



INIStress Consortium Publications 2009

F. N. Abu-Khzam, J. D. Eblen, M. A Langston, AD. Perkins, C.A Phillips and G. L. Rogers. "Using Out-of-Core Techniques to Produce Exact Solutions to the Maximum Clique Problem on Extremely large Graphs," Proceedings, ACS/IEEE International Conference on Computer Systems and Applications, Rabat, Morocco, May, 2009.

Badea A, Johnson GA, Williams RW. Genetic dissection of the mouse brain using high-field magnetic resonance microscopy. *Neuroimage*. 2009 May 1;45(4):1067-79. Epub 2009 Jan 24. PMID: 19349225, PMCID: PMC2667384.

Baker EJ, Jay JJ, Philip VM, Zhang Y, Li Z, Kirova R, Langston MA, Chesler EJ. Ontological discovery environment: a system for integrating gene-phenotype associations. *Genomics*. 2009 Dec;94(6):377-87. Epub 2009 Sep 3. PMID: 19733230, PMCID: PMC2783409.

Beiter T, Reich E, Williams RW, Simon P. Antisense transcription: a critical look in both directions. *Cell Mol Life Sci*. 2009 Jan;66(1):94-112. Review. PMID: 18791843.

Borate BR, Chesler EJ, Langston MA, Saxton AM, Voy BH. Comparison of threshold selection methods for microarray gene co-expression matrices. *BMC Res Notes*. 2009 Dec 2;2:240. doi: 10.1186/1756-0500-2-240. PMID: 19954523; PMCID: PMC2794870.

Brigman JL, Mathur P, Lu L, Williams RW, Holmes A. Genetic relationship between anxiety-related and fear-related behaviors in BXD recombinant inbred mice. *Behav Pharmacol*. 2009 Mar;20(2):204-9. doi: 10.1097/FBP.0b013e32830c368c. PMID: 18830130; PMCID: PMC2701299.

Brookshire BR, Jones SR. Direct and indirect 5-HT receptor agonists produce gender-specific effects on locomotor and vertical activities in C57 BL/6J mice. *Pharmacol Biochem Behav*. 2009 Nov;94(1):194-203. doi: 10.1016/j.pbb.2009.08.008. Epub 2009 Aug 19. PMID: 19698737; PMCID: PMC2768771.

Campbell JC, Szumlinski KK, Kippin TE. Contribution of early environmental stress to alcoholism vulnerability. *Alcohol*. 2009 Nov;43(7):547-54. doi:10.1016/j.alcohol.2009.09.029. Review. PubMed PMID: 19913199; PubMed Central PMCID: PMC3096452.

Carneiro AM, Airey DC, Thompson B, Zhu CB, Lu L, Chesler EJ, Erikson KM, Blakely RD. Functional coding variation in recombinant inbred mouse lines reveals multiple serotonin transporter-associated phenotypes. *Proc Natl Acad Sci U S A*. 2009 Feb 10;106(6):2047-52. Epub 2009 Jan 28. PMID: 19179283, PMCID: PMC2632716.

E. J. Chesler, R. Kirova, M. A Langston, X. Peng and A D. Perkins. "A Systems Genetic Analysis of Chronic Fatigue Syndrome: Combinatorial Data Integration from SNPs to Differential Diagnosis of Disease," in Methods of Microarray Data Analysis VI (J. Cuticchia and S. M. Lin, editors), CreateSpace Publishing, 2009, 81 -98.

Clermont G, Auffray C, Moreau Y, Rocke DM, Dalevi D, Dubhashi D, Marshall DR, Raasch P, Dehne F, Provero P, Tegner J, Aronow BJ, Langston MA, Benson M. Bridging the gap between systems biology and medicine. *Genome Med.* 2009 Sep 29;1(9):88. doi: 10.1186/gm88. PMID: 19754960; PMCID: PMC2768995.

Dai J, Wang X, Chen Y, Wang X, Zhu J, Lu L. Expression quantitative trait loci and genetic regulatory network analysis reveals that Gabra2 is involved in stress responses in the mouse. *Stress.* 2009 Feb 12:6. PMID: 19212922.

Daunais JB, Kraft RA, Davenport AT, Burnett EJ, Maxey VM, Szeliga KT, Rau AR, Flory GS, Hemby SE, Kroenke CD, Grant KA, Friedman DP. MRI-guided dissection of the nonhuman primate brain: a case study. *Methods.* 2010 Mar;50(3):199-204. doi:10.1016/j.ymeth.2009.03.023. Epub 2009 Apr 11. PubMed PMID: 19364532; PubMed Central PMCID: PMC2828512.

