

Ethan Gahtan, Ph.D.

Curriculum Vitae

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Education

Ph.D. Cognitive and Biological Psychology, University of Minnesota, July, 1999. Minor: psychoneuroimmunology.

M.A. Cognitive and Biological Psychology, University of Minnesota, September, 1995. Minor: Statistics.

B.A. Psychology, Macalester College, May, 1993.

Employment

- 2005-Present: Humboldt State University. Professor of Psychology, Adjunct Professor of Biology.
- 2004-2005: UMass Amherst. Assistant Professor of Psychology.
- 2002-2004: University of California, San Francisco. Post-Doctoral Fellow, Department of Physiology.
- 1999-2002: Northeastern University, Post-doctoral fellow in Biology, Adjunct Professor in Psychology
- 1996-1999: University of Minnesota, Graduate Research Assistant, Department of Psychology
- 1995-1996: Weizmann Institute of Science, Research Assistant, Department of Neurobiology
- 1993-1995: University of Minnesota, Graduate Research Assistant, Department of Psychiatry

Publications

1. Jones, EF, Butler, G, Trendafilova, D, Mendez, MS, Jernigan, JA, Gahtan, E, Steele, J. In vivo tracking of KCC2b expression during early brain development. *Journal of Comparative Neurology*. *In Press*
2. Bishop BH, Spence-Chorman N, Gahtan E. (2016) Three-dimensional motion tracking reveals a diving component to visual and auditory escape swims in zebrafish larvae. *J Exp Biol*. 219(Pt 24):3981-3987. DOI: 10.1242/jeb.147124
3. Stednitz SJ, Freshner B, Shelton S, Shen T, Black D, Gahtan E. (2015). Selective toxicity of L-DOPA to dopamine transporter-expressing neurons and locomotor behavior in zebrafish larvae. *Neurotoxicol Teratol*. 52(Pt A):51-6. doi: 10.1016/j.ntt.2015.11.001.
4. Bass EC, Stednitz SJ, Simonson K, Shen T, Gahtan E. (2014) Physiological stress reactivity and empathy following social exclusion: a test of the defensive emotional analgesia hypothesis. *Social Neuroscience*, 9(5): 504-13.
5. Mark, Q., Gahtan, E. (2013). Did sexual selection and culture interact in the evolution of human height? *Journal of Social, Evolutionary, and Cultural Psychology*, 7(2), 121-137.
6. Griffiths, B.B., Schoonheim, P.J., Ziv, L., Voelker, L., Baier, H., Gahtan, E. (2012). A zebrafish model of glucocorticoid resistance shows serotonergic modulation of the stress response. *Frontiers Beh Neuro*, 6: 68
7. Stobb, M., Peterson, J.M., Mazzag, B., Gahtan, E. (2012). Graph theoretical model of a sensorimotor connectome in zebrafish. *PLoS One*, 7(5):e37292.
8. Peterson, J.M., Stobb, M., Mazzag, B., Gahtan, E. (2012). Computational Graph Theoretical Model of the Zebrafish Sensorimotor Pathway. *Conference Proceedings of the American Institute of Physics (AIP)*, 1368, pp. 139-142; doi: <http://dx.doi.org/10.1063/1.3663479>
9. Holden, J.M., Meyers-Manor, J.E., Overmier, J.B., Gahtan, E., Sweeney, W., Miller, H. (2008). Lipopolysaccharide-induced immune activation impairs attention but has little effect on short-term working memory. *Behavioral and Brain Research*, 12;194(2):138-45.
10. Muto, A., Orger, M.B., Wehman, A.M., Smear, M.C., Kay, J.N., Page-McCaw, P.S., Gahtan, E., Xiao, T., Nevin, L.M., Gosse, N.J., Staub, W., Finger-Baier, K., Baier, H. (2005). *Forward Genetic Analysis of Visual Behavior in Zebrafish*. *PLoS Genetics*, 25;1(5):e66.
11. Gahtan, E., Tanger, P., Baier, H. (2005). Visual prey capture in larval zebrafish is controlled by identified reticulospinal neurons downstream of the tectum. *Journal of Neuroscience*, 25(40):9294-303.
12. Orger MB, Gahtan E, Muto A, Page-McCaw P, Smear MC, Baier H. (2004). Behavioral screening assays in zebrafish. *Methods in Cell Biology*, 77:53-68.

