

**Curriculum Vita**  
(June 2016)

**DONALD ALAN WILSON**

Senior Research Scientist and Deputy Director of the Emotional Brain Institute at the Nathan Kline Institute  
*and*  
Professor of Child & Adolescent Psychiatry and Physiology & Neuroscience, New York University Langone  
School of Medicine

**CONTACT INFORMATION**

- Address: Emotional Brain Institute  
The Nathan S. Kline Institute for Psychiatric Research  
140 Old Orangeburg Road, Orangeburg, NY 10962  
*or*  
Department of Child and Adolescent Psychiatry  
New York University Langone School of Medicine  
1 Park Avenue, 7<sup>th</sup> Floor, New York, NY 10016
- Telephone: 845-398-2178 (NKI) or 646-754-5159 (NYU)
- FAX: 845-398-2193
- E-mail : [dwilson@nki.rfmh.org](mailto:dwilson@nki.rfmh.org) or [Donald.wilson@nyumc.org](mailto:Donald.wilson@nyumc.org)
- WWW: <http://faculty-staff.ou.edu/W/Donald.A.Wilson-1/home.html> or  
<http://www.med.nyu.edu/people/wilsod05.html>

**EDUCATIONAL BACKGROUND**

- Postdoctoral Researcher, 1983-1988,  
Center for the Neurobiology of Learning and Memory, and  
Department of Psychobiology, School of Biological Sciences  
University of California at Irvine
- Doctor of Philosophy, 1983, Physiological Psychology  
McMaster University, Hamilton, Ontario, Canada
- Bachelor of Science, 1979, (Summa cum laude), Psychology  
University of Nebraska at Omaha

**ACADEMIC POSITIONS**

- Nathan S. Kline Institute for Psychiatric Research  
Senior Research Scientist, 2008-*present*  
Deputy Director, Emotional Brain Institute, 2013-*present*
- New York University School of Medicine  
Department of Child and Adolescent Psychiatry  
Department of Neuroscience and Physiology  
Research Professor, 2008-2013  
Professor with tenure, 2013-*present*  
NYU Center of Excellence on Brain Aging  
Member, 2009 - *present*
- New York University  
Center for Neural Science  
Associated Professor, 2010-*present*
- City University of New York  
Cognitive Neuroscience Program, City College of New York  
Professor, Graduate Faculty, 2008 - *present*
- University of Oklahoma  
Department of Zoology/Biology  
Affiliated Professor of Biology, 2010-*present*  
Professor of Zoology with tenure, 2000-2010  
Associate Professor of Zoology with tenure 1994-2000  
Assistant Professor of Zoology, 1990 – 1994  
Neurobehavioral Institute, 2003-2010  
Co-Director  
Department of Psychology  
Assistant Professor of Psychology, 1989 – 1994

- University of Oklahoma Health Sciences Center  
Oklahoma Center for Neuroscience, *and* Department of Psychiatry and Behavioral Sciences  
Adjunct Faculty, 1991 - 2008
- University of California at Irvine  
Department of Psychobiology, School of Biological Sciences  
Assistant Researcher (Research Assistant Professor), 1988-1989

#### **VISITING POSITIONS**

- Visiting Scientist, Laboratoire Physiologie Neurosensorielle,  
Universite Claude Bernard, Lyon, FRANCE, 1995
- Visiting Researcher, Department of Physiology,  
Kochi Medical School, Kochi, JAPAN, 2004
- Visiting Scholar, Department of Psychology,  
Macquarie University, Sydney, AUSTRALIA, 2005
- Visiting Scientist, Olfaction Team, CNRS, Lyon, FRANCE, 2013
- Visiting Scientist, Pasteur Institute, Paris, FRANCE, 2015

#### **HONORS and AWARDS**

- Outstanding Psychology Undergraduate, University of Nebraska, Omaha, 1979
- Graduated *summa cum laude*, University of Nebraska, Omaha, 1979
- Max Mozell Award for Outstanding Achievement in the Chemical Senses, AChemS, 2014  
<http://www.achems.org/i4a/pages/index.cfm?pageid=3700>

#### **CONSULTING POSITIONS**

- Givaudan, Neuroscience Unit, 2013 - *present*

#### **TEACHING EXPERIENCE**

- Introduction to Neuroscience, upper-level zoology majors and graduate, OU
- Neurobiology of Memory, upper-level zoology/psychology majors and graduate, OU
- Sensory Functions, upper-level zoology/psychology majors, OU
- Human Physiology, pre-health majors, OU
- Physiological Psychology, upper-level psychology majors and graduate, OU
- Chemical Senses, graduate Neuroscience program, NYU/NYUMC
- Chemical Senses/Limbic System, second year medical students, NYUMC

#### **PROFESSIONAL MEMBERSHIPS**

- Association for Chemoreception Sciences
- International Society for Developmental Psychobiology
- Society for Neuroscience

#### **PROFESSIONAL SERVICE**

##### Departmental (major appointments and elected posts)

- Departmental Appointments and Promotions Committee, Dept. Child & Adolescent Psych., 2014-*present*
- Assistant Chair, Department of Zoology, 2003-2008
- ad hoc Undergraduate Curriculum Committee (Chair), 2006-2007
- Strategic Planning Committee, Department of Zoology, (Chair), 2005
- Committee A (elected Executive committee), Department of Zoology, 1997-1999, 2007-2008
- Graduate admissions committee,  
Department of Psychology, 1989-1993 (Chair, 1991-1993)  
Department of Zoology, 1996-1998, 1999-2000
- Faculty search committee  
Department of Zoology, 1996-2001, 2006 (Chair of multiple searches)

##### University/Institute

- Deputy Director of the Emotional Brain Institute, Nathan Kline Institute, 2013-*present*
- Institutional BioSafety Committee, Nathan Kline Institute, 2013-*present*
- Executive Committee, Nathan Kline Institute, 2013-*present*
- Graduate Selections Interviewer, Sackler Institute, NYUMC, 2010-*present*
- Animal Support Advisory Committee, Nathan Kline Institute, 2010-2012
- Advisory committee, Oklahoma Center for Neurosciences, 1999-2006
- Mentor, McNair Scholars Program, 2002-2003
- University of Oklahoma Institutional Animal Care and Use Committee, 1999-2008

- Executive committee, Oklahoma Center for Neurosciences, 1990-1999
- Curriculum committee, Oklahoma Center for Neurosciences, 1991-1995
- University of Oklahoma Research Council, 1998-2001, elected Chair, 2000-2001

#### National/International

- Member, NIDCD Strategic Plan Working Group, 2016-*present*
- Member, NIDCD Advisory Council, 2015-*present*
- *ad hoc* member, NIA-N study section, National Institutes of Health, 2013
- Member, NIA Division of Neuroscience Program Review Committee, 2012-2013
- President-elect, President and Past-President, Association for Chemoreception Sciences, 2009-2012
- Program Chair for Association for Chemoreception Sciences 2009 annual meeting
- Membership chair, Association for Chemoreception Sciences, 2004-2006
- Program committee member, Association for Chemoreception Sciences meeting, 2004
- Board member, International Society for Developmental Psychobiology, 2003-2005
- Member, IFCN4 study section, National Institutes of Health, 2000-2003
- *ad hoc* Member, IFCN4/SCS study section, National Institutes of Health, 1998-2000, 2003
- Special Emphasis Panel Member, National Institutes of Health, 2004-2014
  - NIMH, Autism STAART Centers, 2002
  - NIDCD, Fellowship Program, 1998
  - NIDCD, Small Grants Program, 1996, 2006-2008 (Study section chair)
- NIH Neuroscience Blueprint, member Olfaction consensus terminology workshop, 2007
- Organizer, Symposium: *Cortical information processing in the olfactory system*, Association for Chemoreception Sciences annual meeting, Sarasota, FL, April 2000
- Organizer, Symposium: *Sensory gating: From genes to behavior* Current Issues in Developmental Psychobiology Winter Conference, Costa Rica, January 2007
- Co-organizer, Symposium: *Olfaction beyond the olfactory bulb: From perception to memory* Association for Chemoreception Sciences annual meeting, Sarasota, FL, April 2007
- Grass Foundation Traveling lecturer, Santiago, Chile chapter, September 2006
- *ad hoc* reviewer, National Science Foundation, various international foundations, multiple journals

#### **EDITORIAL ACTIVITIES**

- Executive Editor, *Chemical Senses*, 2015-*present*
- Associate Editor, *Frontiers in Neural Circuits*, 2015-*present*
- Associate Editor, *Chemosensory Perception*, 2014-*present*
- Special topic co-editor, Olfactory memory networks: from emotional learning to social behaviors, Regina M. Sullivan, Donald A. Wilson, Anne-Marie Mouly, and Nadine Ravel, in *Frontiers in Behavioral Neuroscience*, 2015
- Special topic co-editor, Mechanisms of Habituation, Susanne Schmid, Catharine H. Rankin and Donald A. Wilson, in *Frontiers in Integrative Neuroscience*, 2014
- Associate Editor, *Frontiers in Behavioral Neuroscience*, 2010-*present*
- Review Editorial Board, *Frontiers in Integrative Neuroscience*, 2009-*present*
- Editorial Board, *Neural Plasticity*, 2006-2015
- Editorial Advisory Board, *Encyclopedia of Perception*, 2006-2009

#### **OUTREACH ACTIVITIES** (*examples*)

- University of Oklahoma Speakers Service, various talks to lay audiences, 1990-1999
- *Scientific American* online, Ask the experts: How do we manage to remember smells despite the fact that each olfactory sensory neuron only survives for about 60 days and is then replaced by a new cell?, October 2007, [http://www.sciam.com/askexpert\\_question.cfm?chanID=sa005&articleID=C8600288-E7F2-99DF-34682C4F8E9B8D81&topic\\_id=3](http://www.sciam.com/askexpert_question.cfm?chanID=sa005&articleID=C8600288-E7F2-99DF-34682C4F8E9B8D81&topic_id=3)
- Science Friday, National Public Radio, The Science of Smell, August 27, 2010, <http://www.sciencefriday.com/segment/08/27/2010/the-science-of-smell.html>
- Doctor Radio, Smell and disease. Sirius XM, November 29, 2011.
- Alzheimer's Disease Research Update: What to expect in 2013. What can the sense of smell tell us about aging and disease?. New York University Langone School of Medicine, April 10, 2013.
- BrainWave: The Spice Master. Rubin Museum of Art. New York, New York, April 10, 2013.
- TEDx Salon, Learning to Smell, Leuven, BELGIUM, August 26, 2013 <http://www.youtube.com/watch?v=NgZpDolr148&list=PLsRNoUx8w3rMG1TrfSHqfhUF0sZGW6RGV>

## RESEARCH INTERESTS

- Perceptual learning, neurobiology of memory, ontogeny of memory, emotion
- Olfactory system sensory physiology, development and plasticity
- Neurodegenerative and developmental disorders including Alzheimer's Disease and FAS
- Cognitive neuroscience/behavioral neuroscience

## RESEARCH FUNDING

### Ongoing

National Institutes of Health, "Cortical processing of olfactory stimuli", RO1-DC03906, 12/1/98-11/30/02, \$420,427 total award (Role on project: PI)

Competing renewal 12/1/02-11/30/07, \$852,351 total renewal award

Competing renewal 12/1/07-11/30/13, \$1,554,349 total renewal award

Competing renewal 03/10/13-02/28/18, \$1,640,238 total renewal award

National Institutes of Mental Health "Sensitive Period for Neurobehavioral Development of Social Behavior", R01-MH091451, 7/1/2010-6/30/2016, \$1,920,000 total award (Role on Project: subcontract PI; PI: Regina Sullivan).

National Institutes of Health "Modulation of Olfactory Sensory Function by Amyloid-beta", R01-AG037693, 05/01/11-04/30/17, \$1,619,500 total award (Multiple PI award with Efrat Levy and Ralph Nixon).

National Institutes of Health "Long-lasting consequences of early ethanol on network activity during sleep", R01-AA023181, 08/10/2014-06/30/2019, \$1,612,000 total award (Multiple PI award with Mariko Saito).

National Institutes of Health, "Maternal influence over prefrontal cortex and transition to independence", R37-HD083217, 03/13/15-02/28/20, \$1,920,000 total award (Role on Project: subcontract PI; PI: Regina Sullivan)

### Completed

National Science Foundation, "Olfactory system plasticity", BNS 8606786, 9/1/86 - 8/31/89, \$169,087 total award

National Science Foundation, "Neural plasticity induced by early olfactory learning", BNS 8819189, 9/1/89 - 8/31/92, \$134,108 total award

Research Education for Undergraduates Supplement to BNS881989, 9/1/90-8/31/91, \$2,000 total award

National Institutes of Health, "Functional consequences of early olfactory deprivation", (Regina M. Sullivan, co-P.I.) RO1-DC00866, 4/1/91-9/30/94, \$159,253 total award

Minority supplement to RO1-DC00866 (Regina M. Sullivan, co-P.I.), 7/1/92 - 3/31/94, \$27,213 total award

National Science Foundation, "Neural plasticity induced by early olfactory learning", BNS 9209929, 9/1/92 - 8/31/94, \$71,375 total award

National Institutes of Health, "Neural plasticity and early olfactory learning", RO1-DC01674, 9/1/93-8/31/97, \$204,760 total award

National Science Foundation, "Functional consequences of olfactory deprivation", IBN9808149, 1/15/99-12/31/02, \$97,685 total award

Research Education for Undergraduates Supplement to IBN9808149, 1/15/01-12/31/02, \$4,250 total award

Oklahoma Center for the Advancement of Science and Technology, "Neurobiology of perceptual learning", HR02-136R, 7/1/02-6/30/05, \$133,086

Brain Science Foundation, Japan. Collaborative research with Hideto Kaba, Kochi, Japan, 4/1/04-8/1/04, 250,000 Yen

National Science Foundation, "Computational, physiological and behavioral analysis of cortical adaptation in olfaction", CNS 0338981, 8/15/04-7/31/08 (Christiane Linster, Cornell University, P.I.), \$402,895 total award.

