



## INIAstress Consortium Publications 2017

Adkins AE, Hack LM, Bigdeli TB, Williamson VS, McMichael GO, Mamdani M, Edwards AC, Aliev F, Chan RF, Bhandari P, Raabe RC, Alaimo JT, Blackwell GG, Moscati A, Poland RS, Rood B, Patterson DG, Walsh D; Collaborative Study of the Genetics of Alcoholism Consortium., Whitfield JB, Zhu G, Montgomery GW, Henders AK, Martin NG, Heath AC, Madden PAF, Frank J, Ridinger M, Wodarz N, Soyka M, Zill P, Ising M, Nöthen MM, Kiefer F, Rietschel M; German Study of the Genetics of Addiction Consortium., Gelernter J, Sherva R, Koesterer R, Almasy L, Zhao H, Kranzler HR, Farrer LA, Maher BS, Prescott CA, Dick DM, Bacanu SA, Mathies LD, Davies AG, Vladimirov VI, Grotewiel M, Bowers MS, Bettinger JC, Webb BT, Miles MF, Kendler KS, Riley BP. Genomewide Association Study of Alcohol Dependence Identifies Risk Loci Altering Ethanol-Response Behaviors in Model Organisms. *Alcohol Clin Exp Res.* 2017 May;41(5):911-928. doi: 10.1111/acer.13362. Epub 2017 Mar 30. PubMed PMID: 28226201; PubMed Central PMCID: PMC5404949.

Anderson RI, Becker HC. Role of the Dynorphin/Kappa Opioid Receptor System in the Motivational Effects of Ethanol. *Alcohol Clin Exp Res.* 2017 Aug;41(8):1402-1418. doi: 10.1111/acer.13406. Epub 2017 Jun 5. Review. PubMed PMID: 28425121; PubMed Central PMCID: PMC5522623.

Anthenelli RM, Heffner JL, Wong E, Tibbs J, Russell K, Isgro M, Dinh E, Wehrle C, Worley MJ, Doran N. A Randomized Trial Evaluating Whether Topiramate Aids Smoking Cessation and Prevents Alcohol Relapse in Recovering Alcohol-Dependent Men. *Alcohol Clin Exp Res.* 2017 Jan;41(1):197-206. doi: 10.1111/acer.13279. Epub 2016 Dec 28. PubMed PMID: 28029173; PubMed Central PMCID: PMC5310526.

Baud A, Mulligan MK, Casale FP, Ingels JF, Bohl CJ, Callebert J, Launay JM, Krohn J, Legarra A, Williams RW, Stegle O. Genetic Variation in the Social Environment Contributes to Health and Disease. *PLoS Genet.* 2017 Jan 25;13(1):e1006498. doi: 10.1371/journal.pgen.1006498. eCollection 2017 Jan. PubMed PMID: 28121987; PubMed Central PMCID: PMC5266220.

Beattie MC, Maldonado-Devincci AM, Porcu P, O'Buckley TK, Daunais JB, Grant KA, Morrow AL. Voluntary ethanol consumption reduces GABAergic neuroactive steroid (3 $\alpha$ ,5 $\alpha$ )3-hydroxypregnan-20-one (3 $\alpha$ ,5 $\alpha$ -THP) in the amygdala of the cynomolgus monkey. *Addict Biol.* 2017 Mar;22(2):318330. doi: 10.1111/adb.12326. Epub 2015 Dec 2. PubMed PMID: 26625954; PubMed Central PMCID: PMC4896863.

Becker HC. Influence of stress associated with chronic alcohol exposure on drinking. *Neuropharmacology.* 2017 Aug 1;122:115-126. doi: 10.1016/j.neuropharm.2017.04.028. Epub 2017 Apr 19. Review. PubMed PMID: 28431971; PubMed Central PMCID: PMC5497303.

Bogenpohl JW, Mignogna KM, Smith ML, Miles MF. Integrative Analysis of Genetic, Genomic, and Phenotypic Data for Ethanol Behaviors: A Network-Based Pipeline for Identifying Mechanisms and Potential Drug Targets. *Methods Mol Biol.* 2017;1488:531-549. PubMed PMID: 27933543; PubMed Central PMCID: PMC5152688.

Cannady R, McGonigal JT, Newsom RJ, Woodward JJ, Mulholland PJ, Gass JT. Prefrontal Cortex K(Ca)<sub>2</sub> Channels Regulate mGlu(5)-Dependent Plasticity and Extinction of Alcohol-Seeking Behavior. *J Neurosci*. 2017 Apr 19;37(16):4359-4369. doi: 10.1523/JNEUROSCI.2873-16.2017. Epub 2017 Mar 20. PubMed PMID: 28320841; PubMed Central PMCID: PMC5413180.