13. O'Malley, D., Sankrithi, N.S., Borla, M.A., Parker, S., Banden, S., Gahtan, E., Detrich, H.W.III. (2004). Optical Physiology and Locomotor Behaviors of Wild-Type and Nacre Zebrafish. *Methods in Cell Biology*. 76:261-84.
14. Gahtan, E., Baier, H. (2004). Of lasers, mutants, and see-through brains: functional neuroanatomy in zebrafish. *Journal of Neurobiology*, 59(1):147-61.
15. O'Malley, D.M., Zhou, Q., and Gahtan, E. (2003). Probing neural circuits in the zebrafish: a suite of optical techniques. *Methods*. 30(1):49-63.
16. Gahtan, E., O'Malley, D.M. (2003). Visually guided injection of identified reticulospinal neurons in zebrafish: a survey of spinal arborization patterns. *Journal of Computational Neurology*, 459(2):186-200.
17. Gahtan, E., Sankrithi, N., Campos, J.B., O'Malley, D.M. (2002). Evidence for a widespread brain stem escape network in larval zebrafish. *Journal of Neurophysiology*, 87(1):608-14.
18. Lim, G.P., Yang, F., Chu, T., Gahtan, E., Ubeda, O., Beech, W., Overmier, J.B., Hsiao-Ashe, K., Frautschy, S.A. and Cole, G.M. (2001). Ibuprofen effects on Alzheimer's pathology and open field activity in APPsw transgenic mice. *Neurobiology of Aging*, 22(6): 983-991:
19. Gahtan, E. and O'Malley, D.M. (2001). Lesioning and Reconstruction of Large Numbers of Identified Neurons in the Vertebrate CNS. *Journal of Neuroscience Methods*, 108:97-110.
20. Gahtan, E. and Overmier, J.B. (2001). Performance more than working memory disrupted by acute systemic inflammation in rats in appetitive tasks. *Physiology and Behavior*, 73(1-2): 201-210.
21. Gahtan, E. and Overmier, J.B. (1999). Inflammatory pathogenesis in Alzheimer's disease: biological mechanisms and cognitive sequeli. *Neuroscience and Biobehavioral Reviews*, 23, 615-633.
22. Overmier, J.B., and Gahtan, E. (1998). Psychoneuroimmunology: The final hurdle. *Integrative Physiological and Behavioral Science*, 33(2): 137-140.
23. Gahtan, E., Aurbach, J.M., Groner, Y. and Segal, M. (1998) Reversible impairment of long-term potentiation in Cu/ZnSOD mice. *European Journal of Neuroscience*, 10(2): 538-544.
24. Gahtan, E., LaBounty, L.P., Wyvell, C. and Carroll, M.E. (1996). The relationship among saccharin consumption, oral ethanol, and IV cocaine self-administration. *Pharmacology Biochemistry and Behavior*, 53 (4), 919-925.

Meeting Presentations

1. E. GAHTAN, E. F. JONES, G. BUTLER, L. JERNIGAN, M. S. MENDEZ, J. STEELE. In vivo tracking of KCC2b expression during early brain development. *Neuroscience 2022*, San Diego, November 12-16, 2022.
2. Bishop, B.H., Freshner, B.C., and Gahtan, E. Light-evoked diving reflex in zebrafish larvae. *Neuroscience 2015*, Chicago, October 17-21, 2015.
3. Stednitz, S., Shelton, S., Shen, T., Black, D., Lapolla, N., Freshner, B., Hartsuyker, K., Gahtan, E. Dopamine toxicity and oxidative stress in zebrafish larvae as a model of Parkinson's disease neuropathology. *Neuroscience 2014*, Washington, DC, November 9-14, 2014.
4. Wannigman, K., Blackwell, R., Gahtan, E. COMT and serotonin transporter alleles as predictors of hypnotic susceptibility. *Neuroscience 2014*, Washington, DC, November 9-14, 2014.
5. Lapolla, N., Bishop, B., Cibotti, J., Stednitz, S., Gahtan, E. The emotional response to social gaze is a domain specific cognitive mechanism. *Neuroscience 2014*, Washington, DC, November 9-14, 2014.
6. Stednitz, S., Black, D., LaPolla, N., Shen, T., Shelton, A. Dopamine toxicity and oxidative stress in zebrafish larvae as a model of Parkinson's disease neuropathology. *Faculty for Undergraduate Neuroscience Poster Session at Neuroscience 2013*, San Diego, CA, November 11, 2013.
7. Bass, E.C., Stednitz, A., Simonson, K., Gahtan, E. Physiological Stress Reactivity and Empathy Following Social Exclusion. *Neuroscience 2013*, San Diego, CA, November 9-13, 2013. Abstract Number 665.18/HHH40.
8. Helm-Burger, N., Gahtan, E. No evidence for a proprioceptive function of the lateral line in zebrafish larvae. *Neuroscience 2012*, New Orleans, LA, October 13-17, 2012. Abstract Number 788.06/QQ19.
9. Gallander, K., Gahtan, E. Neurobiological and genetic markers in schizophrenia: A theoretical replication using the Allen Institute for brain science online database. *Neuroscience 2012*, New Orleans, LA. October 13-17, 2012. Abstract Number 356.22/V15
10. Gahtan, E., Mazzag, B., Stobb, M., Peterson, J., Sturchio, G. Graph analysis of a zebrafish sensorimotor

