

Curriculum Vitae

Sandra M. Mooney Ph.D.
Associate Professor, Department of Nutrition
Nutrition Research Institute
University of North Carolina at Chapel Hill

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Contact Information

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Education

1997 Ph.D. University of Otago. Anatomy and Structural Biology.
1991 B.Sc. (Honours) Neuroscience. Second Class, Division I. University of Otago, Dunedin, New Zealand.

Post Graduate Training

1997 – 2000 Postdoctoral Associate, Dr Michael W. Miller, Dept. Psychiatry, University of Iowa, Iowa City, IA

Professional Experience

2018 – current Associate Professor with tenure, Department of Nutrition, Nutrition Research Institute of UNC Chapel Hill
2015 – 2018 Associate Professor with tenure, Department of Pediatrics, UMSOM
2014 – 2018 Regular Member, Graduate Program in Life Sciences, UMSOM
2011 – 2015 Associate Professor, Department of Pediatrics, UMSOM
2005 – 2011 Assistant Professor, Dept. Neuroscience and Physiology, SUNY Upstate Medical University, Syracuse, NY
2001 – 2005 Research Assistant Professor, Dept. Neuroscience and Physiology, SUNY Upstate Medical University, Syracuse, NY
2000 – 2001 Research Scientist, Dept. Neuroscience and Physiology, SUNY Upstate Medical University, Syracuse, NY
1996 Laboratory Demonstrator, Dept. Anatomy and Structural Biology, University of Otago, Dunedin, New Zealand
1995 Teaching Fellow, Dept. Anatomy and Structural Biology, University of Otago, Dunedin, New Zealand
1991 - 1994 Laboratory Demonstrator, Dept. Anatomy and Structural Biology, University of Otago, Dunedin, New Zealand

Honors

2017 Travel Award to attend the 7th Annual Conference on Fetal Alcohol Spectrum Disorders, Vancouver, Canada
2013 Nominated for Clinical Research Forum's 2014 Top 10 Clinical Research Achievement Awards
1996 University of Otago Postgraduate Scholarship
1995 University of Otago Divisional Teaching Assistantship
1994 University of Otago Postgraduate Scholarship
1994 Alcohol Advisory Council Travel Award
1994 NZ Neurological Foundation Travel Award
1993 New Zealand Federation of University Women Travel Award

1992 HRC Young Investigators International Travel Award
1992 Royal Society of New Zealand Young Scientists Fund Award
1991 - 1993 Blair Postgraduate Scholarship

Professional Society Memberships

2015 – current Society for Experimental Biology and Medicine
2013 - 2016 Society for Pediatric Research
2012 - 2015 International Society for Neurochemistry
1998 - current Society for Neuroscience
1995 - current Research Society on Alcoholism

Bibliography (# denotes senior author if other than last; *italics denotes trainee*)

Book Chapters

1. *A.H. Mahnke*, R.C. Miranda, and **S.M. Mooney**. Ch. 7. Fetal alcohol spectrum disorder. In: Neurodevelopmental Disorders and Function in the Healthy and Diseased Brain, Second Edition, Vol 4. Comprehensive Developmental Neuroscience. (J. Rubenstein and P. Rakic ed.s). Oxford, UK: Elsevier.
2. A.J. Falck, **S.M. Mooney**, C.F. Bearer. Ch 15. Adverse Exposures to the Fetus and Neonate. In: Fanaroff and Martin's Neonatal-Perinatal Medicine, 11th Edition. 2020, in press.
3. A.J. Falck, **S.M. Mooney**, C.F. Bearer. Ch 15. Adverse Exposures to the Fetus and Neonate. In: Fanaroff and Martin's Neonatal-Perinatal Medicine, 10th Edition. 2015:211-226.
4. **S.M. Mooney**, P.J. Lein, and M.W. Miller. Ch. 28. Fetal alcohol spectrum disorder: Targeted effects of ethanol on cell proliferation and survival. In: Neural Circuit Development and Function in the Healthy and Diseased Brain. Comprehensive Developmental Neuroscience. (J. Rubenstein and P. Rakic ed.s). Oxford, UK: Elsevier. 2013:521-537.
5. **S.M. Mooney**, M.W. Miller, and G.I. Henderson. Intracellular events in ethanol-induced neuronal death. In: Brain Development: Normal Processes and the Effects of Alcohol and Nicotine (Miller MW ed) New York, NY: Oxford UP. 2006:267-278.
6. **S.M. Mooney#** and G.I. Henderson. Intracellular pathways of neuronal death. In: Brain Development: Normal Processes and the Effects of Alcohol and Nicotine (Miller MW ed) New York, NY: Oxford UP. 2006:91-103.
7. **S.M. Mooney** and M.W. Miller. Ethanol and neuronal death in the developing brain. In: Recent Research Developments in Neurochemistry Vol. 2. 1999:573-586.