Cervera-Juanes R, Wilhelm LJ, Park B, Grant KA, Ferguson B. Alcohol-dose-dependent DNA methylation and expression in the nucleus accumbens identifies coordinated regulation of synaptic genes. *Transl Psychiatry*. 2017 Jan 10;7(1):e994. doi: 10.1038/tp.2016.266. PubMed PMID: 28072409; PubMed Central PMCID: PMC5545731.

Cervera-Juanes R, Wilhelm LJ, Park B, Grant KA, Ferguson B. Genome-wide analysis of the nucleus accumbens identifies DNA methylation signals differentiating low/binge from heavy alcohol drinking. *Alcohol*. 2017 May;60:103-113. doi: 10.1016/j.alcohol.2016.11.003. Epub 2016 Nov 10. PubMed PMID: 27866807; PubMed Central PMCID: PMC5420479.

Delprato A, Algéio MP, Bonheur B, Bubier JA, Lu L, Williams RW, Chesler EJ, Crusio WE. QTL and systems genetics analysis of mouse grooming and behavioral responses to novelty in an open field. *Genes Brain Behav*. 2017 Nov;16(8):790-799. doi: 10.1111/gbb.12392. Epub 2017 Jun 22. PubMed PMID: 28544613; PubMed Central PMCID: PMC5800503.

Delprato A, Crusio WE. Genetic Dissection of Variation in Hippocampal Intra- and Infrapyramidal Mossy Fibers in the Mouse. *Methods Mol Biol*. 2017;1488:419-430. PubMed PMID: 27933536.

Fordahl SC, Jones SR. High-Fat-Diet-Induced Deficits in Dopamine Terminal Function Are Reversed by Restoring Insulin Signaling. *ACS Chem Neurosci*. 2017 Feb 15;8(2):290-299. doi: 10.1021/acscchemneuro.6b00308. Epub 2017 Jan 3. PubMed PMID: 27966885; PubMed Central PMCID: PMC5789793.

Gioia DA, McCool B. Strain-Dependent Effects of Acute Alcohol on Synaptic Vesicle Recycling and Post-Tetanic Potentiation in Medial Glutamate Inputs to the Mouse Basolateral Amygdala. *Alcohol Clin Exp Res*. 2017 Apr;41(4):735-746. doi:10.1111/acer.13343. Epub 2017 Feb 18. PubMed PMID: 28118494; PubMed Central PMCID: PMC5378618.

Hasirci AS, Maldonado-Devincci AM, Beattie MC, O'Buckley TK, Morrow AL. Cellular GABAergic Neuroactive Steroid (3 $\alpha$ ,5 $\alpha$ )-3-Hydroxy-Pregnan-20-One (3 $\alpha$ ,5 $\alpha$ -THP) Immunostaining Levels Are Increased in the Ventral Tegmental Area of Human Alcohol Use Disorder Patients: A Postmortem Study. *Alcohol Clin Exp Res*. 2017 Feb;41(2):299-311. doi: 10.1111/acer.13300. PubMed PMID: 28068457; PubMed Central PMCID: PMC5272786.

Huang Q, Barnes JB, Schoeffel GJ, Fan B, Tay C, Bergeron BE, Susin LF, Ling JQ, Niu LN, Tay FR. Effect of Canal Anastomosis on Periapical Fluid Pressure Build-up during Needle Irrigation in Single Roots with Double Canals using a Polycarbonate Model. *Sci Rep*. 2017 May 8;7(1):1582. doi: 10.1038/s41598-017-01697-1. PubMed PMID: 28484231; PubMed Central PMCID: PMC5431501.

Hutton H, Lesko CR, Chander G, Lau B, Wand GS, McCaul ME. Differential effects of perceived stress on alcohol consumption in moderate versus heavy drinking HIV-infected women. *Drug Alcohol Depend*. 2017 Sep 1;178:380-385. doi: 10.1016/j.drugalcdep.2017.05.021. Epub 2017 Jun 23. PubMed PMID: 28704766; PubMed Central PMCID: PMC5604751.

Hwa L, Besheer J, Kash T. Glutamate plasticity woven through the progression to alcohol use disorder: a multi-circuit perspective. *F1000Res*. 2017 Mar 21;6:298. doi: 10.12688/f1000research.9609.1. eCollection 2017. Review. PubMed PMID: 28413623; PubMed Central PMCID: PMC5365217.