connectome. *Neuroscience 2011*, Nov 15. Abstract Number 621.22/YY59

11. Eckerd, L., Simonson, K., Gahtan, E. Prolonged Grief and a Known Stress Vulnerability Gene. *ADEC 33rd Annual Conference and the 9th International Conference on Grief and Bereavement in Contemporary Society*, on June 23rd, 2011, in Miami, FL.
12. Stobb, M., Peterson, J., Mazzag, B., Gahtan, E. A Model of the Zebrafish Sensorimotor Pathway: A Graph Theoretic Approach. *23rd Annual CSU Biotechnology Symposium*, Anaheim, CA, Jan 2011
13. Baier, H., Ziv, L., Muto, A., Schoonheim, P., Gahtan, E. Depression-like behavior in zebrafish mutants with disruption of the glucocorticoid receptor. *Neuroscience 2010*, Nov 17. Abstract Number 884.1/SS11
14. Wilcox, E., Jones, S., Gahtan, E. Concern for the distant future is guided by genetic investments with diminishing returns" *AAAS Annual Meeting*, Feb 2010, San Diego
15. Mark, Q., Gahtan, E. Evolution Of Human Height: the role of Social Change. *American Psychology Association Annual Convention*, July 2009, Toronto CA
16. Gahtan, E., Griffiths, B., Gould, E. Glucocorticoid receptor blockade disrupts circadian behavioral activity in zebrafish. *Neuroscience 2008*, Nov 18. Abstract Number 576.14/PP18
17. Orger, M.B., Smear, M.C., Muto, A., Gahtan, E., Kay, J.N., Baier, H. Mutants affecting the optomotor response of zebrafish. *Society for Neuroscience 34th Annual Meeting*, San Diego, CA, Oct 23-27, 2004.
18. Gahtan, E., Baier, H. Tectal lesions and mutations affecting visually guided behaviors in zebrafish. *Society for Neuroscience 33rd Annual Meeting*, New Orleans, LA, Nov 8-12, 2003
19. Gahtan, E., Sankrithi, N., O'Malley, D.M. Optical investigation of descending motor control in the zebrafish: linking anatomy, physiology and behavior. *American Association of Anatomists Annual Meeting at Experimental Biology 2003*. San Diego, California, April 11 – 15, 2003
20. Gahtan, E. and O'Malley, D.M. Locomotor function and anatomy of identified brainstem neurons in zebrafish larvae. *5th International Conference on Zebrafish Development and Genetics*. Madison, WI, June 12-16, 2002
21. Sankrithi, N. S.; Gahtan, E.; Campos, J. B.; O'Malley, D. M. Evidence for a widespread brainstem escape network in larval zebrafish. *Society for Neuroscience 31st Annual Meeting*, San Diego, CA Nov 10-15, 2001.
22. Gahtan, E. and O'Malley, D.M. Analysis of Spontaneous activity in control and reticulospinal ablated zebrafish larvae. *Society for Neuroscience 30th Annual Meeting*, New Orleans, LA. November 4-10, 2000
23. Lim, G.P., Tran, T., Ubeda, F., Yank, T., Chu, W., Beech, E., Gahtan, E., Sigel, J.J., Miller, S., Hsiao, K., Cole, G.M. The effect of ibuprofen on synaptic markers and open field activity in HuAPPsw mice. *Society for Neuroscience 29th Annual Meeting*, Miami, FL., Oct 23-28, 1999
24. Gahtan, E. and Overmier, J.B. Does acute systemic inflammation disrupt short-term memory processes? *Cytokines in the Brain: A satellite symposium to the Society for Neuroscience 27th Annual Meeting*, New Orleans, October 23-25, 1997.
25. Gahtan, E., Aurbach, J.M., Groner, Y. and Segal, M. Over-expression of Cu/ZnSOD and S100 β genes is linked to impaired learning and hippocampal LTP. *Society for Neuroscience 26th Annual Meeting*, Washington, D.C., November 16-21, 1996.

Grants, Fellowships and Awards

- Humboldt state University, Research, Scholarship, and Creative Activities Award (\$4,900). Project title: Why neurons die in Parkinson's and how they might be saved: the role of intracellular calcium. March, 2016.
- National Science Foundation, Integrative Organismal Systems, Individual Investigator Award (\$653,816.00 awarded). Project title: Synaptic Organization and Function of Reticulospinal Sensorimotor Pathways. Award Number 0823358. August 2008 – July 2014.
- Alistar and Judith McCrone Promising Faculty Scholar Award, Humboldt State University, 2007.
- Healey Endowment Grant, University of Massachusetts. May, 2004 – April, 2005
- Post-doctoral fellowship: National Institutes of Health National Research Service Award (NRSA). September, 2000 -September, 2003.
- Pre-doctoral fellowship: NIDA Training grant in Psychoneuroimmunology to the Minnesota Medical Research Foundation. September, 1996 – July 1999.

- American Psychological Association Dissertation Research Award. January, 1999.
- University of Minnesota Graduate School Doctoral Dissertation Special Grant. December, 1998.
Predoctoral Research Award of the Sigma Xi Scientific Research Society. May, 1998.
- Graduate Research Grant, University of Minnesota Department of Psychology. April, 1998.

Professional Memberships

- Society for Neuroscience