J. D. Eblen, I. C. Gerling, M. A Langston, A M. Saxton, J. Wu and J. R. Snoddy."Graph Algorithms for Integrated Biological Analysis, with Applications to Type 1 Diabetes Data," in Clustering Challenges in Biological Networks (S. Butenko, W. A Chaovatwongse and P. Pardalos, editors), World Scientific, 2009, 207 - 222.

Gaglani SM, Lu L, Williams RW, Rosen GD. The genetic control of neocortex volume and covariation with neocortical gene expression in mice. *BMC Neurosci.* 2009 May 9;10:44. doi: 10.1186/1471-2202-10-44. PMID: 19426526; PMCID: PMC2685397.

Geisert EE, Lu L, Freeman-Anderson NE, Templeton JP, Nassr M, Wang X, Gu W, Jiao Y, Williams RW. Gene expression in the mouse eye: an online resource for genetics using 103 strains of mice. *Mol Vis.* 2009 Aug 31;15:1730-63. PMID: 19727342, PMCID: PMC2736153.

Griffin WC 3rd, Lopez MF, Becker HC. Intensity and duration of chronic ethanol exposure is critical for subsequent escalation of voluntary ethanol drinking in mice. *Alcohol Clin Exp Res.* 2009 Nov;33(11):1893-900. doi:10.1111/j.1530-0277.2009.01027.x. Epub 2009 Aug 10. PubMed PMID: 19673744; PubMed Central PMCID: PMC2995298.

Griffin WC 3rd, Lopez MF, Yanke AB, Middaugh LD, Becker HC. Repeated cycles of chronic intermittent ethanol exposure in mice increases voluntary ethanol drinking and ethanol concentrations in the nucleus accumbens. *Psychopharmacology (Berl).* 2009 Jan;201(4):569-80. doi: 10.1007/s00213-008-1324-3. Epub 2008 Sep 13. PMID: 18791704; PMCID: PMC2590623.

Guo, A.Y., Webb, B.T., MILES, M.F., Zimmerman, M.P., Kendler, K.S., and Zhao, Z. ERGR: An ethanol-related gene resource. *Nucleic Acids Res.* 2009 Jan;37(Database issue):D840-5. Epub 2008 Oct 31. PMID: 18978021, PMCID: PMC2686553.

Helms CM, Rogers LS, Grant KA. Antagonism of the ethanol-like discriminative stimulus effects of ethanol, pentobarbital and midazolam in cynomolgus monkeys: comparison of Ro15-4513 and flumazenil. *J Pharmacol Exp Ther.* 2009 Jul 29. PMID: 19641166, PMCID: PMC2766226.

Jackson KJ, Walters CL, Miles MF, Martin BR, Damaj MI. Characterization of pharmacological and behavioral differences to nicotine in C57Bl/6 and DBA/2 mice. *Neuropharmacology.* 2009 Sep;57(4):347-55. Epub 2009 Jul 18. PMID: 19619563, PMCID: PMC2753410.

Kash TL, Baucum AJ 2nd, Conrad KL, Colbran RJ, Winder DG. Alcohol exposure alters NMDAR function in the bed nucleus of the stria terminalis. *Neuropsychopharmacology.* 2009 Oct;34(11):2420-9. Epub 2009 Jun 24. PMID: 19553918; PMCID: PMC2864644.

Koutnikova H, Markku L, Lu L, Combe R, Paananen J, Kuulasmaa T, Kuusisto J, Häring H, Hansen T, Pedersen,O, Smith U, Hanefel M, Williams RW, Auwerx J (2009) Identification of UBP1 as a critical blood pressure determinant. *PLoS Genetics* 5:e1000591. PMID: 19662162, PMCID: PMC2715105.

Kumar, S., Porcu, P., Werner, D.F., Matthews, D.B., and Morrow, A.L. The role of GABAA receptors in the acute and chronic actions of ethanol: A generation of progress. *Psychopharmacology* 205(4):529 -64 (2009). PMID: 19455309, PMCID: PMC2814770.

Läck AK, Christian DT, Diaz MR, McCool BA. Chronic ethanol and withdrawal effects on kainate receptor-mediated excitatory neurotransmission in the rat basolateral amygdala. *Alcohol*. 2009 Feb;43(1):25-33. doi: 10.1016/j.alcohol.2008.11.002. PMID: 19185207; PMCID: PMC2662731.