Jimenez VA, Allen DC, McClintick MN, Grant KA. Social setting, social rank and HPA axis response in cynomolgus monkeys. *Psychopharmacology (Berl)*. 2017 Jun;234(12):1881-1889. doi: 10.1007/s00213-017-4596-7. Epub 2017 Mar 22. PubMed PMID: 28332004; PubMed Central PMCID: PMC5451300.

Jimenez VA, Grant KA. Studies using macaque monkeys to address excessive alcohol drinking and stress interactions. *Neuropharmacology*. 2017 Aug;122:127-135. doi: 10.1016/j.neuropharm.2017.03.027. Epub 2017 Mar 24. Review. PubMed PMID: 28347838; PubMed Central PMCID: PMC5492942.

Kao YJ, Oyarzabal EA, Zhang H, Faber JE, Shih YI. Role of Genetic Variation in Collateral Circulation in the Evolution of Acute Stroke: A Multimodal Magnetic Resonance Imaging Study. *Stroke*. 2017 Mar;48(3):754-761. doi:10.1161/STROKEAHA.116.015878. Epub 2017 Feb 10. PubMed PMID: 28188261; PubMed Central PMCID: PMC5380467.

Karkhanis A, Holleran KM, Jones SR. Dynorphin/Kappa Opioid Receptor Signaling in Preclinical Models of Alcohol, Drug, and Food Addiction. *Int Rev Neurobiol*. 2017;136:53-88. doi: 10.1016/bs.irn.2017.08.001. Epub 2017 Sep 12. Review. PubMed PMID: 29056156.

King CE, Griffin WC, Luderman LN, Kates MM, McGinty JF, Becker HC. Oxytocin Reduces Ethanol Self-Administration in Mice. *Alcohol Clin Exp Res*. 2017 May;41(5):955-964. doi: 10.1111/acer.13359. Epub 2017 Mar 27. PubMed PMID: 28212464; PubMed Central PMCID: PMC5404956.

Laguesse S, Morisot N, Shin JH, Liu F, Adrover MF, Sakhai SA, Lopez MF, Phamluong K, Griffin WC 3rd, Becker HC, Bender KJ, Alvarez VA, Ron D. Prosapip1-Dependent Synaptic Adaptations in the Nucleus Accumbens Drive Alcohol Intake, Seeking, and Reward. *Neuron*. 2017 Sep 27;96(1):145-159.e8. doi: 10.1016/j.neuron.2017.08.037. Epub 2017 Sep 8. PubMed PMID: 28890345; PubMed Central PMCID: PMC6014831.

Li L, Long J, Li L, Cao H, Tang T, Xi X, Qin L, Lai Y, Wang X. Quantitative determination of residual 1,4-dioxane in three-dimensional printed bone scaffold. *J Orthop Translat*. 2017 Jul 17;13:58-67. doi: 10.1016/j.jot.2017.06.004. eCollection 2018 Apr. PubMed PMID: 29662792; PubMed Central PMCID: PMC5894362.

Lopez MF, Miles MF, Williams RW, Becker HC. Variable effects of chronic intermittent ethanol exposure on ethanol drinking in a genetically diverse mouse cohort. *Alcohol*. 2017 Feb;58:73-82. doi: 10.1016/j.alcohol.2016.09.003. PubMed PMID: 27793543; PubMed Central PMCID: PMC5253308.

McCaul ME, Hutton HE, Stephens MA, Xu X, Wand GS. Anxiety, Anxiety Sensitivity, and Perceived Stress as Predictors of Recent Drinking, Alcohol Craving, and Social Stress Response in Heavy Drinkers. *Alcohol Clin Exp Res*. 2017 Apr;41(4):836-845. doi: 10.1111/acer.13350. Epub 2017 Mar 9. PubMed PMID: 28281290; PubMed Central PMCID: PMC5388456.

McHenry JA, Otis JM, Rossi MA, Robinson JE, Kosyk O, Miller NW, McElligott ZA, Budygin EA, Rubinow DR, Stuber GD. Hormonal gain control of a medial preoptic area social reward circuit. *Nat Neurosci*. 2017 Mar;20(3):449-458. doi: 10.1038/nn.4487. Epub 2017 Jan 30. Erratum in: *Nat Neurosci*. 2017 Sep 28;20(10):1427-1430. PubMed PMID: 28135243; PubMed Central PMCID: PMC5735833.