Peer-reviewed Journal Articles

1. **S.M. Mooney**. Prenatal ethanol exposure alters growth factor response in cultured thalamic neurons. (in preparation)
2. J. Waddell, E. Hill, S. Xu, R.P. Gullapalli, L. Jiang, S.Y. *Tang*, E. Ho, **S.M. Mooney**. Choline and working memory training improve cognition and functional connectivity in adults exposed to ethanol prenatally. (in preparation)
3. *J.P. Alexander*, **S.M. Mooney**. Analgesia during paw prick in the neonatal rat: effect on social behavior and pressure thresholds in adolescence. (in preparation)
4. **S.M. Mooney**, D. Ricketts, A. Selchick, E. Ho, E.I. Varlinskaya. Dendritic morphology of neurons in prefrontal cortex and medial amygdala: effects of age, sex, and acute ethanol exposure. (in preparation)
5. S. *Tang*, S. Xu, R.P. Gullapalli, **S.M. Mooney**. Alterations in brain network organization in rats after prenatal alcohol exposure (under review at European Journal of Neuroscience)
6. *J.P. Alexander*, **S.M. Mooney**. Neonatal paw pricking alters behavior in a sex-

- dependent manner. (under review at Brain Research).
7. N.L. Davis, T.O. Akinmboni, **S.M. Mooney**. Medication exposure in preterm neonates. (revision under review at American Journal of Perinatology).
 8. A.Y. Klintsova, D.A. Hamilton, **S.M. Mooney**, C. Petrenko. Proceedings of the 2018 Annual Meeting of the Fetal Alcohol Spectrum Disorders Study Group. Alcohol, 2019, in press.
 9. S. Tang, S. Xu, J. Waddell, W. Zhu, R.P. Gullapalli, **S.M. Mooney**. Functional connectivity and metabolic alterations in medial prefrontal cortex in a rat model of Fetal Alcohol Spectrum Disorder: a resting state functional MRI and *in vivo* proton MR spectroscopy study. Developmental Neuroscience, 2019, Apr 18:1-12, doi: 10.1159/000499183.
 10. **S.M. Mooney**, E.I. Varlinskaya. Acute prenatal exposure to ethanol on gestational day 12 enhances sensitivity to socially facilitating and anxiolytic effects of ethanol in adolescent Sprague Dawley rats. Alcohol, 2018. 69:25-32.
 11. J.R. Wozniak, A.Y. Klintsova, D.A. Hamilton, **S.M. Mooney**. Proceedings of the 2017 Annual Meeting of the Fetal Alcohol Spectrum Disorders Study Group. Alcohol, 2018, 69:7-14.
