology Program. "Olfactory Genomics"
- 01/05 Indiana University School of Medicine, Department of Pharmacology and Toxicology. "Olfactory Genomics"
- 12/03 Northwestern University, Institute for Neuroscience. "The Privileged Lives of Olfactory Receptors"
- 12/02 Australasian Association for Chemosensory Science, Heron Island, Queensland. "Olfactory receptor trafficking and olfactory-specific genes"
- 12/02 Australasian Association for Chemosensory Science, Heron Island, Queensland. "Olfactory specific genes mark specific cell types in mature and proliferation zones of the lobster olfactory organ"
- 11/02 Department of Physiology, Lexington, KY. "Olfactory receptor trafficking and olfactory-specific transcripts"
- 06/02 Kentucky Spinal Cord and Head Injury Research Symposium, Lexington, KY. "Data Mining in SClgenes, the database of spinal cord injury-related genes"
- 02/02 Department of Molecular and Biomedical Pharmacology, University of Kentucky. "Olfactory Receptors and Other Olfactory-specific Genes"
- 09/01 Department of Anatomy and Neurobiology, University of Maryland School of Medicine. "Olfactory Receptors and Other Olfactory-specific Genes"
- 06/01 Kentucky Spinal Cord Injury Research Center, University of Louisville School of Medicine. "High-throughput Analysis of mRNA Abundance"
- 04/01 Symposium on "Functional Genomics in Neural Systems" at the Association for Chemoreception Sciences meeting, Sarasota, Fl. "High throughput Analysis of mRNA Abundance"

- 03/01 Banbury Conference, 'Molecular Biology of Chemosensory Receptors: The First Decade'. Cold Spring Harbor, NY. "Intracellular Trafficking of Olfactory Receptors"
- 02/01 Senomyx Corporation, San Diego, CA. "Intracellular Trafficking of Olfactory Receptors"
- 02/01 Genomics Lunch Bunch, College of Agriculture, University of Kentucky. "Techniques for High-throughput Analysis of mRNA Abundance"
- 12/00 Center for Neuroscience, Mind & Behavior and Department of Biological Sciences, Bowling Green State University, Bowling Green, OH. "Olfactory-Enriched mRNAs and the Molecular Physiology of Olfactory Coding"
- 11/00 Division of Nephrology, Bone, and Mineral Metabolism, Department of Internal Medicine, University of Kentucky. "Techniques for High-throughput Analysis of mRNA Abundance"
- 06/00 Kentucky Spinal Cord and Head Injury Research Trust Symposium, Lexington, KY. "Gene expression changes in dorsal root ganglion neurons following inhibition of growth cone migration by proteoglycans"
- 06/00 Kentucky Spinal Cord and Head Injury Research Trust Symposium, Lexington, KY. "Spinal Cord Injury-Related Gene Database"
- 04/00 The Takasago Award Lecture, Association for Chemoreception Sciences Meeting, Sarasota, FL. "Receptors, Dual Transduction Pathways, and Olfactory-specific Genes"
- 03/00 Integrated Graduate Education and Research Training Program, The University of Kentucky. "Molecular Biotechnology and Olfactory Transduction"
- 07/99 Frontiers in Crustacean Neurobiology meeting; Hamburg, Germany. "Molecular physiology of signal transduction in the lobster olfactory system."
- 07/99 Frontiers in Crustacean Neurobiology meeting; Hamburg, Germany. "Molecular neurobiology and biotechnology: Unique opportunities in the crustacean nervous system."

- 06/99 Frontiers in Spinal Cord Regeneration, the Kentucky Spinal Cord and Head Injury Research Trust Symposium, Louisville, KY. "Gene expression changes during inhibition of growth cone migration by proteoglycans and myelin."
- 03/99 Dept. of Biology and the Center for Neural Communication and Computation, Georgia State University. "Transduction, trafficking, and biotechnophilia in the olfactory system."
- 12/98 School of Biological Sciences, University of Kentucky. "Molecular regulation of information processing in the lobster olfactory system."
- 09/98 Dept. of Physiology, University of Kentucky. "Ex osmiophilia, lux. Olfactory receptors shine at the cell surface"
- 05/98 Dept. of Neuroscience, Tufts University. "Molecular physiology of olfactory receptors and olfactory transduction."
- 02/97 Dept. of Anatomy and Neurobiology, University of Kentucky. "Molecular information processing in the olfactory system."
- 06/96 Gordon Research Conference on the Chemical Senses. "Functional expression of olfactory-adrenergic receptor chimeras and intracellular retention of heterologously expressed olfactory receptors."
- 04/95 Dept. of Anatomical Sciences and Neurobiology, University of Louisville. "Functional expression of olfactory receptor chimeras in a video assay system."
- 03/95 Neuroscience Program, University of Cincinnati. "Chimeric olfactory receptors assayed by imaging of pigment movement in melanophores."
- 12/94 Dept. of Cell Biology and Anatomy, Louisiana State University School of Medicine. "Expression of olfactory receptor chimeras in a novel optical assay system."
- 11/94 Dept. of Surgery, University of Kentucky. "Expression of olfactory receptor chimeras in a novel optical assay system."
- 04/93 Dept. of Biology, University of South Florida. "Functional expression of receptors in a novel digital optical assay."



- 03/93 Dept. of Physiology, University of Kentucky. Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors.
- 03/93 Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors. Dept. of Biology, Wayne State University.
- 02/93 Dept. of Pharmacology and Physiological Sciences, Saint Louis University. Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors.
- 02/93 Dept. of Biology, Notre Dame University. Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors.
- 02/93 Dept. of Physiology, University of North Carolina. Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors.
- 02/93 Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors. Dept. of Biology, University of Illinois, Chicago.
- 01/93 Dept. of Anatomy and Neurobiology, University of Tennessee College of Medicine. Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors.
- 01/93 Dept. of Physiology, University of Massachusetts College of Medicine. Signal integration in olfactory receptor neurons and the functional expression of recombinant receptors.
- 12/89 Dept. of Biochemistry, Brandeis University. Hyperpolarizing receptor potentials and ion channels in lobster olfactory receptor neurons.
- 12/89 Dept. of Neurobiology, Harvard University. Hyperpolarizing receptor potentials and ion channels in lobster olfactory receptor neurons.

**OTHER MEETING PRESENTATIONS (past 6 years):**

03/23 American Society for Neurochemistry, Lexington, KY; "Blocking Perception of Cigarette Odors to Improve Smoking Cessation." Meredith, E, SL Schnable, and TS McClintock.

04/22 Association for Chemoreception Sciences, Bonita Springs, FL; "Human APOE- $\epsilon$ 3 and APOE- $\epsilon$ 4 alleles have differential effects on mouse olfactory epithelium." Kahn, N, Y Alimova, SJ Clark, H Vekaria, AE Walsh, HC Williams, GS Hawk, P Sullivan, LA Johnson, and TS McClintock.

08/20 International Society for Olfaction and Taste, "Cigarette Smoke: Key Odorants and Responsive Odorant Receptors." McClintock, TS, N Kahn, Y Alimova, M. Aulisio, DY Han, and PB Breheny

04/18 Association for Chemoreception Sciences, Bonita Springs, FL; "Interactions of Odorants at Odorant Receptors *in vivo*. Correlate with Perception of Odor Mixtures" TS McClintock, C De March, T. Sengoku, WB Titlow, P Breheny and H Matsunami.

03/18 International Society of Neurogastronomy; "Odor Interactions at Odorant Receptors *in vivo*." T. Sengoku, WB Titlow, P Breheny and TS McClintock.