National Institutes of Health, "Ensemble coding in olfactory cortex", R21DC007112, 7/1/05-6/30/08, \$394,211 total award.

National Alliance for Autism Research/Autism Speaks, "Functional consequences of sensory gating deficits", 7/1/05-3/30/08, \$117,135 total award.

New York University Center of Excellence on Brain Aging Seed Grant, "Synaptic Adaptor Protein Regulation of Alzheimer's Disease Pathology", 9/01/10-08/31/11, \$60,000 total award (Role on Project: PI, Multiple PI award with Efrat Levy and Paul Matthews).

National Institutes of Health, "Ensemble coding in olfactory cortex", R01-DC008982, 7/1/08-6/30/14, \$1,868,595 total award (Multiple PI award with Robert Rennaker, University of Texas at Dallas).  
Administrative (ARRA) supplement, 2009, \$42,000 total award

National Institutes of Health "Ontogeny of Olfactory Hedonic Encoding", R01-DC009910, 8/1/2009-7/31/2015, \$1,810,000 total award (Role on Project: subcontract PI; PI: Regina Sullivan).

**ORIGINAL RESEARCH (peer reviewed) (\*undergraduate authors)**

1. Wilson, D.A. and Racine, R.J. The postnatal development of post-activation potentiation in the rat neocortex. *Developmental Brain Research*, 1983, **7**: 271-276.
2. Wilson, D.A. A comparison of the postnatal development of post-activation potentiation in the neocortex and dentate gyrus of the rat. *Developmental Brain Research*, 1984, **16**: 61-68.
3. Wilson, D.A. and Racine, R.J. Barbiturate-enhanced paired-pulse depression in neonatal rats. *Neuroscience Letters*, 1985, **56**: 101-106.
4. Wilson, D.A., Sullivan, R.M. and Leon, M. Odor familiarity alters mitral cell response in the olfactory bulb of neonatal rats. *Developmental Brain Research*, 1985, **22**: 314-317.
5. Wilson, D.A. and Leon, M. Early appearance of inhibition in the neonatal rat olfactory bulb. *Developmental Brain Research*, 1986, **26**: 289-292.
6. Racine, R.J., Wilson, D.A., \*Gingell, R. and Sunderland, D. Long-term potentiation in the interpositus and vestibular nuclei in the rat. *Experimental Brain Research*, 1986, **63**: 158-162.
7. Wilson, D.A., Willner, J. Kurz, E. and Nadel, L. Early handling increases hippocampal long-term potentiation in young rats. *Behavioral Brain Research*, 1986, **21**: 223-227.
8. Wilson, D.A. and Leon, M. Abrupt decrease in synaptic inhibition in the postnatal rat olfactory bulb. *Developmental Brain Research*, 1987, **33**: 134-138.
9. Wilson, D.A. and Leon, M. Evidence of lateral synaptic interactions in olfactory bulb output cell responses to odors. *Brain Research*, 1987, **417**: 175-180.
10. Wilson, D.A., Sullivan, R.M. and Leon, M. Single-unit analysis of postnatal olfactory learning: Modified olfactory bulb output response patterns to learned attractive odors. *Journal of Neuroscience*, 1987, **7**: 3154-3162.
11. Sullivan, R.M., Wilson, D.A. and Leon, M. Physical stimulation decreases brain temperature in infant rats. *Developmental Psychobiology*, 1988, **21**: 237-250.
12. Wilson, D.A. and Leon, M. Spatial patterns of olfactory bulb single-unit responses to learned olfactory cues in young rats. *Journal of Neurophysiology*, 1988, **59**: 1770-1782.
13. Wilson, D.A. and Leon, M. Noradrenergic modulation of olfactory bulb excitability in the postnatal rat. *Developmental Brain Research*, 1988, **42**: 69-75.
14. Sullivan, R.M., Wilson, D.A., \*Kim, M.H. and Leon, M. Behavioral and neural correlates of postnatal olfactory conditioning: I. Effect of respiration on conditioned neural responses. *Physiology and Behavior*, 1988, **44**: 85-90.
15. Sullivan, R.M., Wilson, D.A. and Leon, M. Associative processes in early olfactory preference acquisition: Neural and behavioral consequences. *Psychobiology*, 1989, **17**: 29-33.
16. Sullivan, R.M., Wilson, D.A. and Leon, M. Norepinephrine and learning-induced plasticity in infant rat olfactory system. *Journal of Neuroscience*, 1989, **9**: 3998-4006.
17. Wilson, D.A. and Sullivan, R.M. Olfactory associative conditioning in infant rats with brain stimulation as reward. I. Neurobehavioral consequences. *Developmental Brain Research*, 1990, **53**: 215-221.
18. Sullivan, R.M., Wilson, D.A., \*Wong, R., \*Corrian, A. and Leon, M. Modified behavioral and olfactory bulb responses to maternal odors in preweanling rats. *Developmental Brain Research*, 1990, **53**: 243-247.
19. Wilson, D.A., Guthrie, K.M. and Leon, M. Modification of olfactory bulb synaptic inhibition by early

- unilateral olfactory deprivation. *Neuroscience Letters*, 1990 **116**: 250-256.
20. Guthrie, K.M., Wilson, D.A. and Leon, M. Unilateral olfactory deprivation modifies olfactory bulb function. *Journal of Neuroscience*, 1990, **10**: 3402-3412.
  21. Sullivan, R.M. and Wilson, D.A. Neural correlates of conditioned odor avoidance in preweanling rats. *Behavioral Neuroscience*, 1991, **105**: 85-90.
  22. Wilson, D.A. and Sullivan, R.M. Olfactory associative conditioning in infant rats with brain stimulation as reward. II. Norepinephrine mediates a specific component of the bulb response to reward. *Behavioral Neuroscience*, 1991, **105**: 843-849.
  23. Sullivan, R.M. and Wilson, D.A. The role of norepinephrine in the expression of learned olfactory neurobehavioral responses in infant rats. *Psychobiology*, 1991, **19**:308-312.
  24. Wilson, D.A. and Wood, J.G. Functional consequences of unilateral olfactory deprivation: Time course and age sensitivity. *Neuroscience*, 1992, **49**:183-192.
  25. Wilson, D.A. and Sullivan, R.M. Blockade of mitral/tufted cell habituation to odors by association with reward: A preliminary note. *Brain Research*, 1992, **594**:143-145.
  26. Sullivan, R.M., \*Zyzak, D.R., Skierkowski, P. and Wilson, D.A. The role of olfactory bulb norepinephrine in early olfactory learning. *Developmental Brain Research*, 1992, **70**:279-282.
  27. Sullivan, R.M. and Wilson, D.A. The role of the amygdala complex in early olfactory associative learning. *Behavioral Neuroscience*, 1993, **107**:254-263.
  28. Hamrick, W.D., Wilson, D.A. and Sullivan, R.M. Neural correlates of memory for odor detection conditioning in adult rats. *Neuroscience Letters*, 1993, **163**: 36-40.
  29. Racine, R.J., Wilson, D.A., Teskey, G.C., Milgram, N.W. Post-activation potentiation in the neocortex: I. Acute preparations. *Brain Research*, 1994, **637**:73-82.
  30. Racine, R.J., Teskey, G.C., Wilson, D.A., Seidlitz, E. and Milgram, N.W. Post-activation potentiation and depression in the neocortex of the rat: II. Chronic preparations. *Brain Research*, 1994, **637**:83-96.
  31. Sullivan, R.M., Wilson, D.A., \*Lemon, C. and Gerhardt, G.A. Bilateral 6-OHDA lesions of the locus coeruleus impair associative olfactory learning in newborn rats. *Brain Research*, 1994, **643**:306-309.
  32. Wilson, D.A., \*Pham, T.-C. and Sullivan, R.M. Norepinephrine and post-training memory consolidation in neonatal rats. *Behavioral Neuroscience*, 1994, **108**:1-6.
  33. Sullivan, R.M. and Wilson, D.A. Dissociation of behavioral and neural correlates of early associative learning. *Developmental Psychobiology*, 1995, **28**:213-219.
  34. Wilson, D.A. NMDA receptors mediate expression of one form of functional plasticity induced by olfactory deprivation. *Brain Research*, 1995, **677**:238-242.
  35. Wilson, D.A. and Sullivan, R.M. The D2 antagonist spiperone mimics the effects of olfactory deprivation on mitral/tufted cell odor response patterns. *Journal of Neuroscience*, 1995, **15**: 5574-5581.
  36. Woo, C.C., Wilson, D.A., Sullivan, R.M. and Leon, M. Early locus coeruleus lesions increase density of beta-adrenergic receptors in the main olfactory bulb of rats. *International Journal of Developmental Neuroscience*, 1996, **14**:913-919.
  37. Wilson, D.A., Sullivan, R.M., Gall, C.M. and Guthrie, K.M. NMDA-receptor modulation of lateral inhibition and c-fos expression in olfactory bulb. *Brain Research*, 1996, **719**:62-71.
  38. Wilson, D.A. Bi-nasal interactions in the rat piriform cortex. *Journal of Neurophysiology*, 1997, **78**:160-169.
  39. Wilson, D.A. Habituation of odor responses in the rat anterior piriform cortex. *Journal of Neurophysiology*, 1998, **79**: 1425-1440.
  40. Wilson, D.A. Synaptic correlates of odor habituation in the rat anterior piriform cortex. *Journal of Neurophysiology*, 1998, **80**: 998-1001.
  41. Wilson, D.A. and Sullivan, R.M. Respiratory airflow pattern at the rat's snout and an hypothesis regarding its role in olfaction. *Physiology and Behavior*, 1999, **66**:41-44.
  42. Young, T.A. and Wilson, D.A. Frequency-dependent modulation of inhibition in the rat olfactory bulb. *Neuroscience Letters*, 1999, **276**:65-67.
  43. Chabaud, P., Ravel, N., Wilson, D.A. and Gervais, R. Functional coupling in rat central olfactory pathways: a coherence analysis. *Neuroscience Letters*, 1999, **276**:17-20.
  44. Wilson, D.A. Odor specificity of habituation in the rat anterior piriform cortex. *Journal of Neurophysiology*, 2000, **83**: 139-145.
  45. Wilson, D.A., \*Best, A.R. and Brunjes, P.C. Trans-neuronal modification of anterior piriform cortical circuitry in the rat. *Brain Research*, 2000, **853**:317-322.
  46. Sullivan, R.M., Stackenwalt, G., \*Nasr, F., \*Lemon, C. and Wilson, D.A. Association of an odor with activation of olfactory bulb noradrenergic  $\beta$ -receptors or locus coeruleus stimulation is sufficient to produce learned approach responses to that odor in neonatal rats. *Behavioral Neuroscience*, 2000, **114**:957-962.
  47. Chabaud, P., Ravel, N., Wilson, D.A., Mouly, A.M., Vigouroux, M., Farget, V. and Gervais, R. Exposure to behaviourally relevant odour reveals differential characteristics in rat central olfactory pathways as studied through oscillatory activities. *Chemical Senses*, 2000, **25**:561-573.
  48. Sullivan, R.M., Landers, M., \*Yeaman, B. and Wilson, D.A. Good memories of bad events in infancy. **6**



*Nature*, 2000, **407**: 38-39.