 12. T.O. Akinmboni*, N.L. Davis*, A.J. Falck, C.F. Bearer, **S.M. Mooney**. Excipient exposure in very low birth weight preterm neonates. *Akinmboni and Davis both first authors. Journal of Perinatology, 2018, 38:169-174.
 13. J. Waddell, **S.M. Mooney**. Choline and working memory training improve cognitive function deficits caused by prenatal exposure to ethanol. Nutrients, 2017, Sep 29;9(10). pii: E1080.
 14. M. Camargo Moreno, **S.M. Mooney**, F.A. Middleton. Heterogeneity of p53 dependent genomic responses following ethanol exposure in a developmental mouse model of fetal alcohol spectrum disorder. PLoS ONE, 2017, 12:e0180873.
 15. N.S. Pulimood, W. Rodrigues Jr., **S.M. Mooney**, D. Atkinson, A.E. Medina. The role of CREB, SRF and MEF2 in activity-dependent neuronal plasticity in the visual cortex. Journal of Neuroscience, 2017, 37:6628-6637.
 16. J. Waddell, E. Ho, T. Yang, K.A. Wellmann, **S.M. Mooney**. Prenatal ethanol exposure and whisker clipping disrupt ultrasonic vocalizations and play behavior in adolescent rats. Brain Sciences, 2016, 28:6(4). pii: E43.
 17. M.R. Diaz, **S.M. Mooney**, E.I. Varlinskaya. Acute prenatal exposure to ethanol on gestational day 12 elicits opposing deficits in social behaviors and anxiety-like behaviors in Sprague Dawley rats. Behavioral Brain Research. 2016, 310:11-19.
 18. A.J. Falck, **S. Mooney**, S.S. Kapoor, K.M.R. White, C. Bearer, D. El Metwally, Developmental Exposure to Environmental Toxicants. Pediatric Clinics of North America. 2015, 62:1173-1197.
 19. C.F. Bearer, K.A. Wellmann, N. Tang, M. He, **S.M. Mooney**. Choline ameliorates deficits in balance caused by acute neonatal ethanol exposure. Cerebellum. 2015, 14:413-420.
 20. K.A. Wellmann, F. George, F. Brnouti, **S.M. Mooney**. Docosahexaenoic acid partially ameliorates deficits in social behavior and ultrasonic vocalizations caused by prenatal ethanol exposure. Behavioral Brain Research. 2015, 286:201-211.
 21. K.A. Wellmann, **S.M. Mooney**. Unilateral whisker clipping exacerbates ethanol-induced behavioral deficits. Physiology and Behavior. 2015, 148:166-175.
 22. N. Tang, P. Bamford, J. Jones, M. He, M. Kane, **S.M. Mooney**, C.F. Bearer. Choline partially prevents the impact of ethanol on the lipid raft dependent functions of L1 cell adhesion molecule. Alcoholism: Clinical and Experimental Research. 2014, 38:2722-2730.

