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Robert P. Lane *Curriculum Vitae*

Assistant Professor,
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Education:

B.A., 1986	Colgate University, Hamilton, NY., U.S.A.
Ph.D., 1997	California Institute of Technology, Pasadena, CA., U.S.A.

Professional Experience

Graduate student 1989-1996	Professor William J. Dreyer California Institute of Technology Thesis: Evolution of the Neural Immunoglobulin Supergene Family and Functional Studies of One of its Members.
Postdoctoral Fellow 1997-2000	Professor Leroy Hood Department of Molecular Biotechnology University of Washington (until Oct. 2000) Institute for Systems Biology Seattle, WA., U.S.A.
Postdoctoral Fellow 2000-2002	Professor Barbara J. Trask Department of Molecular Biotechnology University of Washington (until Oct. 2000) Fred Hutchinson Cancer Research Center Seattle, WA, U.S.A.
Assistant Professor 2002-present	Department of Molecular Biology and Biochemistry Wesleyan University Middletown, CT, U.S.A.
Governance 2005-2008	Elected to Program Committee of the Association of Chemosensory Sciences

Honors/Awards:

Chemistry Award 1983	Most Promising Young Scientist Colgate University, Hamilton NY.
Dean's List 1982-1986	Awarded all eight semesters Colgate University, Hamilton NY.
Biology Highest Honors 1986	Top student among graduating biology students Colgate University, Hamilton NY.
Summa Cum Laude 1986	Second-highest GPA in graduating class of 1986 Colgate University, Hamilton NY.
Phi Beta Kappa 1986	Colgate University, Hamilton NY.
NIH Training Grant 1996-1999	Recipient for postdoctoral research. University of Washington, Seattle WA.
Wesleyan Project Grant 2002	Recipient for research funding
NIH R01-DC006267-01 2003-2008	$1.7 million award for research on olfactory receptor gene regulation and evolution. Wesleyan University.

Publications:

Lane, R. P., X-N Cheng, K. Yamakawa, J. Vielmetter, J. Korenberg, and W. J. Dreyer (1996). Characterization of a highly conserved human homolog to the chicken neural cell surface protein Bravo/Nr-CAM that maps to chromosome band 7q31. *Genomics* **35**, 456-465.

Vielmetter, J., X-N Cheng, K. Yamakawa, F. Miskevich, **R. P. Lane**, J. Korenberg, and W. J. Dreyer (1997). Molecular characterization of human neogenin, a DCC-related protein, and mapping of its gene to chromosomal position 15q22.3-q23. *Genomics* **41**, 414-421.

Rowen L., Wong G. K., **Lane R. P.**, and Hood L. (2000) Intellectual property. Publication rights in the era of open data release policies. *Science* **289**, 1881.

Fitzli, D., Stoeckli E. T., Kunz S., Siribour K., Rader C., Kunz B., Kozlov S. V., Buchstaller, A., **Lane R. P.**, Suter D. M., Dreyer W. J., and Sonderegger P. (2000). A direct interaction of axonin-1 with NgCAM-related cell adhesion molecule (NrCAM) results in guidance, but not growth of commissural axons. *J. Cell Biol*. **149**, 951-968.

Lane, R. P., Cutforth T., Young J., Athanasiou M., Friedman C., Rowen L., Evans G., Axel R., Hood L., and Trask B. J (2001). Genomic analysis of orthologous mouse and human olfactory receptor loci. *Proc Natl Acad Sci U.S.A*. **98**, 7390-7395.

Lane, R. P., Cutforth T., Friedman C., Axel R., Trask B. J., and Hood L (2002). Genomic analysis of the murine chromosome-6 vomeronasal receptor gene cluster reveals common promoter motifs and a history of local duplication. *Proc Natl Acad Sci U.S.A*. **99**, 291-296

Lane, R. P., Roach J., Lee, I., Boysen C., Smit A., Trask B. J., and Hood L (2002). Genomic analysis of the olfactory receptor region of the mouse and human T-cell receptor alpha/delta loci. *Genome Research* **12**, 81-87

Young J. M., Shykind B. M., **Lane R. P**., Tonnes-Priddy L., Ross J. A., Walker M., Williams E. M., and Trask B. J. (2003). Odorant receptor expressed sequence tags demonstrate olfactory expression of over 400 genes, extensive alternate splicing and unequal expression levels. *Genome Biol*. **4**, R71.

Lane, R. P., Young J., Newman T., and Trask B. (2004). Species specificity in rodent pheromone receptor repertoires. *Genome Res*. 14: 603-608.

Young, J., Kambere, M.-J., Trask, B. J., and **Lane, R. P.** (2005). Divergent V1R repertoires in five species: amplification in rodents, decimation in primates, and a surprisingly small repertoire in dogs. Genome Res. 15: 231-40.

Lane, R. P., Smutzer, G. S., and Doty, R. L. (2005). The Sense of Smell. In: Encyclopedia of Molecular Cell Biology and Molecular Medicine. R.A. Meyers, Ed. Volume 12. Second Edition. Wiley, pp. 637-705.

Kambere, M-J., and **Lane, R. P.** (2007). Co-regulation of large and rapidly evolving repertoires of odorant receptor genes. BMC Neurosci. 8(Suppl 3): S2.

Stewart, R. and **Lane, R. P.** (2007). V1R promoters are well conserved and exhibit common putative regulatory motifs. BMC Genomics. 8: 253.

Lane, R. P., Smutzer, G. S., and Doty, R. L. (2008). Sense of smell. In: Neurobiology, From Molecular Basis to Disease. R. A. Meyers, Ed. Volume 1. Weinheim: Wiley-VCH Verlag, pp. 163-232.

Kambere, M-J., and **Lane, R. P.** V1R gene families reside at heterochromatic, LINE1-rich loci (submitted to Genomics).

Pathak, N., Johnson, P., Getman, M., and **Lane, R. P.** Odorant receptor (OR) gene choice is biased and non-clonal in two olfactory placode cell lines, and OR RNA is nuclear prior to differentiation of these lines (submitted to Journal Neurochemistry).

Stewart, R., Tachibana, T., Rice, M., and **Lane, R. P.** *LogoAlign*, a new motif-searching strategy for hierarchical datasets (in preparation).

Kurzweil, V., Getman, M., Green E. D., and **Lane, R. P.** Comparative sequence analysis of a V1R gene cluster between *mus musculus* and *mus spretus* (in preparation).