49. Wilson, D.A. A comparison of odor receptive field plasticity in the rat olfactory bulb and anterior piriform cortex. *Journal of Neurophysiology*, 2000, **84**:3036-3042.
50. Wilson, D.A. Scopolamine enhances generalization between odor representations in rat olfactory cortex. *Learning and Memory*, 2001, **8**:279-285.
51. Fletcher, M.L. and Wilson, D.A. Ontogeny of odor discrimination: A method to assess novel odor discrimination in neonatal rats. *Physiology and Behavior*, 2001, **74**:589-593.
52. Fletcher, M.L. and Wilson, D.A. Experience modifies olfactory acuity: ACh-dependent learning decreases behavioral generalization between similar odorants. *Journal of Neuroscience*, 2002, **22**:RC201(1-5).
53. Best, A.R. and Wilson, D.A. A postnatal sensitive period for plasticity of cortical afferents but not cortical association fibers in rat piriform cortex. *Brain Research*, 2003, **961**:81-87.
54. Wilson, D.A. Rapid, experience-induced enhancement in odorant discrimination by anterior piriform cortex neurons. *Journal of Neurophysiology*, 2003, **90**:65-72.
55. Leung, C.H.W. and Wilson, D.A. Trans-neuronal regulation of cortical apoptosis in the adult rat olfactory system. *Brain Research*, 2003, **984**:182-188.
56. Fletcher, M.L. and Wilson, D.A. Olfactory bulb mitral/tufted cell plasticity: Odorant-specific tuning reflects prior odorant exposure. *Journal of Neuroscience*, 2003, **23**:6946-6955.
57. Best, A.R. and Wilson, D.A. Coordinate synaptic mechanisms contributing to olfactory cortical adaptation. *Journal of Neuroscience*, 2004, **24**:652-660.
58. Fletcher, M.L., \*Smith, A.M., Best, A.R. and Wilson, D.A. High frequency oscillations are not necessary for simple olfactory discriminations in young rats. *Journal of Neuroscience*, 2005, **25**:792-798. (Highlighted in "This Week in the Journal").
59. Best, A.R., \*Thompson, J.V., Fletcher, M.L. and Wilson, D.A. Cortical metabotropic glutamate receptors contribute to habituation of a simple odor-evoked behavior. *Journal of Neuroscience*, 2005, **25**: 2513-2517.
60. \*Thompson, J.V., Best, A.R. and Wilson, D.A. Ontogeny of cortical synaptic depression underlying olfactory sensory gating in the rat. *Developmental Brain Research*, 2005, **158**:107-110.
61. \*Yadon, C.A. and Wilson, D.A. The role of metabotropic glutamate receptors and cortical adaptation in habituation of odor-guided behavior. *Learning and Memory*, 2005, **12**:601-605.
62. Roth, E.D., Lutterschmidt, W.I. and Wilson, D.A. Relative medial and dorsal cortex volume in relation to sex differences in spatial ecology of a snake population. *Brain, Behavior and Evolution*, 2006, **67**:103-110.
63. Kadohisa, M. and Wilson, D.A. Olfactory cortical adaptation facilitates detection of odors against background. *Journal of Neurophysiology*, 2006, **95**:1888-1896.
64. Moriceau, S., Wilson, D.A., Levine, S. and Sullivan, R.M. Dual circuitry for odor-shock conditioning during infancy: Corticosterone switches between fear and attraction via amygdala. *Journal of Neuroscience*, 2006: **26**:6737-6748. (Highlighted in "This Week in the Journal").
65. Kadohisa, M. and Wilson, D.A. Separate encoding of identity and similarity of complex familiar odors in piriform cortex. *Proceedings of the National Academy of Sciences (USA)*, 2006, **103**:15206-15211. (Commentary: Leon, M. and Johnson, B. Functional units in the olfactory system. *PNAS*, **103**:14985-14986.)
66. Linster, C. \*Henry, L., Kadohisa, M. and Wilson, D.A. Synaptic adaptation and odor-background segmentation. *Neurobiology of Learning and Memory*, 2007, **87**:352-360.
67. Rennaker, R.L., \*Miller, J., Tang, H. and Wilson, D.A. Minocycline increases quality and longevity of chronic neural recordings. *Journal of Neural Engineering*, 2007, **4**:L1-L5.
68. Rennaker, R.L., Chen, C.-F. F, Ruyle, A., Sloan, A.M. and Wilson, D.A. Spatial and temporal distribution of odorant-evoked activity in the piriform cortex. *Journal of Neuroscience*, 2007, **27**:1534-1542.
69. \*Pope, K. and Wilson, D.A. Olfactory system modulation of hippocampal cell death, *Neuroscience Letters*, 2007, **422**:13-17.
70. McNamara, A.M., Magidson, P.D., Linster, C., Wilson, D.A. and Cleland, T.A. Distinct neural mechanisms mediate olfactory memory formation at different timescales. *Learning and Memory*, 2008, **15**:117-125.
71. \*Thompson, J.V., Sullivan, R.M. and Wilson, D.A. Developmental emergence of fear learning corresponds with changes in amygdala synaptic plasticity. *Brain Research*, 2008, **1200**:58-65.
72. Bell, H., \*Chenoweth, B. and Wilson, D.A. Neurobehavioral consequences of cortical adaptation disruption during ontogeny. *Neuroscience Letters*, 2008, **445**:47-52.
73. \*Barnes, D., \*Hofacer, R., \*Zaman, A., Rennaker, R.L. and Wilson, D.A. Olfactory perceptual stability and discrimination. *Nature Neuroscience*, 2008, **11**: 1378-1380. (Highlighted in "News & Views", pg. 1372. Also, Faculty of 1000 Biology evaluations: <http://www.f1000biology.com/article/id/1160961/evaluation>)
74. \*Smith, J.J., Shionoya, K., Sullivan, R.M. and Wilson, D.A. Auditory stimulation dishabituates olfactory responses via noradrenergic cortical modulation. *Neural Plasticity*, Volume 2009, Article ID 754014, 6 pages doi:10.1155/2009/754014.
75. Linster, C., Melon, A., Singh, C. and Wilson, D.A. Odor-specific habituation arises from interaction of afferent synaptic adaptation and intrinsic synaptic potentiation in olfactory cortex. *Learning and Memory*, 2009, **16**:452-459.

76. Wesson, D.W., Levy, E., Nixon, R.A. and Wilson, D.A. Olfactory dysfunction correlates with amyloid- $\beta$  burden in an Alzheimer's disease mouse model. *Journal of Neuroscience*, 2010, **30**:505-514.
77. Wilson, D.A. Single-unit activity in piriform cortex during slow-wave state is shaped by past odor experience, *Journal of Neuroscience*, 2010, **30**: 1760-1765.
78. Wesson, D.W. and Wilson, D.A. Smelling sounds: Olfactory-auditory sensory integration in the olfactory tubercle. *Journal of Neuroscience*, 2010, **30**:3013-3021. (Highlighted in *Scientific American* <http://www.scientificamerican.com/article.cfm?id=making-scents-of-sounds-n> ).
79. Wilson, D.A. and Yan, X. Sleep-like states modulate functional connectivity in the rat olfactory system. *Journal of Neurophysiology*, 2010, **104**: 3231-3239.
80. Yang, D.-S., Stavrides, P., Mohan, P., Kaushik, S., Kumar, A., Ohno, M., Schmidt, S.D., Wesson, D., Bandyopadhyay, U., Jiang, Y., Houseweart, M.K., Pawlik, M., Peterhoff, C.M., Yang, A.J., Myers, R.M., Wilson, D.A., Westaway, D., Mathews, P.M., Levy, E., Cuervo, A.M., Nixon, R.A. Reversal of Autophagy Dysfunction in the TgCRND8 Mouse Model of Alzheimer's Disease Ameliorates Amyloid Pathologies and Memory Deficits. *Brain*, 2011, **134**: 258-277.
81. Wesson, D.W. and Wilson, D.A. Age and gene overexpression interact to abolish nesting behavior in Tg2576 amyloid precursor protein (APP) mice. *Behavioural Brain Research*, 2011, **216**:408-413.
82. Barnes, D.C., Chapuis, J., Chaudhury, D. and Wilson, D.A. Odor fear conditioning modifies piriform cortex local field potentials both during conditioning and during post-conditioning sleep. *PLoS ONE*, 2011, **6**(3): e18130. doi:10.1371/journal.pone.0018130.
83. Wilson, D.A., Hoptman, M.J., Gerum, S.V., Guilfoyle, D.N. State-dependent functional connectivity of rat olfactory system assessed by fMRI. *Neuroscience Letters*, 2011, **497**:69-73.
84. Borkowski, A.H., Barnes, D.C., Blanchette, D.R., Castellanos, F.X., Klein, D.F. and Wilson, D.A. Interaction between delta opioid receptors and benzodiazepines in CO<sub>2</sub>-induced respiratory responses in mice. *Brain Research*, 2011, **1396**:54-59.
85. Wesson, D.W., Varga-Wesson, A.G., Borkowski, A.H. and Wilson, D.A. Respiratory and sniffing behaviors throughout adulthood and aging in mice. *Behavioural Brain Research*, 2011, **223**: 99-106.
86. Wilson, D.A., \*Peterson, J., Basavaraj, B.S. and Saito, M. Local and regional network function in behaviorally relevant cortical circuits of adult mice following postnatal alcohol exposure. *Alcoholism: Clinical and Experimental Research*, 2011, **35**:1974-1984.
87. Wesson, D.W., Borkowski, A.H., Landreth, G.E., Nixon, R.A., Levy, E. and Wilson, D.A. Sensory network dysfunction, behavioral impairments, and their reversibility in an Alzheimer's  $\beta$ -amyloidosis mouse model. *Journal of Neuroscience*, 2011, **31**:15962-145971.
88. Granados-Fuentes, D., Ben-Josef, G., Perry, G., Wilson, D.A. \*Sullivan-Wilson, A. and Herzog, E.D. Daily rhythms in olfactory discrimination depend on clock genes, but not the suprachiasmatic nucleus. *Journal of Biological Rhythms*, 2011, **26**:552-560.
89. Chen, C.F.F., Barnes, D.C. and Wilson, D.A. Generalized versus stimulus-specific learned fear differentially modifies stimulus encoding in primary sensory cortex of awake rats. *Journal of Neurophysiology*, 2011, **106**:3136-3144.
90. Chapuis, J. and Wilson, D.A. Bidirectional plasticity of cortical pattern recognition and behavioral sensory acuity. *Nature Neuroscience*, 2011, **15**: 155-163. (Highlighted in "News & Views", pg. 10-12).
91. Sadrian, B., Subbanna, S., Wilson, D.A., Basavarajappa, B.S., Saito, M. Lithium prevents long-term neural and behavioral pathology induced by early alcohol exposure. *Neuroscience*, 2012, **206**:122-135 (selected for issue Cover image).
92. Cramer, P.E., Cirrito J.R., Wesson, D.W., Lee, C.Y.D., Karlo, J.C., Zinn, A.E., Restivo, J.L., Goebel, W.D., James, M.J., Brunden, K.R., Wilson, D.A. and Landreth, G.E. ApoE-directed therapeutics rapidly clear  $\beta$ -amyloid and reverse deficits in mouse models of Alzheimer's disease. *Science*, 2012, **335**:1503-1506. (Highlighted in "Perspectives", pg. 1447-1448). Faculty of 1000 evaluations: <http://f1000.com.ezproxy.med.nyu.edu/13879956> Technical Comment: Landreth, G.E., Cramer, P.E., Lakner, M.M., Cirrito, J.R., Wesson, D.W., Brunden, K.R. and Wilson, D.A. Response to comments on "ApoE-directed therapeutics rapidly clear  $\beta$ -amyloid and reverse deficits in AD mouse models". *Science*, 2013, **340**:924.
93. Lovitz, A.M., Sloan, A.M., Rennaker, R.L., and Wilson, D.A. Complex mixture discrimination and the role of contaminants. *Chemical Senses*, 2012, **37**:533-540.
94. Payton, C.A., Wilson, D.A. and Wesson, D.W. Parallel odor processing by two anatomically distinct olfactory bulb target structures. *PLoS ONE*, 2012, **7**(4):e34926. doi:10.1371/journal.pone.0034926.
95. Xu, W. and Wilson, D.A. Odor-evoked activity in the mouse lateral entorhinal cortex. *Neuroscience*, 2012, **223**:12-20.
96. Wesson, D.W., Morales-Corraliza, J., Mazzella, M.J., Wilson, D.A. and Mathews, P.M. Chronic anti-murine A-beta immunization preserves odor guided behaviors in an Alzheimer's beta-amyloidosis model *Behavioural Brain Research*, 2012, **237**:96-102.
97. Morales-Corraliza, J., Schmidt, S.D., Mazzella, M.J., Berger, J.D., Wilson, D.A., Wesson, D.W., 8