23. C.M. Ignacio, **S.M. Mooney#**, F.A. Middleton. Effects of acute prenatal exposure to ethanol on microRNA expression are ameliorated by environmental manipulation. *Frontiers in Pediatrics*. 2014, 2:103. *Mooney and Middleton both senior authors*
24. K.A. Wellmann, E.I. Varlinskaya, **S.M. Mooney**. D-cycloserine ameliorates communication and social behavior deficits in a valproic acid model of autism. *Brain Research Bulletin*. 2014, 108:1-9.
25. E.I. Varlinskaya and **S.M. Mooney**. Acute exposure to ethanol on gestational day 15 affects social motivation of female offspring. *Behavioral Brain Research*. 2014, 261:106-109.
26. O. Cohen, E.I. Varlinskaya, C.A. Wilson, S.J. Glatt, **S.M. Mooney**. Acute prenatal exposure to a moderate dose of valproic acid increases social behavior and alters gene expression in rats. *International Journal of Developmental Neuroscience*. 2013, 31:740-750.
27. F.A. Middleton, E.I. Varlinskaya, **S.M. Mooney**. Molecular substrates of social avoidance seen following prenatal ethanol exposure and its reversal by social enrichment. *Developmental Neuroscience*. 2012, 34:115-128.
28. **S.M. Mooney#** and M.W. Miller. Role of neurotrophins in postnatal neurogenesis in thalamus. *Neuroscience*. 2011, 179:256-266.
29. **S.M. Mooney#** and E.I. Varlinskaya. Acute prenatal exposure to ethanol and social behavior: effect of age, sex, and timing of exposure. *Behavioral Brain Research*. 2011, 216:358-364.
30. **S.M. Mooney#** and M.W. Miller. Prenatal exposure to ethanol affects postnatal neurogenesis in thalamus. *Experimental Neurology*. 2010, 223:566-573.
31. **S.M. Mooney#** and M.W. Miller. Vulnerability of macaque brainstem to ethanol is time- and site-dependent. *Alcohol*. 2009, 43:323-331.
32. F.A. Middleton K. Carrierfenster, **S.M. Mooney**, S.L. Youngentob. Gestational ethanol exposure alters the behavioral response to ethanol odor and the expression of neurotransmission genes in the olfactory bulb of adolescent rats. *Brain Research*. 2009, 1252:105-116.
33. **S.M. Mooney#** and M.W. Miller. Time-specific effects of ethanol exposure on cranial nerve nuclei: gastrulation and neuronogenesis. *Experimental Neurology*. 2007, 205:56-63.
34. **S.M. Mooney#** and M.W. Miller. Postnatal generation of neurons in the ventrobasal nucleus of the rat thalamus. *Journal of Neuroscience* 2007, 27:5023-5032.
35. **S.M. Mooney#** and M.W. Miller. Nerve growth factor neuroprotection of ethanol-induced neuronal death in rat cerebral cortex is age-dependent. *Neuroscience* 2007, 149:372-381.
36. M.W. Miller, **S.M. Mooney**, F.A. Middleton. Transforming growth factor β 1 and ethanol affect transcription of genes for cell adhesion proteins in B104 neuroblastoma cells. *Journal of Neurochemistry* 2006, 97:1182-1190.
37. **S.M. Mooney#** and R.M.A. Napper. Early postnatal exposure to alcohol reduces the number of neurons in the occipital but not the parietal cortex of the rat. *Alcoholism: Clinical and Experimental Research* 2005, 29:683-691.
38. **S.M. Mooney#**, J.A. Siegenthaler, and M.W. Miller. Ethanol induces heterotopias in organotypic cultures of rat cerebral cortex. *Cerebral Cortex* 2004, 14:1071-1080.
39. M.W. Miller and **S.M. Mooney**. Chronic exposure to ethanol alters neurotrophin expression in the basal forebrain-cortex system in the mature rat: effects on autocrine/paracrine mechanisms. *Journal of Neurobiology* 2004, 60:490-498.
40. **S.M. Mooney** and M.W. Miller. Ethanol-induced neuronal death in organotypic cultures of rat cerebral cortex. *Developmental Brain Research* 2003, 147:135-141.
41. **S.M. Mooney** and M.W. Miller. Effects of prenatal exposure to ethanol on the expression of bcl-2, bax and caspase 3 in the developing rat cerebral cortex and thalamus. *Developmental Brain Research* 2001, 911:71-81.

42. **S.M. Mooney** and M.W. Miller. Episodic exposure to ethanol during development differentially affects brainstem nuclei in the macaque: a model of fetal alcohol syndrome and autism. *Journal of Neurocytology* 2001, 30:973-982.
43. **S.M. Mooney** and M.W. Miller. Expression of bcl-2, bax, and caspase-3 in the brain of the developing rat. *Developmental Brain Research* 2000, 123:103-117.
44. **S.M. Mooney** and M.W. Miller. Effects of prenatal exposure to ethanol on systems matching: The number of neurons in the ventrobasal thalamic nucleus of the mature rat. *Developmental Brain Research* 1999, 117:121-125.
45. **S.M. Mooney**, R.M.A. Napper and J.R. West. Long-term effect of postnatal alcohol exposure on the number of cells in the neocortex of the rat: A stereological study. *Alcoholism: Clinical and Experimental Research*. 1996, 20:615-623.