Melchior JR, Jones SR. Chronic ethanol exposure increases inhibition of optically targeted phasic dopamine release in the nucleus accumbens core and medial shell ex vivo. *Mol Cell Neurosci*. 2017 Dec;85:93-104. doi: 10.1016/j.mcn.2017.09.007. Epub 2017 Sep 20. PubMed PMID: 28942046; PubMed Central PMCID: PMC5698100.

Mulligan MK, Mozhui K, Pandey AK, Smith ML, Gong S, Ingels J, Miles MF, Lopez MF, Lu L, Williams RW. Genetic divergence in the transcriptional engram of chronic alcohol abuse: A laser-capture RNA-seq study of the mouse mesocorticolimbic system. *Alcohol*. 2017 Feb;58:61-72. doi: 10.1016/j.alcohol.2016.09.001. Epub 2016 Oct 15. PubMed PMID: 27894806; PubMed Central PMCID: PMC5450909.

Mulligan MK, Mozhui K, Prins P, Williams RW. GeneNetwork: A Toolbox for Systems Genetics. *Methods Mol Biol*. 2017;1488:75-120. doi: 10.1007/978-1-4939-6427-7\_4. PMID: 27933521; PMCID: PMC7495243.

Nimitvilai S, Lopez MF, Mulholland PJ, Woodward JJ. Ethanol Dependence Abolishes Monoamine and GIRK (Kir3) Channel Inhibition of Orbitofrontal Cortex Excitability. *Neuropsychopharmacology*. 2017 Aug;42(9):1800-1812. doi: 10.1038/npp.2017.22. Epub 2017 Jan 31. PubMed PMID: 28139680; PubMed Central PMCID: PMC5520780.

Nimitvilai S, Uys JD, Woodward JJ, Randall PK, Ball LE, Williams RW, Jones BC, Lu L, Grant KA, Mulholland PJ. Orbitofrontal Neuroadaptations and Cross-Species Synaptic Biomarkers in Heavy-Drinking Macaques. *J Neurosci*. 2017 Mar 29;37(13):3646-3660. doi: 10.1523/JNEUROSCI.0133-17.2017. Epub 2017 Mar 7. PubMed PMID: 28270566; PubMed Central PMCID: PMC5373140.

Peasant C, Sullivan TP, Weiss NH, Martinez I, Meyer JP. Beyond the syndemic: condom negotiation and use among women experiencing partner violence. *AIDS Care*. 2017 Apr;29(4):516-523. doi: 10.1080/09540121.2016.1224296. Epub 2016 Sep 2. PubMed PMID: 27590004; PubMed Central PMCID: PMC5291821.

Porcu P, O'Buckley TK, Lopez MF, Becker HC, Miles MF, Williams RW, Morrow AL. Initial genetic dissection of serum neuroactive steroids following chronic intermittent ethanol across BXD mouse strains. *Alcohol*. 2017 Feb;58:107-125. doi: 10.1016/j.alcohol.2016.07.011. PubMed PMID: 27884493; PubMed Central PMCID: PMC5253318.

Qi Q, Wang Q, Chen W, Du L, Dimitrov DS, Lu L, Jiang S. HIV-1 gp41-targeting fusion inhibitory peptides enhance the gp120-targeting protein-mediated inactivation of HIV-1 virions. *Emerg Microbes Infect*. 2017 Jun 21;6(6):e59. doi: 10.1038/emi.2017.46. PubMed PMID: 28634358; PubMed Central PMCID: PMC5520319.

Radke AK, Jury NJ, Delpire E, Nakazawa K, Holmes A. Reduced ethanol drinking following selective cortical interneuron deletion of the GluN2B NMDA receptors subunit. *Alcohol*. 2017 Feb;58:47-51. doi: 10.1016/j.alcohol.2016.07.005. Epub 2016 Aug 12. PubMed PMID: 28109345; PubMed Central PMCID: PMC5444088.

Radke AK, Jury NJ, Kocharian A, Marcinkiewicz CA, Lowery-Gionta EG, Pleil KE, McElligott ZA, McKlveen JM, Kash TL, Holmes A. Chronic EtOH effects on putative measures of compulsive behavior in mice. *Addict Biol*. 2017 Mar;22(2):423-434. doi: 10.1111/adb.12342. Epub 2015 Dec 21. PubMed PMID: 26687341; PubMed Central PMCID: PMC4916036.