- Jucker, M., Levy, E., Nixon, R.A. and Mathews, P.M. Immunization targeting a minor plaque constituent clears beta amyloid and rescues behavioral deficits in an Alzheimer's disease mouse model. *Neurobiology of Aging*, 2013, **34**:137-145.
98. Chapuis, J. and Wilson, D.A. Cholinergic modulation of olfactory pattern separation. *Neuroscience Letters*, 2013, **545**:50-53.
  99. Roth, T.L., Raineki, C., Salstein, L., Perry, R., \*Sullivan-Wilson, T.A., Sloan, A., \*Lalji, B., Hammock, E., Wilson, D.A., Levitt, P., Okutani, F., Kaba, H., and Sullivan, R.M. Neurobiology of secure infant attachment and attachment despite adversity: A mouse model. *Genes, Brain and Behavior*, 2013, **12**:673-680.
  100. Chapuis, J., Cohen, Y., He, X., Zhang, Z., Jin, S., Xu, F. and Wilson, D.A. Lateral entorhinal modulation of piriform cortical activity and fine odor discrimination. *Journal of Neuroscience*, 2013, **33**:13449-13459.
  101. Courtiol, E. and Wilson, D.A. Thalamic olfaction: Characterizing odor processing in the mediodorsal thalamus of the rat. *Journal of Neurophysiology*, 2014, **111**:1274-1285.
  102. Kaur, G., Sharma, A., Xu, W., Gerum, S., Alldred, M., Shivakumar, S., Basavarajappa, B., Pawlik, M., Ohno, M., Ginsberg, S., Wilson, D.A., Guilfoyle, D. and Levy, E. Glutamatergic transmission aberration: a major cause of behavioral deficits in a murine model of Down's syndrome. *Journal of Neuroscience*, 2014, **34**: 5099-5106.
  103. Barnes, D.C. and Wilson, D.A. Slow-wave sleep imposed-replay modulates both strength and precision of memory. *Journal of Neuroscience*, 2014, **34**:5134-5142.
  104. Coureaud, G., Thomas-Danguin, T., Datiche, F., Wilson, D.A. and Ferreira, G. Differential memory persistence of odour mixture and components in newborn rabbits: Competition between the whole and its parts. *Frontiers in Behavioral Neuroscience*, 2014, **8**:211. doi: 10.3389/fnbeh.2014.00211
  105. Coureaud, G., Thomas-Danguin, T., Wilson, D.A. and Ferreira, G. Neonatal representation of odour objects: distinct memories of the whole and its parts. *Proceedings of the Royal Society B*, 2014, **281**:20133319. <http://dx.doi.org/10.1098/rspb.2013.3319>
  106. Sarro, E., Wilson, D.A. and Sullivan, R.M. Maternal regulation of infant brain state. *Current Biology*, 2014, **24**: 1664-1669.
  107. Xu, W., Lopez-Guzman, M., Schoen, C., Fitzgerald, S., Lauer, S.L., Nixon, R.A., Levy, E., Wilson, D.A. Spared piriform cortical single-unit odor processing and odor discrimination in the Tg2576 mouse model of Alzheimer's disease, *PLoS ONE*, 2014, 9(9):e106431. DOI: 10.1371/journal.pone.0106431.
  108. Sadrian, B., Lopez-Guzman, M., Wilson, D.A. and Saito, M. Distinct neurobehavioral dysfunction based on the timing of developmental binge-like alcohol exposure. *Neuroscience*, 2014, **280**:204-219.
  109. Raineki, C., Sarro, E., Rincon Cortes, M., Perry, R., Boggs, J., Holman, J., Wilson, D.A. and Sullivan, R.M. Paradoxical neurobehavioral rescue by memories of early-life abuse: The safety signal value of odors learned during abusive attachment. *Neuropsychopharmacology*, 2015 **40**:906-914.
  110. Cohen, Y., Wilson, D.A. and Barkai, E. Differential modifications of synaptic weights during odor rule learning: Dynamics of interaction between the piriform cortex with lower and higher brain areas. *Cerebral Cortex*, 2015, **25**:180-191.
  111. Xu, W., Fitzgerald, S., Nixon, R.A., Levy, E. and Wilson, D.A. Early hyperactivity in lateral entorhinal cortex is associated with accumulation of A $\beta$ PP metabolites in the Tg2576 mouse model of Alzheimer's disease. *Experimental Neurology*, 2015, **264**:82-91.
  112. Cohen, Y., Putino, D. and Wilson, D.A. Dynamic cortical lateralization during olfactory discrimination learning. *Journal of Physiology (London)*, 2015, **593**:1701-1714.
  113. Smiley, J.F., Saito, M., Bleiwas, C., Masiello, K., Ardekani, B., Guilfoyle, D.N., Gerum, S., Wilson, D.A., and Vadasz, C. Selective reduction of cerebral cortex GABA neurons in a late gestation model of fetal alcohol spectrum disorder. *Alcohol*, 2015, **49**: 571-580.
  114. Karunanayaka, P.R. Wilson, D.A. Wang, M.J. Yang, Q.X. Rapidly Acquired Multisensory Association in the Olfactory Cortex. *Brain and Behavior*, 2015; **5**(11), e00390, doi: 10.1002/brb3.390.
  115. Sadrian, B. and Wilson, D.A. Optogenetic stimulation of lateral amygdala input to posterior piriform cortex modulates single-unit and ensemble odor processing. *Frontiers in Neural Circuits*, 2015: **9**:81. doi: 10.3389/fncir.2015.00081.
  116. Kimball, B., Wilson, D.A. and Wesson, D. Alterations of the volatile metabolome in mouse models of Alzheimer's disease. *Scientific Reports*, 2016:**6**:19495 | DOI: 10.1038/srep19495.
  117. Schneider, N.Y., Datiche, F., Wilson, D.A., Gigot, V., Thomas-Danguin, T., Ferreira, G., and Coureaud, G. Brain processing of a configural versus elemental odor mixture in the newborn rabbit. *Brain Structure and Function*, 2016, **221**: 2527-2539.
  118. Wilson, D.A., Masiello, K., Lewin, M.P., Hui, M., Smiley, J.F. and Saito, M. Developmental ethanol exposure-induced sleep fragmentation predicts adult cognitive impairment. *Neuroscience*, 2016, **322**:18-27.
  119. Al Aïn, S., Perry, R.E., Nuñez, B., Kayser, K., Hochman C., Brehman, E., LaComb, M., Wilson, D.A. and Sullivan, R.M. Neurobehavioral assessment of maternal odor in developing rat pups: Implications for social buffering. *Social Neuroscience*, 2016, (*in press*).
  120. Courtiol, E. and Wilson, D.A. Neural representation of odor-guided behavior in the rat olfactory

thalamus. *Journal of Neuroscience*, 2016, **36**:5946-5960.

121. Olofsson, J.K., Josefsson, M., Ekströma, I., Wilson, D.A., Nyberge, L., Nordin, S., Adolfsson, A.N., Adolfsson, R., Nilsson, L.-G. and Larsson, M. Long-term episodic memory decline is associated with olfactory deficits only in carriers of ApoE-ε4. *Neuropsychologica*, 2016, **85**:1-9.
122. Perry, R.E., Al Ain, S., Raineki, C., Regina M. Sullivan, R.M. and Wilson, D.A. Development of odor hedonics: Experience-dependent ontogeny of circuits supporting maternal and predator odor responses in rats. *Journal of Neuroscience*, 2016, (in press).

\*undergraduate authors

## BOOKS

1. Wilson, D.A. and Stevenson, R. J. *Learning to Smell: Olfactory perception from neurobiology to behavior*. Johns Hopkins University Press, Baltimore, USA, 336 pages, 2006.  
Reviewed, various including: Khan, R.M. and Sobel, N. How the nose knows what it knows, *Nature Neuroscience*, 2007, 10:7.  
Translated into Japanese by Maya Suzuki, Fragrance Journal Publishers, 2013.
2. Barkai, E. and Wilson, D.A. (Editors). *Odor Memory and Perception*. Progress in Brain Research, Volume 208. Elsevier, Oxford, UK, 2014.

## REVIEWS and BOOK CHAPTERS

1. Leon, M., Coopersmith, R., Lee, S., Sullivan, R.M., Wilson, D.A. and Woo, C. Neural and behavioral plasticity induced by early olfactory learning. In N. Krasnegor, E. Blass, M. Hofer and W. Smotherman (Eds.), *Perinatal Development: A Psychobiological Perspective*, Academic Press, New York, 1987, 145-167.
2. Wilson, D.A. and Leon, M. Information processing in the olfactory system. In J.S. Lund (Ed.), *Sensory Processing in the Mammalian Brain: Neural Substrates and Experimental Strategies*, Oxford University Press, New York, 1989, 7-22.
3. Wilson, D.A., Sullivan, R.M. and Leon, M. A search for the neural mechanisms of olfactory learning in postnatal rats. In H. Shair, G. Barr and M. Hofer (Eds.), *Developmental Psychobiology: Current Methodological and Conceptual Issues*, Oxford University Press, New York, 1991, 287-302.
4. Leon, M., Wilson, D.A. and Guthrie, K.M. Plasticity in the developing olfactory system. In J. Davis and H. Eichenbaum (Eds.), *Olfaction as a Model System for Computational Neuroscience*, MIT Press, Cambridge, MA, 1991, 121-140.
5. Wilson, D.A. and Sullivan, R.M. Neurobiology of associative learning in the neonate: Early olfactory learning. *Behavioral and Neural Biology*, 1994, **61**:1-18.
6. Sullivan, R.M. and Wilson, D.A. The locus coeruleus, norepinephrine and memory in newborns. *Brain Research Bulletin*, 1994, **35**:467-472.
7. Wilson, D.A. and Sullivan, R.M. Peripheral mechanisms of smell. R.W.A. Linden (Ed.), *Frontiers of Oral Biology, Volume 9: The Scientific Basis of Eating*, Karger, Basel Switzerland, 1998, 29-39.
8. Wilson, D.A. Receptive fields in rat primary olfactory cortex. *Chemical Senses*, 2001, **26**: 577-584.
9. Wilson, D.A. and Sullivan, R.M. Sensory physiology of central olfactory pathways. In R.L. Doty (Ed.) *Handbook of Olfaction and Gustation, 2<sup>nd</sup> Edition*, Marcel Dekker, Inc., 2003, 181-201.
10. Wilson, D.A. and Stevenson, R.J. The fundamental role of memory in olfactory perception. *Trends in Neurosciences*, 2003, **26**:243-247.
11. Wilson, D.A. and Stevenson, R.J. Olfactory perceptual learning: The critical role of memory in odor discrimination. *Neuroscience and Biobehavioral Reviews*, 2003, **27**:307-328.
12. Wilson, D.A., Fletcher, M.L. and Sullivan, R.M. Acetylcholine and olfactory perceptual learning. *Learning and Memory*, 2004, **11**:28-34.
13. Roth, T.L., Wilson, D.A. and Sullivan, R.M. Neurobehavioral development of infant learning and memory: Designed for attachment. In P.J.B. Slater, J.S. Rosenblatt, C.T. Snowden and T.J. Roper (Eds.) *Advances in the Study of Behavior, volume 34*, Academic Press, San Diego, 2004, 103-133.
14. Wilson, D.A., Best, A.R. and Sullivan, R.M. Plasticity in the olfactory system: Lessons for the neurobiology of memory, *The Neuroscientist*, 2004, **10**: 513-524.
15. Wilson, D.A. Odor perception is dynamic: Consequences for interpretation of odor maps, *Chemical Senses*, 2005, **30**: i105-i106.
16. Wilson, D.A., Kadohisa, M. and Fletcher, M.L. Olfactory cortex. *Seminars in Cell and Developmental Biology*, 2006, **17**:462-470.
17. Sullivan, R.M., Wilson, D.A., Feldon, J., Yee, B.K., Richter-Levin, G., Avi, A., Michael, T., Gruss, M., Bock, J., Helmeke, C., Westerholz, S. and Braun, K. Impact of early life experience on brain and behavioral development. *Developmental Psychobiology*, 2006, **48**: 583-602.
18. Stevenson, R.J. and Wilson, D.A. Odor perception: An object recognition approach. *Perception*, 2007, 10

36:1821-1833.