Published Abstracts

National

1. **S.M. Mooney**, D. Ricketts, E. Ho, E.I. Varlinskaya. Dendritic morphology of the prefrontal cortex neurons: impact of age, sex, and acute ethanol exposure on gestational day 12. *Alcoholism: Clinical and Experimental Research Suppl.* 2019.
2. J. Waddell, E. Ho, **S.M. Mooney**. Choline plus working memory training improves fetal ethanol-induced deficits in cognitive flexibility in adulthood but not expression of synaptic proteins. *Alcoholism: Clinical and Experimental Research Suppl.* 2019
3. S. Tang, S. Xu, J. Waddell, M. Hanscom, W. Zhu, **S.M. Mooney**. Prenatal ethanol exposure alters brain connectivity in adult rats: a resting state functional MRI study. *Alcoholism: Clinical and Experimental Research Suppl.* 2017
4. J. Jones, M. Kane, **S.M. Mooney**. Prenatal ethanol exposure and/or postnatal exposure to docosahexaenoic acid alters lipid profiles in the prefrontal cortex of the rat. *Alcoholism: Clinical and Experimental Research Suppl.* 2017
5. **S.M. Mooney**, E.I. Varlinskaya. Prenatal ethanol exposure enhances sensitivity to socially facilitating and anxiolytic effects of ethanol in adolescent Sprague Dawley rats. *Alcoholism: Clinical and Experimental Research Suppl.* 2016.
6. J. Waddell, **S.M. Mooney**. Prenatal ethanol-induces deficits in working memory in adolescence; improvement with choline. *Alcoholism: Clinical and Experimental Research Suppl.* 2016.
7. K. A. Wellmann, E. Ho, L. Guo, and **S. M. Mooney**. Postnatal supplementation with docosahexaenoic acid reduces prenatal ethanol-induced attentional set shifting cognitive deficits in adolescent rats. *Alcoholism: Clinical and Experimental Research Suppl.* 2015.
8. M.D. Camargo, **S.M. Mooney**, S.D. Hicks, F.A. Middleton. Examination of p53 dependent and independent changes in somatosensory cortex and hippocampus of neonatal mice following ethanol exposure. *Alcoholism: Clinical and Experimental Research Suppl.* 38:153A. 2014.
9. K. A. Wellmann, F. George, F. Brnouti, **S.M. Mooney**. Reversal of prenatal ethanol-induced behavioral deficits by postnatal treatment with docosahexaenoic acid persists throughout adolescence. *Alcoholism: Clinical and Experimental Research Suppl.* 38:259A. 2014.
10. K.A. Wellmann, F. George, **S.M. Mooney**. Unilateral whisker clipping exacerbates ethanol-induced social and somatosensory behavioral deficits in a sex-and age-dependant manner. *Alcoholism: Clinical and Experimental Research Suppl.* 38:113A. 2014.
11. **S.M. Mooney#**, F.A. Middleton, E.I. Varlinskaya. Sex, age, and timing of alcohol exposure define behavioral and molecular outcomes. *Alcoholism: Clinical and Experimental Research Suppl.* 38:325A. 2014.
12. F. Brnouti, N.D. Nguyen, M.C. McKenna, **S.M. Mooney**. Postnatal administration of docosahexaenoic acid ameliorates alterations in brain energy metabolism caused by