Mathews TA, Brookshire BR, Budygin EA, Hamre K, Goldowitz D, Jones SR. Ethanol-induced hyperactivity is associated with hypodopaminergia in the 22-TNJ ENU-mutated mouse. *Alcohol*. 2009 Sep;43(6):421-31. doi: 10.1016/j.alcohol.2009.04.006. PubMed PMID: 19801272; PubMed Central PMCID: PMC2782517.

McCool BA, Chappell AM. Early social isolation in male Long-Evans rats alters both appetitive and consummatory behaviors expressed during operant ethanol self-administration. *Alcohol Clin Exp Res*. 2009 Feb;33(2):273-82. PMID: 19032581, PMCID: PMC2633417.

McElligott ZA, Winder DG. Modulation of glutamatergic synaptic transmission in the bed nucleus of the stria terminalis. *Prog Neuropsychopharmacol Biol Psychiatry*. 2009 Nov 13;33(8):1329-35. Epub 2009 Jun 11. Review. PMID: 19524008; PMCID: PMC2783684.

Mobini R, Andersson BA, Erjefalt J, Hahn-Zoric M, Langston MA, Perkins AD, Cardell LO, Benson M. A module-based analytical strategy to identify novel disease-associated genes shows an inhibitory role for interleukin 7 Receptor in allergic inflammation. *BMC Syst Biol*. 2009 Feb 12;3:19. PMID: 19216740, PMCID: PMC2653464.

Morrow AL, Biggio G, Serra M, Becker HC, Lopez MF, Porcu P, Alward SE, O'Buckley TK. The role of neuroactive steroids in ethanol/stress interactions: proceedings of symposium VII at the Volterra conference on alcohol and stress, May 2008. 2009 Nov;43(7):521-30. PMCID: 2778608, PMCID: PMC2778608.

Morrow A.L. and Porcu P. Neuroactive steroid biomarkers of alcohol sensitivity and alcoholism risk. In: The Handbook of Neuropsychiatric Biomarkers, Endophenotypes and Genes. Volume 3: Metabolic and Peripheral Biomarkers. Editor: Ritsner M.S., Springer Science + Business Media B.V., Berlin. Chapter 31, pages 47 -57, 2009.

Oleson EB, Salek J, Bonin KD, Jones SR, Budygin EA. Real-time voltammetric detection of cocaine-induced dopamine changes in the striatum of freely moving mice. *Neurosci Lett*. 2009 Dec 25;467(2):144 -6. doi: 10.1016/j.neulet.2009.10.025. Epub 2009 Oct 12. PubMed PMID: 19822192; PubMed Central PMCID: PMC2787452.

Overall RW, Kempermann G, Peirce J, Lu L, Goldowitz D, Gage FH, Goodwin S, Smit G, Airey DC, Rosen GD, Schalkwyk LC, Sutter TR, Nowakowski R, Whatley S, Williams RW (2009) Systems genetics of the hippocampal transcriptome in 99 mouse strains. *Frontiers in Neurogenomics* 1:3.

Patel S, Kingsley PJ, Mackie K, Marnett LJ, Winder DG. Repeated homotypic stress elevates 2-arachidonoylglycerol levels and enhances short-term endocannabinoid signaling at inhibitory synapses in basolateral amygdala. *Neuropsychopharmacology*. 2009 Dec;34(13):2699-709. Epub 2009 Aug 12. PMID: 19675536; PMCID: PMC2881681.

Perkins AD, Langston MA. Threshold selection in gene co-expression networks using spectral graph theory techniques. *BMC Bioinformatics*. 2009 Oct 8;10 Suppl 11:S4. doi: 10.1186/1471-2105-10-S11-S4. PubMed PMID: 19811688; PubMed Central PMCID: PMC3152776.

Phan V, Olusegun George E, Tran QT, Goodwin S, Bodreddigari S, Sutter TR. Analyzing microarray data with transitive directed acyclic graphs. *J Bioinform Comput Biol*. 2009 Feb;7(1):135-56. PMID: 19226664; PMCID: PMC2743182.

Philip VM, Duvvuru S, Gomero B, Ansah TA, Blaha CD, Cook MN, Hamre KM, Lariviere WR, Matthews DB, Mittleman G, Goldowitz D, Chesler EJ. High-throughput behavioral phenotyping in the expanded panel of BXD recombinant inbred strains. *Genes Brain Behav.* 2010 Mar 1;9(2):129-59. doi: 10.1111/j.1601-183X.2009.00540.x. Epub 2009 Sep 22. PubMed PMID: 19958391; PubMed Central PMCID: PMC2855868.