19. Wilson, D.A. Olfactory cortex. In: Allan I. Basbaum, Akiichi Kaneko, Gordon M. Shepherd and Gerald Westheimer, editors *The Senses: A Comprehensive Reference*, Vol. 4, Olfaction and Taste, Stuart Firestein and Gary K. Beauchamp. San Diego: Academic Press, 2008, p 687-706.
20. Sullivan, R.M. and Wilson, D.A. Development of olfactory modulated approach and avoidance motivated behaviors. In Andrew Elliot (Ed.) *Handbook of Approach and Avoidance Motivation*. Mahwah, NJ, Lawrence Erlbaum Associates, 2008, p. 127-147.
21. Wilson, D.A. Olfactory cortex physiology. In Larry R. Squire, Editor-in-Chief, *Encyclopedia of Neuroscience*, Academic Press, Oxford, 2008, pp. 95-100.
22. Illig, K.R. and Wilson, D.A. Olfactory cortex: Comparative anatomy. In Larry R. Squire, Editor-in-Chief, *Encyclopedia of Neuroscience*, Academic Press, Oxford, 2008, pp. 101-106.
23. Wilson, D.A., Bell, H., Chen, C.F. Olfactory perceptual learning. *Encyclopedic Reference of Neuroscience*, Springer, 2009.
24. Wilson, D.A. Olfactory adaptation. *Encyclopedia of Perception*, Sage Publishing, 2010, volume 2, 676-679.
25. Wilson, D.A. and Linster, C.L. Neurobiology of a simple memory. *Journal of Neurophysiology*, 2008, **100**:2-7.
26. Rankin, C.H., Abrams, T., Barry, R., Bhatnagar, S., Cerutti, D., Clayton, D., Colombo, J., Coppola, G., Geyer, M., Glanzman, D., Marsland, S., McSweeney, F., Wilson, D., Wu, C.-F., and Thompson, R. Habituation revisited: An updated and revised description of the behavioral characteristics of habituation. *Neurobiology of Learning and Memory*, 2009, **92**:135-138.
27. Wilson, D.A. Olfaction as a model system for the neurobiology of mammalian short-term habituation. *Neurobiology of Learning and Memory*, 2009, **92**:199-205.
28. Wilson, D.A. and Rennaker, R.L. Cortical activity evoked by odors. In Anna Menini (Editor) *The Neurobiology of Olfaction*. Part of the *Frontiers in Neuroscience Series*, Series Editors: Sid Simon and Miguel Nicolelis. Taylor and Francis Group, CRC Press, 2010, 353-366.
29. Wilson, D.A. Pattern separation and completion in olfaction. In *Olfaction and Taste: International Symposium, Annals of the New York Academy of Sciences*, , 2009, **1170**:309-312.
30. Wilson, D.A. and Barkai, E. Olfactory cortex, In *Handbook of Brain Microcircuits*, Editors Gordon Shepherd and Sten Grillner, Oxford University Press, 2010, 263-273.
31. Schroeder, C.E., Wilson, D.A., Radman, T., Scharfman, H., and Lakatos, P. Dynamics of active sensing and perceptual selection, *Current Opinion in Neurobiology*, 2010, **20**, 172-176.
32. Wesson, D.W., Wilson, D.A. and Nixon, R.A. Should olfactory dysfunction be used as a biomarker of Alzheimer's disease? *Expert Reviews in Neurotherapeutics*, 2010, **10**:633-635.
33. Wilson, D.A., Chapuis, J. and Wesson, D.W. Olfaction. In: *Encyclopedia of Life Sciences*, John Wiley & Sons, Ltd. Chichester, 2010, <http://www.els.net/> [DOI: 10.1002/9780470015902.a0000077.pub2.]
34. Wesson, D.W. and Wilson, D.A. Sniffing out the contributions of the olfactory tubercle to the sense of smell: Hedonics, sensory integration and more? *Neuroscience and Biobehavioral Reviews*, 2011, **35**: 655-668.
35. Gottfried, J.A. and Wilson, D.A. Smell. In J.A. Gottfried (Ed.) *Neurobiology of Sensation and Reward*. Part of the *Frontiers in Neuroscience Series*, Series Editors: Sid Simon and Miguel Nicolelis. Taylor and Francis Group, CRC Press, 2011
36. Wesson, D.W., Nixon, R.A., Levy, E. and Wilson, D.A. Mechanisms of neural and behavioral dysfunction in Alzheimer's disease. *Molecular Neurobiology*, 2011, **43**: 163-179.
37. Sahay, A., Wilson, D.A. and Hen, R. Pattern separation: A common function for new neurons in hippocampus and olfactory bulb. *Neuron*, 2011, **70**:582-588.
38. Wilson, D.A. and Sullivan, R.M. Cortical processing of odor objects. *Neuron*, 2011, **72**:506-519.
39. Sadrian, B., Wilson, D.A. and Saito, M. Long-lasting neural circuit dysfunction following developmental ethanol exposure. *Brain Sciences*, 2013, **3**:704-727.
40. Albers, M.W., Gilmore, G.C., Kaye, J., Murphy, C., Wingfield, A., Bennett, D.A., Boxen, A.L., Buchman, A.S., Cruickshanks, K.J., Devanand, D.P., Duffy, C.J., Gall, C.M., Gates, G.A., Granholm, A.-C., Hensch, T., Holtzer, R., Hyman, B.T., Lin, F.R., McKee, A.C., Morris, J.C., Petersen, R.C., Silbert, L.C., Struble, R.C., Trojanowski, J.Q., Verghese, J., Wilson, D.A., Xu, S., Zhang, L.I. At the interface of sensory and motor dysfunctions and Alzheimer's Disease. *Alzheimer's & Dementia*, 2014, Jul 8. pii: S1552-5260(14)00642-6. doi: 10.1016/j.jalz.2014.04.514. [Epub ahead of print].
41. Wilson, D.A., Xu, W., Sadrian, B., Courtiol, E., Cohen, Y. and Barnes, D.C. Cortical odor processing in health and disease. In: Barkai, E. and Wilson, D.A. (Editors). *Odor Memory and Perception*. Progress in Brain Research, volume 208. Elsevier, Oxford, UK, 2014, 275-308.
42. Barnes, D.C. and Wilson, D.A. Sleep and olfactory cortical plasticity. *Frontiers in Behavioral Neuroscience*, 2014, **8**:134. doi: 10.3389/fnbeh.2014.00134.
43. Wilson, D.A., Chapuis, J. and Sullivan, R.M. Cortical olfactory anatomy and physiology. In R.L. Doty (Ed.) *Handbook of Olfaction and Gustation, 3rd Edition*, John Wiley & Sons, Inc., 2014, 211-225.
44. Parma, V., Wilson, D.A. and Lundstrom, J.N. Aversive olfactory conditioning: From rodents to humans. *Handbook of Odour*, Springer, New York, 2015, *in press*.

45. Schmid, S., Wilson, D.A. and Rankin, C.H. Habituation mechanisms and their importance for cognitive function. *Frontiers in Integrative Neuroscience*, 2014, doi: 10.3389/fnint.2014.00097
46. Courtiol, E. and Wilson, D.A. The olfactory thalamus: understanding the contribution of the mediodorsal thalamus in odor processing. *Frontiers in Neural Circuits*, 2015 Sep 18;9:49. doi: 10.3389/fncir.2015.00049.
47. Wilson, D.A., Kondrakiewicz, K. and Barnes, D. Sleep and odor memory consolidation in non-human animal models. In Nikolai Axmacher and Bjorn Rasch (Eds.) *Cognitive neuroscience of memory consolidation*. Springer, New York, 2016, *in press*.

#### INVITED COMMENTARIES

1. Sullivan, R.M. and Wilson, D.A. Perspective: Molecular biology of early olfactory learning. *Learning and Memory*, 2003, **10**:1-4.
2. Wilson, D.A. Fish smell: Editorial focus on "Odorant specificity of single olfactory bulb neurons to amino acids in the channel catfish", Nikonov, A.A. and Caprio, J. *Journal of Neurophysiology*, 2004, **92**:38-39.
3. Wilson, D.A. What's new in the olfactory cortex? *ChemoSense*, 2007, **9**:1-5.
4. McClintock, T.S., Wilson, D.A., Munger, S.D., Geran, L. Meeting Report: The 15<sup>th</sup> International Symposium on Olfaction and Taste (ISOT) on July 21 – 26, 2008 in San Francisco, CA. *Chemical Senses*, 2008, **33**: 735-738.
5. Wilson D.A., Baker H., Brunjes P., Gilbertson, T.A., Hermer, L., Hill, D.L., Matsunami, H., Meredith, M., Mistretta C.M., Smeets, M.A., Stowers, L. and Zhuang, H.. Chemoreception scientists gather under the Florida sun: The 31<sup>st</sup> Annual Association for Chemoreception Sciences meeting. *Ann N Y Acad Sci*. 2009, 1170 Suppl 1:1-11.
6. Wilson, D.A. and Nixon, R.A. Sniffing out a function for prion proteins. *Nature Neuroscience*, 2009, **12**: 7-8.
7. Wilson, D.A. Running just to stand still. *Nature Neuroscience*, 2012, 15:1175-1176.

#### INVITED COLLOQUIA, SYMPOSIA AND WORKSHOPS (since 1994)

- Neurobiology of memory in neonates, Oklahoma Center for Neurosciences 3rd Annual Meeting, Oklahoma City, October, 1994.
- Neurobiology of memory in infants, CNRS, Université Marie et Pierre Curie, Paris, FRANCE, June 1994
- Memory consolidation in neonates. European Brain and Behavior Society workshop *A new look at time dependent processes in memory formation*, Fourth International Behavioral Neuroscience Society Conference, Santiago de Compostela, SPAIN, May 18-21, 1995
- Functional consequences of olfactory deprivation, Laboratoire Physiologie Neurosensorielle, Université Claude Bernard, Lyon, FRANCE, May 4, 1995
- Functional consequences of olfactory deprivation, Department of Neuroscience, University of Virginia, April 16, 1996
- Information processing in the rat olfactory system, Department of Psychology, University of Arkansas, October 9, 1998
- Cortical mechanisms of simple memory in the olfactory system. 14th Annual Winter Conference on Current Issues in Developmental Psychobiology, St. Georges, GRENADA, January 7-10, 1999
- Cortical mechanisms of simple memory in the olfactory system. College of Physicians and Surgeons of Columbia University, Division of Developmental Psychobiology, New York, August 2, 1999
- Dynamic odor receptive fields in rat piriform cortex. Association for Chemoreception Sciences annual meeting symposium: *Cortical information processing in the olfactory system*, Sarasota, Florida, April 28, 2000
- Receptive fields in rat anterior piriform cortex. Department of Neuroscience and Physiology, SUNY Upstate Medical University, Syracuse, New York, December 8, 2000
- Receptive fields of olfactory cortical neurons. Department of Anatomy and Neurobiology, University of Maryland, Baltimore, Maryland, February 20, 2001
- Receptive fields of olfactory cortical neurons. Monell Chemical Senses Center, Philadelphia, Pennsylvania, May 29, 2001
- Receptive fields in olfactory cortex: Plasticity and synaptic mechanisms. Seminaires de Neurosciences, Université Pierre & Marie Curie, Paris, FRANCE, July 20, 2001.
- Receptive fields in olfactory cortex: Their role in perception and memory. Psychobiology 2001-2002 Workshop Series, Department of Psychobiology, Binghamton University, Binghamton, New York, September 21, 2001.
- Receptive fields of olfactory cortical neurons. Chemosensory Perception Laboratory, University of California at San Diego, November 30, 2001.
- Cortical receptive fields and perceptual learning in olfaction, Neuroscience Program, Florida State University, Tallahassee, Florida, March 6, 2002.
- The role of experience in development and maintenance of olfactory functional anatomy, Baker Research Seminar, Neuroscience Program, Florida State University, Tallahassee, Florida, March 7, 2002.

Synthetic coding and perceptual learning in piriform cortex. Gordon Conference on Chemical Senses, New Hampshire, July 10, 2003

Perceptual learning and memory as critical determinants of olfactory discrimination. International Brain Research Organization 6<sup>th</sup> World Congress, Prague, CZECH REPUBLIC, July 13, 2003

Neurobiology of olfactory perceptual learning. Max-Planck-Institut für medizinische Forschung, Heidelberg, GERMANY, July 18, 2003

Cortical mechanisms of simple olfactory memory. Center for Smell and Taste, McKnight Brain Institute, University of Florida, Gainesville, Florida, January 15, 2004.

Neurobiology of olfactory perceptual learning. Committee on Computational Neuroscience, University of Chicago, Chicago, Illinois, February 3, 2004.

Things just don't smell like they used to: Effects of learning on odor perception. Association for Chemoreception Sciences Workshop: Biophysical algorithms in chemosensation: Olfactory representation and learning. Sarasota, Florida, April 22, 2004.

Cortical and limbic sensory processing during ontogeny. International Society for Developmental Psychobiology symposium: Impact of infant experiences on emotional and limbic system development. Aix-en-Provence, FRANCE, June 26, 2004.

Odor perception is dynamic: Consequences for interpretation of odor maps. International Society for Olfaction and Taste symposium: Odor Maps, Kyoto, JAPAN, July 7, 2004

Odor perception is dynamic: Consequences for interpretation of odor maps, National Institute of Advanced Industrial Science and Technology, July 12, 2004, Osaka, JAPAN.

Olfactory information processing and its ontogeny, Department of Physiology, School of Medicine, University of Tokyo, July 21, 2004, Tokyo, JAPAN.

Olfactory information processing and its ontogeny, Department of Physiology, Kochi Medical School, July 23, 2004, Kochi, JAPAN.

Olfactory sensory physiology during ontogeny of the rat. European Chemoreception Research Organization symposium: Developing chemosensation and behavioural development. Dijon, FRANCE, September 2004.

Cortical plasticity and olfactory perception. Program in Neuroscience, Boston University, Boston, Massachusetts, March 2, 2005.

Cortical plasticity and olfactory perception. Department of Physiology and Program in Neuroscience, University of Utah, Salt Lake City, Utah, March 10, 2005.

Cortical plasticity and olfactory perception. Department of Biological Sciences, Columbia University, New York City, New York, March 21, 2005.

Learning to smell: The role of cortical plasticity in olfaction. Department of Neuroscience and Cell Biology, University of Texas Medical Branch, Galveston, Texas, December 5, 2005.

Learning to smell: The role of cortical plasticity in olfaction. Association for Chemoreception Sciences Symposium: Approaching taste and olfaction at the systems level. Sarasota, FL April 29, 2006.

Learning to smell: The role of cortical plasticity in olfaction. Monell Chemical Senses Center, Philadelphia, Pennsylvania, May 9, 2006.

Learning to smell: Cortical contributions to olfaction. Seventh Annual Simpson Neuroscience Symposium, University of Illinois at Chicago, Chicago, Illinois, June 2, 2006.

Perception of odor objects: Neurobiology and behavior. Aroma and Flavor symposium. American Society for Enology and Viticulture 57<sup>th</sup> annual meeting, Sacramento, California June 27, 2006.

Cortical plasticity and odor perception. Symposium, From Molecules to behavior: The mammalian olfactory system in action. 5<sup>th</sup> Forum of European Neuroscience, Vienna AUSTRIA, July 11, 2006.

Grass Foundation Traveling Lecture: Learning to smell: Memory and odor perception. University of Chile, Santiago, CHILE, September 5, 2006.

Cortical plasticity: A key to sensory gating and perceptual learning. Department of Psychiatry, Emory University, Atlanta, Georgia, October 2, 2006.

Cortical mechanisms of sensory habituation through development. Symposium: Sensory gating: From genes to behavior. Current Issues in Developmental Psychobiology Winter Conference, COSTA RICA, January 2007.

Learning to smell: Cortical contributions to odor perception. Department of Psychology, Cornell University, Ithaca, New York, February 2, 2007

Learning to smell: Memory and odor perception. Center for Neuroscience, West Virginia University, Morgantown, West Virginia, February 7, 2007.