- prenatal ethanol exposure. *Alcoholism: Clinical and Experimental Research Suppl.* 37:111A. 2013.
13. M.D. Camargo; S.D. Hicks, **S.M. Mooney**, F.A. Middleton. The role of p53 in apoptotic and DNA repair processes induced by developmental ethanol exposure. *Alcoholism: Clinical and Experimental Research Suppl.* 37:127A. 2013.
 14. F. George, K.A. Wellmann, **S.M. Mooney**. Docosahexaenoic acid can mitigate some ethanol-induced behavioral changes during adolescence. *Alcoholism: Clinical and Experimental Research Suppl.* 37:111A. 2013.
 15. K.A. Wellmann, F. George, **S.M. Mooney**. Whisker trimming exacerbates the damaging effects of fetal ethanol exposure on rat social behavior and somatosensory performance. *Alcoholism: Clinical and Experimental Research Suppl.* 37:43A. 2013.
 16. F.A. Middleton, E.I. Varlinskaya, **S.M. Mooney**. Behavioral and molecular effects of acute prenatal exposure to ethanol are altered by social enrichment. *Alcoholism: Clinical and Experimental Research Suppl.* 36:13A. 2012.
 17. **S.M. Mooney**, E.I. Varlinskaya. Behavioral effects of acute prenatal exposure to ethanol are time- and sex-dependent. *Alcoholism: Clinical and Experimental Research Suppl.* 2. 34:98A. 2010.
 18. S.M. Britton, W.A. Bondi, **S.M. Mooney**, M.W. Miller. Does up-regulation of active caspase 3 caused by postnatal exposure to ethanol presage neuronal death in cerebral cortex? *Alcoholism: Clinical and Experimental Research Suppl.* 33:132A. 2009.
 19. **S.M. Mooney**, S.L. Youngentob, E.I. Varlinskaya. Behavioral effects of acute exposure to ethanol are time-dependent. *Alcoholism: Clinical and Experimental Research Suppl.* 33:35A. 2009.
 20. **S.M. Mooney**, D.J. Stelzner. Effect of ethanol on thalamocortical afferents. *Alcoholism: Clinical and Experimental Research* 31:67A. 2007.
 21. **S.M. Mooney**, S.M. Britton, M.W. Miller. Brainstem motor nucleus neurons are vulnerable to ethanol during gastrulation and neuronal generation. *International Society for Biomedical Research on Alcoholism.* 2006.
 22. **S.M. Mooney**, C. Griffin, M.W. Miller. Specificity of brainstem vulnerability to ethanol. *Alcoholism: Clinical and Experimental Research* 30:228A. 2006.
 23. **S.M. Mooney**, R.C. Mezza, and M.W. Miller. Thalamus is protected from prenatal exposure to ethanol. *Alcoholism: Clinical and Experimental Research* 29:128A. 2005.
 24. C.M. Fisher, **S.M. Mooney**, R.C. George, F.A. Middleton, S.L. Youngentob. Analysis of gene expression in the olfactory bulb and epithelium of adult rats prenatally exposed to ethanol. *Alcoholism: Clinical and Experimental Research* 28:9A. 2004.
 25. S.L. Youngentob, P.F. Kent, **S.M. Mooney**, N.E. Spear, J.C. Molina. In utero ethanol experience and olfactory plasticity. *Alcoholism: Clinical and Experimental Research* 28:94A. 2004.
 26. **S.M. Mooney** and M.W. Miller. Neuroprotective effect of nerve growth factor is age-dependent. *Alcoholism: Clinical and Experimental Research* 27:81A. 2003.
 27. **S.M. Mooney** and M.W. Miller. Ethanol causes the apoptotic death of cells in the fetal cortical plate in organotypic slice cultures. *Alcoholism: Clinical and Experimental Research* 25:149A. 2001.
 28. **S.M. Mooney** and M.W. Miller. Effect of prenatal exposure to ethanol on the ventrobasal nucleus of the thalamus: a longitudinal study. *Alcoholism: Clinical and Experimental Research* 25:394. 2001.
 29. **S.M. Mooney** and M.W. Miller. Ethanol differentially affects the developmental expression of caspase 3 in the rat trigeminal system. *Alcoholism: Clinical and Experimental Research* 24:149A. 2000.
 30. **S.M. Mooney** and M.W. Miller. Gestational exposure to ethanol disrupts the bcl-2: bax ratio. *Alcoholism: Clinical and Experimental Research* 23:63A. 1999.