Porcu P, O'Buckley TK, Alward SE, Song SC, Grant KA, de Wit H, Leslie Morrow A. Differential effects of ethanol on serum GABAergic 3alpha,5alpha/3alpha,5beta neuroactive steroids in mice, rats, cynomolgus monkeys, and humans. *Alcohol Clin Exp Res.* 2010 Mar 1;34(3):432-42. doi: 10.1111/j.1530-0277.2009.01123.x. Epub 2009 Dec 17. PubMed PMID: 20028362; PubMed Central PMCID: PMC2858248.

Porcu P, O'Buckley TK, Alward SE, Marx CE, Shampine LJ, Girdler SS, Morrow AL. Simultaneous quantification of GABAergic 3alpha,5alpha/3alpha,5beta neuroactive steroids in human and rat serum. *Steroids.* 2009 Apr-May;74(4-5):463-73. doi: 10.1016/j.steroids.2008.12.015. Epub 2009 Jan 13. PMID: 19171160; PMCID: PMC2832187.

Rosen GD, Pung CJ, Owens CB, Caplow J, Kim H, Mozhui K, Lu L, Williams RW. Genetic modulation of striatal volume by loci on Chrs 6 and 17 in BXD recombinant inbred mice. *Genes Brain Behav.* 2009 Apr;8(3):296-308. doi: 10.1111/j.1601-183X.2009.00473.x. Epub 2009 Jan 12. PMID: 19191878; PMCID: PMC2706028.

Saccone SF, Bierut LJ, Chesler EJ, Kalivas PW, Lerman C, Saccone NL, Uhl GR, Li CY, Philip VM, Edenberg HJ, Sherry ST, Feolo M, Moyzis RK, Rutter JL. Supplementing high-density SNP microarrays for additional coverage of disease-related genes: addiction as a paradigm. *PLoS One.* 2009;4(4):e5225. Epub 2009 Apr 21. PMID: 19381300, PMCID: PMC2668711.

Seggio JA, Fixaris MC, Reed JD, Logan RW, Rosenwasser AM. Chronic ethanol intake alters circadian phase shifting and free-running period in mice. *J Biol Rhythms.* 2009 Aug;24(4):304-12. doi: 10.1177/0748730409338449. PubMed PMID: 19625732; PubMed Central PMCID: PMC3049296.

Serra M, Pisu MG, Mostallino MC, Sanna E, Biggio. Social isolation stress-induced changes in allopregnanolone modulate GABAA receptor plasticity and function. Chapter 3 from: *Translational Neuroscience and its Advancements of Animal Research Ethics*, Warnick JE, Kauleff AV (Eds), Series: *Neuroscience Research Progress*, Nova Science Publisher, 2009. ISBN:978-1-60876-185-2.

Shen Q, Wang X, Chen Y, Xu L, Wang X, Lu L: Expression QTL and regulatory network analysis of microtubule-associated protein tau gene. *Parkinsonism and Related Disorders* 2009, Feb 21. PMID: 19233709.

Silberman Y, Bajo M, Chappell AM, Christian DT, Cruz M, Diaz MR, Kash T, Lack AK, Messing RO, Siggins GR, Winder D, Roberto M, McCool BA, Weiner JL. Neurobiological mechanisms contributing to alcohol-stress-anxiety interactions. *Alcohol.* 2009 Nov;43(7):509-19. doi: 10.1016/j.alcohol.2009.01.002. PMID: 19913194; PMCID: PMC2814297.

Song MJ, Lewis CK, Lance ER, Chesler EJ, Yordanova RK, Langston MA, Lodowski KH, Bergeson SE. Reconstructing generalized logical networks of transcriptional regulation in mouse brain from temporal gene expression data. *EURASIP J Bioinform Syst Biol.* 2009;545176. Epub 2009 Mar 17. PMID: 19300527, PMCID: PMC2656965.

Wang L, Chen X, Wolfinger RD, Franklin JL, Coffey RJ, Zhang B. A unified mixed effects model for gene set analysis of time course microarray experiments. *Stat Appl Genet Mol Biol.* 2009;8:Article 47. doi: 10.2202/1544-6115.1484. Epub 2009 Nov 7. PubMed PMID: 19954419; PubMed Central PMCID: PMC2861317.

Williams RW. Herding cats: the sociology of data integration. *Front Neurosci.* 2009 Sep 15;3(2):154-6. PMID: 20228863; PMCID: PMC2751652.