Cortical dynamics and sensory emotional perception: Learning to smell. Nathan Kline Institute, Orangeburg, New York, April 19, 2007.

Olfaction beyond the receptor. Origins and Evolution of Chemoreception catalysis meeting. National Evolutionary Synthesis Center, Durham, North Carolina, June 4, 2007.

Cortical contributions to sensory habituation. Workshop: Habituation: The foundation of learning and attention. Peter Wall Institute for Advanced Studies, Vancouver, CANADA, August 17, 2007.

Cortical plasticity and odor perception. Foundation des Treilles Workshop: Olfaction: Processing, Learning

and Cognition, Tourtour, FRANCE, August 31, 2007.

Rushton Lecture: Odors as objects: Cortical processing of complex stimuli. Florida State University, Tallahassee, FL, December 1, 2007

Cortical plasticity and odor perception. Department of Neurobiology, Yale University, New Haven, CT, December 6, 2007.

Pattern separation and completion in olfactory cortex: The balance between odor discrimination and perceptual stability. Presidential symposium, Joint meeting of the International Society for Olfaction and Taste *and* the Association for Chemoreception Sciences, San Francisco, California, July 24, 2008.

Cortical plasticity and odor perception. Department of Zoology and Physiology, University of Wyoming, Cheyenne, Wyoming, October 16, 2008.

Learning to smell: Cortical plasticity and odor perception, Department of Biology, University of Haifa, Haifa, ISRAEL, January 11, 2009.

Learning to smell: Cortical plasticity and odor perception, Department of Biology, Weizmann Institute, Rehovot, ISRAEL, January 14, 2009.

Olfaction as a model system for memory and perceptual disorders. Center for Dementia Research, Nathan Kline Institute for Psychiatric Research, February 17, 2009.

Olfactory cortical processing. Keystone Symposium on Chemical Senses: Receptors and Circuits. Tahoe City, California, March 18, 2009.

Cortical plasticity and odor perception. Department of Neurobiology and Anatomy, University of Texas at Houston Medical School, Houston, Texas, April 16, 2009.

The nose is just the beginning: Patterns, objects and experience in olfaction,. Association for Chemoreception Sciences Symposium: Follow the head not only the nose: Top-down influences on olfactory perception. Sarasota, Florida. April 24, 2009.

Perception of odors. NATIONAL INSTITUTES ON DRUG ABUSE Workshop: Sensory Coding in Drug Abuse. Rockville, Maryland, June 9, 2009.

Memory and discrimination of odors. Cosmetic and Sensory Congress: From Neuroscience to Marketing. Tours, FRANCE, June 25, 2009.

Local and global circuit changes associated with learned odor hedonics. 41<sup>st</sup> European Brain and Behaviour Society meeting, Rhodes, GREECE, September 16, 2009.

Neurobiology of a simple memory in a complex system. Memory in Brain seminar series, Center for Neural Science, New York University, October 2, 2009.

Cortical plasticity and odor perception. Department of Psychology and Program in Cognitive Neuroscience, City College, City University of New York, New York, New York, February 9, 2010.

Neurobiology of a simple memory: Odor habituation from synapse to circuit. Second NovoBrain Conference on Mechanisms of Cognition, Learning and Memory, Bochum, GERMANY, March 10, 2010.

Olfaction as a model system for memory and perceptual disorders. Institute for Social and Psychiatric Initiatives, New York University School of Medicine, March 24, 2010.

Recent advances in understanding olfactory perceptual mechanisms. Association for Chemoreception Sciences Symposium: Industry Symposium, St. Petersburg, Florida, April 22, 2010.

Olfaction as a model system for memory and perceptual disorders. New York State Psychiatric Institute/Columbia University, New York, New York, June 2, 2010.

Amyloid- $\beta$  Effects on Olfactory Neural Plasticity and Perception. NATIONAL INSTITUTE ON AGING Workshop: Sensory and Motor Dysfunction in Aging and Alzheimer's Disease, Bethesda, Maryland, August 10, 2010.

Cortical plasticity and odor perception, Department of Anatomy and Cell Biology, University of Western Ontario, London, Ontario CANADA, September 24, 2010.

Cortical plasticity and odor perception. Wuhan Institute for Physics and Mathematics, Chinese Academy of Sciences, Wuhan, CHINA, October 11, 2010.

Cortical plasticity and odor perception. National Institute for Biological Sciences, Beijing, CHINA, October 15, 2010.

Cortical plasticity and odor perception, Institute for Psychology, Chinese Academy of Sciences, Beijing, CHINA, October 15, 2010.

Perceptual plasticity in olfaction, Human Chemosensation, Dresden, GERMANY, December 4, 2010.

The neurobiology of olfactory perceptual learning. Institute for Advanced Studies at the Hebrew University conference on Olfaction: From Receptor to Behavior, Jerusalem, ISRAEL, February 9, 2011.

The neurobiology of olfactory perceptual learning. Monell Chemical Senses Center, Philadelphia, Pennsylvania, February 14, 2011.

The neurobiology of olfactory perceptual learning. Department of Neurobiology, SUNY Stony Brook, Stony Brook, New York, February 24, 2011.

The neurobiology of olfactory perceptual learning. Interdepartmental Neuroscience Program, Yale University, New Haven, Connecticut, March 7, 2011.

Learning to smell: Cortical plasticity and olfactory perceptual learning. Leon Levy and Shelby White Center for Mind, Brain and Behavior, Rockefeller University, New York, New York, March 23, 2011.



Learning to smell: Cortical plasticity and olfactory perceptual learning. CNRS, Lyon FRANCE, June 24, 2011.

Learning to smell: Cortical plasticity and olfactory perceptual learning. Penn State Hershey College of Medicine, Pennsylvania September 1, 2011.

Learning to smell: Cortical plasticity and odor perception. McKnight Brain Institute, University of Florida, Gainesville, Florida December 2, 2011.

Learning to smell: Cortical plasticity and odor perception. Neuroscience Seminar, Cold Spring Harbor Labs, Cold Spring Harbor, New York, February, 6, 2012

Cortical odor object processing. COSYNE 2012 Workshop: Is it time for theory in olfaction? Snowbird, Utah, February 27-28, 2012.

Learning to smell: Circuits and synapses. NYU Neuroscience Retreat, Mohonk, New York, April, 20, 2012.

How do I smell? Olfaction as a window into memory, perception and disease. Department of Psychiatry Grand Rounds, Lincoln Hospital, New York, New York, May 1, 2012.

Odor perception as a network phenomenon. Center for Dementia Research, Nathan Kline Institute for Psychiatric Research, Orangeburg, New York, May 3, 2012.

The role of piriform cortical ensembles, pattern recognition and plasticity in odor perception. Symposium on "Odor memory and perception: Cells to Circuits" at The International Society for Olfaction and Taste (ISOT), Stockholm, SWEDEN, June 27, 2012.

The role of piriform cortical ensembles, pattern recognition and plasticity in odor perception. Symposium on "Odor memory and perception: Cells to Circuits" at the Federation of European Neuroscience Societies (FENS), Barcelona, SPAIN, July 16, 2012.

Learning to smell: Cortical plasticity and odor perception. Department of Neuroscience, Case Western Reserve University, Cleveland, Ohio, September 13, 2012.

Cortical adaptation and sensory filtering from early development to senescence in a rodent model. Foundation des Trielles Workshop: Translational Development Neuroscience, Tourtour, FRANCE, September 27, 2012.

Learning to smell: The brain and perception of odor mixtures. Givaudan France Fragrances SAS, Paris, FRANCE October 1, 2012.

Cortical networks and odor perception: Function and dysfunction. Neuroscience Program, University of Wyoming, Laramie, Wyoming, November 29, 2012.

Development of sensation, perception and communication. Symposium (organizer), Sackler Winter Conference in Developmental Psychobiology, Providenciales, TURKS & CAICOS ISLANDS, January 8, 2013.

Cortical adaptation and sensory filtering from early development to senescence. Symposium: Neurobiological Mechanisms And Biomarkers In The Development Of Behavior. Eastern Psychological Association annual meeting, New York, New York, March 2, 2013.

Learning to smell: Cortical plasticity and odor perception. Department of Medicine, Florida Atlantic University, Boca Raton, Florida, March 12, 2013.

Alzheimer's Disease stinks, or does it? Amyloid-beta and olfactory function. Center for Smell and Taste, McKnight Brain Institute, University of Florida, Gainesville, Florida, March 20, 2013.

Learning to smell: Cortical plasticity and odor perception. Neurobiology Group. Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, March 22, 2013.

Alzheimer's Disease stinks, or does it? Amyloid-beta and olfactory function. NYU Comprehensive Center on Brain Aging Research Day, New York University Langone School of Medicine, March 27, 2013.

Olfaction in context, European Chemosensory Research Organization annual meeting, Leuven, BELGIUM, August 27, 2013.

Amyloid- $\beta$  and olfactory function, LIA, LearnEmoTime Team, Orsay, FRANCE, September 16, 2013.

State-dependent and top-down modulation of olfaction, Centre Neuroscience Research- Lyon, Lyon FRANCE, September 23, 2013

Datablitz presentation, Workshop: Sleep for Brain Functioning and Beyond. Centre Neuroscience Research- Lyon, Lyon FRANCE, October 7, 2013

Smell in context: State-dependent and top-down modulation of olfaction. Neuroscience Institute, University of Tennessee Health Sciences Center, Memphis, Tennessee, December 10, 2013.

Experience-Dependent Perception of Odor Mixtures, Gordon Research Conference on Plant Volatiles: Exploring the Plant Headspace: Functional Analysis and Emerging Applications, Ventura, California, January, 27, 2014.

Pattern recognition and odor objects. The 27<sup>th</sup> Annual Conference on the Neurobiology of Learning and Memory. Center for the Neurobiology of Learning and Memory, University of California at Irvine, May, 2, 2014.

Plasticity as a mechanism of stability in olfaction. Harriet Baker Honorary Symposium, Burke Medical Research Institute, White Plains, New York, September, 22, 2014.

State-dependent and top-down modulation of olfaction, Institute for Psychology, Chinese Academy of Sciences, Beijing, CHINA, September 29, 2014.

Keynote: Olfaction in animal models of disease. Clinical Chemosensation, Dresden GERMANY, November 22, 2014.

Sleep and odor perception. NYU Sleep Disorders Center, New York, New York, January 15, 2015.

- Cortical-cortical interactions in olfaction. International Graduate School of Neuroscience Symposium. Ruhr University at Bochum, Bochum, GERMANY, January 19, 2015.
- Olfaction in context: Cortical-cortical interactions in olfaction. Pasteur Institute, Paris, FRANCE, June 11, 2015.
- Olfaction in context: Cortical-cortical interactions in olfaction. Center for Interdisciplinary Research in Biology, College de France, Paris, FRANCE, June 16, 2015.
- Olfaction in context: Cortical-cortical interactions in olfaction. Kavli Institute for Theoretical Physics Program on "Deconstructing the Sense of Smell". University of California at Santa Barbara, June 25, 2015.
- Olfactory bulb and odor perception. Chemical Senses in Vertebrates British Workshop XXII. The U.K. Semiochemistry Network, Cambridge University, Cambridge UNITED KINGDOM, July 21, 2015.
- Lateralization of odor memory in rats. European Chemoreception Research Organization Annual Meeting, Istanbul, TURKEY, September 3, 2015.
- Smell in context: The role of top-down feedback and dynamic networks in olfaction. Neurobiology and Behavior, Cornell University, Ithaca, New York, October 30, 2015
- Smell in context: The role of top-down feedback and dynamic networks in olfaction. Interdepartmental Neuroscience Program, Yale University, New Haven, Connecticut, November 10, 2015.
- Early Life Adversity and Sleep, In Sleep: Memory and Development Symposium (organizer), Sackler Winter Conference in Developmental Psychobiology, Papagayo Bay, COSTA RICA, January 7, 2016.
- Cortical pattern recognition and odor objects. Department of Psychology, Rutgers University, Piscataway, New Jersey, April 7, 2016.