International

31. **S.M. Mooney**#, F. Brnouti, F. George, K.A. Wellmann, N. Nguyen, M.C. McKenna. Neuroprotective effect of docosahexaenoic acid on brain metabolism and behavior in a model of fetal alcohol syndrome. *Journal of Neurochemistry* 125 (S1):161. Mexico. 2012.
32. **S.M. Mooney**, M.W. Miller, E.I. Varlinskaya. Acute exposure to ethanol affects social behavior and amygdala structure in a time-dependent manner. *International Society of Developmental Biologists Congress. Mechanisms of Development* 126:S193. Scotland. 2009.
33. **S.M. Mooney** and R.M.A. Napper. A reduced number of neurons in the occipital cortex of the 10 day-old rat following postnatal alcohol exposure. *Alcoholism: Clinical and Experimental Research* 20:28A. USA. 1996.
34. **S.M. Mooney**, R.M.A. Napper and J.R. West. The effect of postnatal exposure to alcohol on the rat parietal cortex. *Alcoholism: Clinical and Experimental Research* 18:436A. USA. 1994.
35. **S.M. Mooney** and R.M.A. Napper. The effects of postnatal alcohol exposure on the rat cerebral cortex: A stereological study. *Alcoholism: Clinical and Experimental Research* 17:484A. USA. 1993.

Major Invited Communications Local

1. **S.M. Mooney** Prenatal alcohol exposure; effects on neuroanatomy, behavior, and gene expression. Grand Rounds, UMSOM, seminar, 2012.
2. **S.M. Mooney** Prenatal exposure to ethanol alters social behavior in a timing-, sex, and age-dependent manner. Summer Undergraduate Research Foundation, SUNY Upstate Medical University, Syracuse NY, seminar, 2010.
3. **S.M. Mooney** Differential effects of ethanol on the somatosensory system. CNY Neurofest, Skaneateles NY, invited speaker, 2010.
4. **S.M. Mooney** Behavioral effects of acute exposure to ethanol: an autism-like phenotype? Neurosurgery Research Day, SUNY Upstate Medical University, Syracuse NY, invited speaker, 2009.
5. **S.M. Mooney** Alcohol and brain development. What's different about the thalamus? Summer Undergraduate Research Foundation program, SUNY Upstate Medical University, Syracuse NY, seminar, 2009.
6. **S.M. Mooney** Ethanol, neurotrophins, and thalamocortical matching. Neuroscience Program, SUNY Upstate Medical University, Syracuse NY, seminar, 2009.
7. **S.M. Mooney** Autism and Alcohol. What's the Connection? Asa Gray Seminar series, Utica College, Utica NY, seminar, 2008.
8. **S.M. Mooney** Fetal Alcohol Syndrome; what is it and how does it happen. Summer Undergraduate Research Foundation, SUNY Upstate Medical University, Syracuse NY, seminar, 2007.
9. **S.M. Mooney** A second period of neuronogenesis in the thalamus. Neurosurgery Research Day, SUNY Upstate Medical University, Syracuse NY, invited speaker, 2006.

National

10. **S.M. Mooney** Prenatal exposure to ethanol alters functional connectivity and cognition in rats. Texas A&M University, College Station TX, seminar, 2018
11. **S.M. Mooney** Prenatal exposure to ethanol: structural and functional consequences. Temple University / Shriner's Children's Hospital, Philadelphia PA, seminar, 2017.
12. **S.M. Mooney** Prenatal ethanol exposure alters brain structure and behavior: can nutritional interventions improve outcomes? Annual Meeting of the American Society for Neurochemistry, Little Rock AR, Symposium co-organizer and speaker, 2017.