Rinker JA, Fulmer DB, Trantham-Davidson H, Smith ML, Williams RW, Lopez MF, Randall PK, Chandler LJ, Miles MF, Becker HC, Mulholland PJ. Differential potassium channel gene regulation in BXD mice reveals novel targets for pharmacogenetic therapies to reduce heavy alcohol drinking. *Alcohol*. 2017 Feb;58:33-45. doi: 10.1016/j.alcohol.2016.05.007. PubMed PMID: 27432260; PubMed Central PMCID: PMC5191998.

Rinker JA, Mulholland PJ. Promising pharmacogenetic targets for treating alcohol use disorder: evidence from preclinical models. *Pharmacogenomics*. 2017 Apr;18(6):555-570. doi: 10.2217/pgs-2016-0193. Epub 2017 Mar 27. Review. PubMed PMID: 28346058; PubMed Central PMCID: PMC5558539.

Rodberg EM, den Hartog CR, Anderson RI, Becker HC, Moorman DE, Vazey EM. Stress Facilitates the Development of Cognitive Dysfunction After Chronic Ethanol Exposure. *Alcohol Clin Exp Res*. 2017 Sep;41(9):1574-1583. doi:10.1111/acer.13444. Epub 2017 Jul 28. PubMed PMID: 28753742; PubMed Central PMCID: PMC5592109.

Siciliano CA, Locke JL, Mathews TA, Lopez MF, Becker HC, Jones SR. Dopamine synthesis in alcohol drinking-prone and -resistant mouse strains. *Alcohol*. 2017 Feb;58:25-32. doi: 10.1016/j.alcohol.2016.05.005. Epub 2016 Jun 11. PubMed PMID: 27425261; PubMed Central PMCID: PMC5684872.

Simecek P, Forejt J, Williams RW, Shiroishi T, Takada T, Lu L, Johnson TE, Bennett B, Deschepper CF,

Scott-Boyer MP, Pardo-Manuel de Villena F, Churchill GA. High-Resolution Maps of Mouse Reference Populations. *G3 (Bethesda)*. 2017 Oct 5;7(10):3427-3434. doi: 10.1534/g3.117.300188. PubMed PMID: 28839117; PubMed Central PMCID: PMC5633391.

van der Vaart AD, Wolstenholme JT, Smith ML, Harris GM, Lopez MF, Wolen AR, Becker HC, Williams RW, Miles MF. The allostatic impact of chronic ethanol on gene expression: A genetic analysis of chronic intermittent ethanol treatment in the BXD cohort. *Alcohol*. 2017 Feb;58:93-106. doi: 10.1016/j.alcohol.2016.07.010. PubMed PMID: 27838001; PubMed Central PMCID: PMC5253248.

Vranjkovic O, Pina M, Kash TL, Winder DG. The bed nucleus of the stria terminalis in drug-associated behavior and affect: A circuit-based perspective. *Neuropharmacology*. 2017 Aug 1;122:100-106. doi: 10.1016/j.neuropharm.2017.03.028. Epub 2017 Mar 27. Review. PubMed PMID: 28351600; PubMed Central PMCID: PMC5481847.

Weerts EM, Wand GS, Maher B, Xu X, Stephens MA, Yang X, McCaul ME. Independent and Interactive Effects of OPRM1 and DAT1 Polymorphisms on Alcohol Consumption and Subjective Responses in Social Drinkers. *Alcohol Clin Exp Res*. 2017 Jun;41(6):1093-1104. doi: 10.1111/acer.13384. Epub 2017 Apr 26. PubMed PMID: 28376280; PubMed Central PMCID: PMC5483245.

Wills TA, Baucum AJ 2nd, Holleran KM, Chen Y, Pasek JG, Delpire E, Tabb DL, Colbran RJ, Winder DG. Chronic intermittent alcohol disrupts the GluN2B-associated proteome and specifically regulates group I mGlu receptor-dependent long-term depression. *Addict Biol*. 2017 Mar;22(2):275-290. doi: 10.1111/adb.12319. Epub 2015 Nov 8. PubMed PMID: 26549202; PubMed Central PMCID: PMC4860359.

Wolstenholme JT, Mahmood T, Harris GM, Abbas S, Miles MF. Intermittent Ethanol during Adolescence Leads to Lasting Behavioral Changes in Adulthood and Alters Gene Expression and Histone Methylation in the PFC. *Front Mol Neurosci*. 2017 Sep 26;10:307. doi: 10.3389/fnmol.2017.00307. PMID: 29018328; PMCID: PMC5622951.