### SELECTED ABSTRACTS

1. Oswalt, G.L. and Wilson, D.A. Adult-male odor suppresses ultrasonic vocalization in infant rats. Presented at the Eastern Conference on Reproductive Behavior, New Orleans, 1979.
2. Gall, C., Lynch, G.S., Morris, R.G.M. and Wilson, D.A. Septo-temporal distribution of medial and lateral perforant path innervation of rat hippocampus and capacity to support long-term potentiation. *Journal of Physiology* (London), 1985, **358**: 45P.
3. Wilson, D.A. and Leon, M. Localized changes in olfactory bulb output cell response patterns following postnatal olfactory learning. *International Society for Developmental Psychobiology Abstracts*, 1986, p. 70.
4. Wilson, D.A. and Leon, M. Evidence of lateral synaptic interactions in olfactory bulb output cell responses to odors. *Chemical Senses*, 1987, **12**: 709.
5. Wilson, D.A., Sullivan, R.M. and Leon, M. Norepinephrine influences early olfactory learning: Single-unit, metabolic and behavioral responses to learned odor cues. Third Conference on the Neurobiology of Learning and Memory, Irvine, California, 1987.
6. Wilson, D.A. and Leon, M. Spatial patterns of mitral/tufted cell responses to odors investigated with combined single-unit, HRP and <sup>14</sup>C-2-DG techniques in the rat. *Society for Neuroscience Abstracts*, 1988, **14**: 1188.
7. Sullivan, R.M. and Wilson, D.A. Plasticity in the reinforcement system of infant rats. *Society for Neuroscience Abstracts*, 1990, **16**, 917.
8. Wilson, D.A. and Sullivan, R.M. Norepinephrine antagonists modulate a specific component of the mitral/tufted cell response to reward. *Fourth Conference on the Neurobiology of Learning and Memory*, Irvine, California, 1990.
9. Sullivan, R.M. and Wilson, D.A. The role of the amygdala and periamygdala region in early olfactory associative learning. *Society for Neuroscience Abstracts*, 1991, **17**, 660.
10. Wilson, D.A. and Sullivan, R.M. Blockade of mitral/tufted cell habituation to odors by association with reward. *Society for Neuroscience Abstracts*, 1992, **18**, 1065.
11. Sullivan, R.M. and Wilson, D.A. The role of norepinephrine in consolidation of early olfactory memories. *Society for Neuroscience Abstracts*, 1992, **18**, 526.
12. Wilson, D.A., Guthrie, K.M., Smart, R., Gall, C.M. and Sullivan, R.M. NMDA receptor modulation of olfactory bulb inhibitory circuits. *Association for Chemoreception Sciences*, 1993, Sarasota, FL.
13. Hamrick, W.D., Wilson, D.A. and Sullivan, R.M. Learning induced changes in metabolic activity in the adult rat olfactory system. *Association for Chemoreception Sciences*, 1993, Sarasota, FL.
14. Sullivan, R.M., Wilson, D.A. and Toubas, P.L. Olfactory cues suppress newborn human infant crying. *Association for Chemoreception Sciences*, 1993, Sarasota, FL.
15. Wilson, D.A. Effects of long-term (>12 months) unilateral olfactory deprivation on olfactory bulb single-unit response patterns to odors. *Society for Neuroscience Abstracts*, 1993, **19**, 133.
16. Sullivan, R.M., Wilson, D.A., Lemon, C., Pham, C. and Gerhardt, G.A. Bilateral 6-OHDA lesions of the locus coeruleus impair associative olfactory learning in newborn rats. *Society for Neuroscience Abstracts*, 1993, **19**, 565.
17. Smart, R.S., Wilson, D.A. and Sullivan, R.M. Effect of olfactory bulb GABA on olfactory associative learning and bulb physiology in neonatal rats. *Society for Neuroscience Abstracts*, 1993, **19**, 565.
18. Wilson, D.A. and Sullivan, R.M. La spiperone, antagoniste D2 dopaminergic, reproduit les effets de

la privation sensorielle sur les patterns de reponse des cellules mitrales/panaches aux odeurs. *Colloque de la Societe des Neurosciences de la France*, Lyon, FRANCE, May 14-18, 1995.

19. Wilson, D.A., Herve-Minvielle, A., Robinson, D. and Sara, S.J. Inhibition of locus coeruleus neurons by spontaneous and induced frontal cortex activity. *Society for Neurosciences Abstracts*, 1995, **21**, 1929.
20. Woo, C.C., Lemon, C., Wilson, D.A., Sullivan, R.M. and Leon, M. Locus coeruleus lesions increase density of beta-adrenergic receptors in the main olfactory bulb of young rats. *Society for Neurosciences Abstracts*, 1995, **21**, 1183.
21. Wilson, D.A. and Sullivan, R.M. Memory consolidation in neonates. Invited address at the European Brain and Behavior Society workshop: *A new look at time dependent processes in memory formation*, Fourth International Behavioral Neuroscience Society Conference, Santiago de Compostela, SPAIN, May 18-21, 1995.
22. Wilson, D.A. and Sullivan, R.M. Unilateral olfactory deprivation modifies bi-nasal interactions in piriform cortex. *Association for Chemoreception Sciences*, 1996, Sarasota, FL.
23. Ravel, N., Chabaud, P., Mouly, A.M., Wilson, D.A. and Gervais, R. Dynamics and coherence of oscillatory activity in central olfactory pathways in rats. *Society for Neurosciences Abstracts*, 1996, **22**, 1825.
24. Wilson, D.A. and Sullivan, R.M. Experience-dependent modification of bi-nasal interactions in piriform cortex. *Society for Neurosciences Abstracts*, 1996, **22**, 913.
25. Sullivan, R.M., Landers, M. and Wilson, D.A. Paradoxical infantile olfactory memories. *Society for Neurosciences Abstracts*, 1996, **22**, 1385.
26. Chabaud, P., Ravel, N., Mouly, A.M., Gervais, R. and Wilson, D.A. Dynamic changes induced by odors: A multisite recording study of local field potentials in freely-moving rats. European Neuroscience Association Annual meeting, FRANCE, September, 1996.
27. Wilson, D.A. Bi-nasal interactions in rat piriform cortex. *International Society for Olfaction and Taste XII/Association for Chemoreception Sciences*, 1997, San Diego, CA.
28. Wilson, D.A. Habituation to odor stimuli by rat anterior piriform cortex single-units. *Society for Neurosciences Abstracts*, 1997, **23**, 2075.
29. Landers, M.S., Sullivan, R.M. and Wilson, D.A. Functional integration of stimuli by the neonatal somatosensory system. *Society for Neurosciences Abstracts*, 1997, **23**, 2347.
30. Chabaud, P., Ravel, N., Didier, A., Gervais, R. and Wilson, D.A. Differential effect of scopolamine on odor-induced synchronization between olfactory areas in rat. *Society for Neurosciences Abstracts*, 1997, **23**, 2076.
31. Ravel, N., Chabaud, P., Mouly, A.M., Wilson, D.A. and Gervais, R. Learning-induced changes in synchronization between olfactory areas in rat. *Society for Neurosciences Abstracts*, 1997, **23**, 1616.
32. Wilson, D.A. Synaptic correlates of odor habituation in the rat anterior piriform cortex. *Society for Neurosciences Abstracts*, 1998, **24**, 651.
33. Wilson, D.A. Cortical mechanisms of olfactory coding: adaptation and cross-adaptation to odorants presented singly and in mixtures. *Association for Chemoreception Sciences*, 1999, Sarasota, FL.
34. Wilson, D.A. Dynamic odor receptive fields in rat piriform cortex. *Association for Chemoreception Sciences*, 2000, Sarasota, FL.
35. Wilson, D.A.. Receptive field plasticity in rat anterior piriform cortex. *Society for Neurosciences Abstracts*, 2000, New Orleans, LA.
36. Wilson, D.A. The role of acetylcholine in odor discrimination and cross-habituation by anterior piriform cortex neurons. *Association for Chemoreception Sciences*, 2001, Sarasota, FL.
37. Wilson, D.A. Synthetic coding of odorant mixtures in rat piriform cortex. *Association for Chemoreception Sciences*, 2002, Sarasota, FL.
38. Best, A.R. and Wilson, D.A. Neural correlates of cortical odor habituation. *Association for Chemoreception Sciences*, 2002, Sarasota, FL.
39. Fletcher, M.L. and Wilson, D.A. Mechanisms of olfactory perceptual learning. *Association for Chemoreception Sciences*, 2002, Sarasota, FL.
40. Leung, C.H. and Wilson, D.A. Odor stimulation modulates apoptosis in adult olfactory (piriform) cortex of the rat. *Association for Chemoreception Sciences*, 2002, Sarasota, FL.
41. Bouret, S., Kublik, E., Wilson, D.A. and Sara, S.J. Olfactory responses in medial frontal cortex neurons in odor-reward association. *Association for Chemoreception Sciences*, 2002, Sarasota, FL.
42. Bouret, S., Wilson, D.A. and Sara, S.J. Neuronal responses to odours in olfactory cortex and medial frontal cortex in the anesthetized rat. *Third Forum of European Neuroscience*, 2002, Paris, France.
43. Moriceau, S., Sullivan, R.M. and Wilson, D.A. Developmental locus coeruleus autoreceptors in a mammalian model of imprinting. *Third Forum of European Neuroscience*, 2002, Paris, France.
44. Wilson, D.A. Experience-dependent synthetic coding of odorants in rat piriform cortex. *Society for Neurosciences Abstracts*, 2002, Orlando, FL.
45. Fletcher, M.L. and Wilson, D.A. Experience-induced changes in mitral/tufted cell receptive fields. *Society for Neurosciences Abstracts*, 2002, Orlando, FL.

46. Best, A.R. and Wilson, D.A. Synaptic correlates of cortical adaptation *Society for Neurosciences Abstracts*, 2002, Orlando, FL.
47. Fletcher, M.L. and Wilson, D.A. Experience-induced olfactory bulb mitral/tufted cell receptive field plasticity. *Association for Chemoreception Sciences*, 2003, Sarasota, FL.
48. Best, A.R. and Wilson, D.A. Coordinated synaptic mechanisms underlie cortical olfactory adaptation. *Association for Chemoreception Sciences*, 2003, Sarasota, FL.
49. Wilson, D.A. Ontogeny of sensory-evoked single-unit responses in rat amygdala. *International society for developmental psychobiology abstracts*, 2003, New Orleans, La.
50. Best, A.R., Thompson, J.V., Fletcher, M.L. and Wilson, D.A. Synaptic mechanism of habituation of a simple olfactory mediated behavior in the rat. *Society for Neurosciences Abstracts*, 2004, San Diego, CA.
51. Fletcher, M.L., Smith, A.M., Myers, B.P. and Wilson, D.A. Olfactory bulb gamma frequency oscillations and odor discrimination: a developmental mismatch. *Society for Neurosciences Abstracts*, 2004, San Diego, CA.
52. Kadohisa, M. and Wilson, D.A. Olfactory figure-ground discrimination in rat piriform cortex. *Society for Neurosciences Abstracts*, 2004, San Diego, CA.
53. Ruyle, A.M., Fletcher, M.L., Wilson, D.A. and Rennaker, R. Ensemble single-unit activity recorded with chronic indwelling microelectrode arrays in rat piriform cortex. *Society for Neurosciences Abstracts*, 2004, San Diego, CA.
54. Fletcher, M.L., Wilson, D.A. and Cleland, T.A. Ontogeny of odor discrimination: Intensity modulation of olfactory acuity emerges postnatally. *Association for Chemoreception Sciences*, 2005, Sarasota, FL.
55. Kadohisa, M. and Wilson, D.A. A cortical high-pass filter contributes to olfactory figure-ground separation. *Association for Chemoreception Sciences*, 2005, Sarasota, FL.
56. Wilson, D.A., Kadohisa, M. and Linster, C. Functional role of synaptic adaptation of afferent inputs to the olfactory cortex: combined electrophysiological, behavioral and computational approach. *Society for Neurosciences Abstracts*, 2005, Washington, D.C.
57. Linster C. Kadohisa, M. and Wilson, D.A. Electrophysiological, behavioral and computational investigation of the functional role of synaptic adaptation in olfactory cortex. *Association for Chemoreception Sciences*, 2006, Sarasota, FL.
58. Kadohisa, M. and Wilson, D.A. Olfactory experience de-correlates encoding of mixtures from components in rat piriform cortex. *Association for Chemoreception Sciences*, 2006, Sarasota, FL.
59. Rennaker, R., Ruyle, A., Chen, C.F. and Wilson, D.A. Microelectrode array analysis of odorant-evoked spatial activity patterns in piriform cortex. *Association for Chemoreception Sciences*, 2006, Sarasota, FL.
60. Kadohisa, M. and Wilson, D.A. Effect of odor experience of rat piriform cortex plasticity. European Chemoreception Research Organization biannual meeting, 2006, Granada, Spain.
61. Kadohisa, M. and Wilson, D.A. Differential effects of odor experience on odor processing in rat anterior and posterior piriform cortex. *Society for Neurosciences Abstracts*, 2006, Atlanta, GA.
62. Bell, H.M. and Wilson, D.A. Sensory adaptation and neurobehavioral development in rats. *Society for Neurosciences Abstracts*, 2006, Atlanta, GA.
63. Wilson, D.A., Ruyle, A., and Rennaker, R.L. Analysis of odorant-evoked spatial and temporal patterns in piriform cortex. *Society for Neurosciences Abstracts*, 2006, Atlanta, GA.
64. Chen, C.F. and Wilson, D.A. Single electrode recording of odorant-evoked activity in rats' anterior piriform cortex: a cross-correlation analysis of cell pairs. *Society for Neurosciences Abstracts*, 2006, Atlanta, GA.
65. Magidson, P.D., McNamara, A.M., Cleland, T.A., Wilson, D.A. and Linster, C. Behavioral and pharmacological evidence for two different mechanisms of habituation learning in the olfactory system. *Association for Chemoreception Sciences*, 2007, Sarasota, FL.
66. Wilson, D.A. Pattern completion and separation in piriform cortex. *Association for Chemoreception Sciences*, 2007, Sarasota, FL.
67. Linster, C. and Wilson, D.A. Computational investigation of the interaction between synaptic adaptation and potentiation in olfactory cortex. *International Society for Olfaction and Taste/Association for Chemoreception Sciences*, 2008, San Francisco, CA.
68. Chen, C.-F.F. and Wilson, D.A. Cortical processing of learned aversive odors in awake rats. *Society for Neurosciences Abstracts*, 2008, Washington, D.C.
69. Barnes, D., Hofacer, R., Zaman, A., Rennaker, R.L. and Wilson, D.A. Pattern separation and completion in olfactory cortex. *Society for Neurosciences Abstracts*, 2008, Washington, D.C.
70. Chen, C.-F.F. and Wilson, D.A. Cortical processing of learned aversive odors in awake rats. *Association for Chemoreception Sciences*, 2009, Sarasota, FL.
71. Rennaker, R.L. and Wilson, D.A. Development and testing of a neural recording system for chemosensory behavioral neuroscience. *Association for Chemoreception Sciences*, 2009, Sarasota, FL.
72. Wesson, D.W., Levy, E., Nixon, R.A. and Wilson, D.A.. Olfactory perceptual correlates of  $\beta$ -amyloid plaque burden in Alzheimer's Disease mouse models. *Association for Chemoreception Sciences*, 2009, Sarasota, FL.
73. Barnes, D.C., Chapuis, J. Wilson, D.A. Odor fear conditioning and olfactory system slow-wave sleep. 18

- Association for Chemoreception Sciences*, 2010, St. Petersburg, FL.
74. Chen, C.F.F. and Wilson, D.A. Odor fear conditioning effects on piriform cortical odor processing in awake rats. *Association for Chemoreception Sciences*, 2010, St. Petersburg, FL.
  75. Wesson, D.W. and Wilson, D.A. Smelling sounds: Olfactory-auditory sensory convergence in the olfactory tubercle. *Association for Chemoreception Sciences*, 2010, St. Petersburg, FL.
  76. Sullivan R. M., Moriceau S., Raineki C. and Wilson D. A. Behavioral neurobiology of learned and unlearned fear in rats: infancy to adulthood. *Seventh Forum of European Neuroscience*, Amsterdam, The NETHERLANDS, July, 2010.
  77. Wilson, D.A., Barnes, D.C., Chapuis, J. and Chen, C.F.F. The scents of sleep: Odor experience shapes olfactory cortical activity during slow-wave sleep. *Seventh Forum of European Neuroscience*, Amsterdam, The NETHERLANDS, July, 2010.
  78. Barnes, D.C., Chapuis, J. Chaudhury, D. and Wilson, D.A. Odor memory and olfactory system slow-wave sleep. *Society for Neurosciences Abstracts*, 2010, San Diego, CA
  79. Borkowski, A., Barnes, D. Castellanos, F.X., Klein, D.F. and Wilson, D.A. Delta opiate receptors regulate response to CO<sub>2</sub> in a mouse model of panic disorder. *Society for Neurosciences Abstracts*, 2010, San Diego, CA.
  80. Chapuis, J. and Wilson, D.A. Effect of olfactory learning on pattern separation and completion processes in the piriform cortex. *Society for Neurosciences Abstracts*, 2010, San Diego, CA.
  81. Chen, C.-F. F. and Wilson, D.A. Odor fear conditioning modifies piriform cortical odor processing of learned odors in awake rats in a manner which predicts behavioral fear. *Society for Neurosciences Abstracts*, 2010, San Diego, CA.
  82. Wesson, D.W., Borkowski, A.H., Landreth, G.E., Nixon, R.A., Levy, E. and Wilson, D.A. Network dysfunction, olfactory behavior impairments, and their reversibility in an Alzheimer's  $\beta$ -amyloidosis mouse model. *Association for Chemoreception Sciences*, 2011, St. Petersburg, FL.
  83. Sadrian, B., Wilson, D.A., Peterson, J., Balapal, B., Saito, M. Local and regional network function in behaviorally relevant cortical circuits of adult mice following postnatal alcohol exposure. *Association for Chemoreception Sciences*, 2011, St. Petersburg, FL.
  84. Wilson, D.A. Lateral entorhinal cortex top-down modulation of odor coding in the piriform cortex. *Society for Neurosciences Abstracts*, 2011, Washington D.C.
  85. Sadrian, B., Wilson, D.A., Basavaraj, B., Saito, M. Impairment of olfactory circuit processing and spatial memory resulting from early ethanol exposure is counteracted by lithium co-treatment. *Society for Neurosciences Abstracts*, 2011, Washington D.C.
  86. Chapuis, J. and Wilson, D.A. Importance of cortical cholinergic and glutamatergic neurotransmission in olfactory pattern separation and completion. *Society for Neurosciences Abstracts*, 2011, Washington D.C.
  87. Barnes, D. and Wilson, D.A. The effects of matching or mismatching patterned input during sleep on consolidation of olfactory pattern memory. *Society for Neurosciences Abstracts*, 2011, Washington D.C.
  88. Cramer, P.E., Cirrito, J.R., Wesson, D.W., Karlo, J.C., Zinn, A.E., Restivo, J.J., Goebel, W.D., Brunden, K.R., James, M.J., Wilson, D.A., Landreth, G.E. ApoE-directed therapeutics rapidly clear  $\beta$ -amyloid and reverse deficits in mouse models of Alzheimer's disease. *Society for Neurosciences Abstracts*, 2011, Washington D.C.
  89. Wilson, D.A., Xu, W., and Sadrian, B.A. Lateral entorhinal cortex top-down modulation of odor coding in the piriform cortex. *Association for Chemoreception Sciences*, 2012, Huntington Beach, CA.
  90. Barnes, D.C., Chapuis, J. and Wilson, D.A. Dreaming of odors: Odor replay during slow wave sleep enhances memory. *Association for Chemoreception Sciences*, 2012, Huntington Beach, CA.
  91. Sadrian, B. and Wilson, D.A. Top-down regulation of odor processing in the piriform cortex. *Society for Neurosciences Abstracts*, 2012, New Orleans, LA.
  92. Barnes, D. and Wilson, D.A. Dreaming odors: CS replay during slow-wave sleep enhances odor memory consolidation *Society for Neurosciences Abstracts*, 2012, New Orleans, LA.
  93. Xu, W., Lauer, S.L., Levy, E. and Wilson, D.A. The effect of A-beta accumulation in piriform cortex on single-unit olfactory processing. *Society for Neurosciences Abstracts*, 2012, New Orleans, LA.
  94. Barnes, D. and Wilson, D.A. Suppression of association synapses in piriform cortex during post-training sleep impairs odor memory selectivity. *Association for Chemoreception Sciences*, 2013, Huntington Beach, CA.
  95. Sadrian, B. and Wilson, D.A. Influences of lateral amygdala activation on piriform cortical odor processing. *Association for Chemoreception Sciences*, 2013, Huntington Beach, CA.
  96. Xu, W., Lauer, S., Schoen, C., Lopez-Guzman, M. and Wilson, D.A. The effect of A $\beta$  accumulation on odor processing in anterior piriform cortex. *Association for Chemoreception Sciences*, 2013, Huntington Beach, CA.
  97. Coureaud, G., Thomas-Danguin, T., Wilson, D.A. and Ferreira, G. Evidence of neonatal memory of odor configuration. *Association for Chemoreception Sciences*, 2013, Huntington Beach, CA.
  98. Cohen, Y., Wilson, D.A., and Barkai, E. Differential modifications of synaptic weights during odor rule learning: dynamics of interaction between the piriform cortex with lower and higher brain areas.

- Association for Chemoreception Sciences*, 2013, Huntington Beach, CA.
99. Barnes, D.C. and Wilson, D.A. Suppression of association synapses in piriform cortex during post-training sleep impairs odor memory selectivity. *Society for Neurosciences Abstracts*, 2013, San Diego, CA.
  100. Sarro, E.C., Sullivan, D.A. and Wilson, D.A. Developmental and maternal regulation of infant brain state. *Society for Neurosciences Abstracts*, 2013, San Diego, CA.
  101. Kaur, G., Ajay, S., Xu, W., Ohno, M., Wilson, D.A., Guilfoyle, D. and Levy, E. Aberrant glutamatergic transmission and behavioral deficits in a murine model of Down's syndrome. *Society for Neurosciences Abstracts*, 2013, San Diego, CA.
  102. Barnes, D.C. and Wilson, D.A. Acuity of Odor Memory is Shaped by Sleep, *Association for Chemoreception Sciences*, 2014, Fort Myers, FL.
  103. Coureaud, G., Thierry Thomas-Danguin, T., Datiche, F., Wilson, D.A. and Guillaume and Ferreira, G. Persistence in memory of configural odor mixture and components in the newborn rabbit. *Association for Chemoreception Sciences*, 2014, Fort Myers, FL.
  104. Courtiol, E. and Wilson, D.A. A first step toward the understanding of the role of the thalamus in olfaction: Characterizing odor processing in the mediodorsal thalamus of the rat. *Association for Chemoreception Sciences*, 2014, Fort Myers, FL.
  105. Cohen, Y., Putrino, D. and Wilson, D.A. Functional dynamic of cortical lateralization during olfactory discrimination learning. *Association for Chemoreception Sciences*, 2014, Fort Myers, FL.
  106. Sadrian, B. and Wilson, D.A. Modulation of activity in the piriform cortex by optogenetic stimulation of descending inputs. *Association for Chemoreception Sciences*, 2014, Fort Myers, FL.
  107. Xu, W., Nixon, R.A., Levy, E. and Wilson, D.A. Piriform cortical single-unit odor coding and behavioral odor perception in an Alzheimer's Disease mouse model is affected by the presence of APP metabolites. *Association for Chemoreception Sciences*, 2014, Fort Myers, FL.
  108. Wilson, D.A., Saito, M., Sullivan, R.M. Early life adversity induces adult sleep fragmentation. *Eighth Forum of European Neuroscience*, 2014, Milan, ITALY.
  109. Courtiol, E. and Wilson, D.A. The olfactory thalamus: characterizing single-unit activity of the mediodorsal thalamic nucleus in behaving rats. *Association for Chemoreception Sciences*, 2015, Fort Myers, FL.
  110. Sadrian, B. and Wilson, D.A. Limbic System Modulation of Olfactory Cortex. In Symposium "Feedback and Modulation in Chemical Senses". *Association for Chemoreception Sciences*, 2015, Fort Myers, FL.
  111. Cohen, Y., Putrino, D. and Wilson, D.A. Transient asymmetry in primary and higher order olfactory cortex during odor learning. Society for Neuroscience Annual Meeting, Chicago, IL 2015
  112. Courtiol, E. and Wilson, D.A. The olfactory thalamus: characterizing single-unit activity of the mediodorsal thalamic nucleus in behaving rats. Society for Neuroscience Annual Meeting, Chicago, IL 2015
  113. Wilson, D.A., Masiello, K., Lewin, M.P., Hui, M., Smiley, J.F. and Saito, M. Developmental ethanol exposure-induced sleep fragmentation predicts adult cognitive impairment. Gordon Research Conference, Sleeping Regulation and Function: Functions of Sleep in Body and Brain, Galveston, TX 2016



## Graduate Students/Post-doctoral associates

| <u>Name</u>                | <u>Degree (funding acquired)</u>         | <u>Next Position</u>   |
|----------------------------|--|--|
| William Hamrick            | MS, 1993                                 | Drug addiction counselor   |
| Rebecca Smart              | MS, 1994                                 | CUNY PhD program   |
| Theresa Young              | MS, 1999                                 | NIH technician   |
| Carol Ho-Wing Leung        | MS, 2002                                 | U Singapore PhD program  |
| Aaron Best                 | MS, 2002/PhD, 2005                       | Post-doc, Harvard Med School   |
| Max Fletcher               | MS, 2002/PhD, 2005 (NIH F31)             | Postdoc, Yale Med School   |
| Mikiko Kadohisa, Ph.D.     | Postdoc, 2004- 2006                      | Scientist, MRC Cognition and Brain Sciences Unit, Cambridge, U.K.        |
| Heather Bell               | MS, 2007                                 | Shedd Aquarium, Chicago  |
| Dipesh Chaudhury, Ph.D.    | Postdoc, 2009-2010                       | Postdoc, Mt. Sinai School of Medicine                                    |
| Chein-Fu Fred Chen         | Ph.D. student, 2005-2011                 | Post-doc, Columbia University  |
| Daniel Wesson, Ph.D.       | Postdoc, 2008-2011 (NSF)                 | Assist Prof, Case Western Reserve U.                                     |
| Xiaodan Yan, M.S.          | Ph.D. rotation student, 2010             |  |
| Julie Chapuis, Ph.D.       | Postdoc, 2009-2012 (Fyssen Found.)       |  |
| Dylan Barnes               | Ph.D. student 2008-2014 (NIH F31)        | Postdoc, U. Oklahoma   |
| Benjamin Sadrian, Ph.D.    | Postdoc, 2010-2015 (NIH T32)             | Research Scientist, California Institute of Biomedical Research (CALIBR) |
| WenJin Jimmy Xu, Ph.D.     | Postdoc, 2011-2014                       | Research Scientist, Psychogenics   |
| Yaniv Cohen, Ph.D.         | Postdoc, 2012- <i>present</i>            |  |
| Emmanuelle Courtiol, Ph.D. | Postdoc, 2013- <i>present</i> (NIH R03)  |  |
| Monica Lewin               | Ph.D. student, 2015- <i>present</i>      |  |
| Catia Teixeira, Ph.D.      | Research Scientist, 2015- <i>present</i> |  |