13. **S.M. Mooney** Nutritional interventions as treatments for Fetal Alcohol Spectrum Disorder: DHA and choline. UNC Nutritional Research Institute, Kannapolis NC, seminar, 2017.
14. **S.M. Mooney** Prenatal ethanol exposure alters brain structure and behavior: can interventions improve outcomes? University of Kentucky, Lexington KY, seminar, 2017.
15. **S.M. Mooney** Prenatal exposure to ethanol alters functional connectivity in rats. University of Kentucky, Lexington KY, seminar, 2017.
16. **S.M. Mooney** Prenatal exposure to ethanol: structural and functional consequences. University of New Mexico, Albuquerque NM, seminar, 2016.
17. **S.M. Mooney** What animal models tell us about FASDs and interventions. University of New Mexico, Albuquerque NM, keynote speaker for FASD Awareness Day, 2016.
18. **S.M. Mooney** Omega 3 fatty acid reversal of ethanol-induced behavior deficits. Annual Meeting of the Children's Environmental Health Network, Austin TX, invited speaker, 2015.
19. **S.M. Mooney** Prenatal alcohol exposure; effects on neuroanatomy and behavior. Children's National Health System, Washington DC, seminar, 2015.
20. **S.M. Mooney** Nutritional mechanisms in the prevention and treatment of fetal alcohol spectrum disorders. Annual Meeting of the Research Society on Alcoholism, San Antonio TX, Symposium co-organizer and Discussant, 2015.
21. **S.M. Mooney** Omega 3 fatty acid reversal of ethanol-induced behavior deficits. Annual Meeting of the Research Society on Alcoholism, San Antonio TX, invited speaker, 2015.
22. **S.M. Mooney** Prenatal exposures shape neuroanatomy and behavior. Children's National Health System, Washington DC, seminar, 2015.
23. **S.M. Mooney** Sex, age, and timing of alcohol exposure define behavioral and molecular outcomes. Annual Meeting of the Research Society on Alcoholism, Bellevue WA, invited speaker, 2014.
24. **S.M. Mooney** Prenatal ethanol alters brain anatomy and behavior: does an omega 3 fatty acid improve outcomes? University of Arkansas Medical School, Little Rock AR, seminar, 2014.
25. **S.M. Mooney** Differential effects of prenatal exposure to ethanol on the trigeminal-somatosensory system. NIAAA Laboratory for Integrative Neuroscience, Rockville MD, seminar, 2012.
26. **S.M. Mooney** Prenatal alcohol exposure; effects on neuroanatomy, behavior, and gene expression. University of Delaware, Newark DE, seminar, 2012.
27. **S.M. Mooney** Differential effects of prenatal exposure to ethanol on the trigeminal-somatosensory system. Albany Medical College, Albany NY, seminar, 2011.
28. **S.M. Mooney** Acute exposure to ethanol: structural and functional consequences. University of Illinois, Chicago IL, seminar, 2010.
29. **S.M. Mooney** Differential effects of ethanol on and within sensory systems. Annual Meeting of the Research Society on Alcoholism, Baltimore MD, invited speaker, 2006.

International

30. **S.M. Mooney** Prenatal Ethanol Exposure Induces Deficits in Cognitive Function in Adulthood; Improvement with Choline and Behavior Training. 7th International Conference on Fetal Alcohol Spectrum Disorder, Vancouver, Canada, invited speaker, 2017.
31. **S.M. Mooney** Prenatal Ethanol Exposure Induces Deficits in Cognitive Function in Adulthood; Improvement with Choline and Behavior Training. 7th International Conference on Fetal Alcohol Spectrum Disorder, Vancouver, Canada, invited speaker, 2017.

32. **S.M. Mooney** Apoptosis, Fetal Alcohol Syndrome Study Group, Vancouver, Canada, panel discussant, 2004.

Teaching Record

University of North Carolina at Chapel Hill

Mentor / Student Committee

2019 Parker Holman, University of British Columbia, Canada, Ph.D. student, External Examiner
2019 – current Kaylee Helfrich, UNC Chapel Hill Ph.D. student, thesis committee member
2019 – current Co-Mentor on K99/R00 for Dr Nipun Saini, Ph.D.

University of Maryland

2017 Placenta & Respiratory Development lecture to MS1 students (~170 medical students)
2016 Foundations of Research and Critical Thinking (FRCT), paper discussion (12 participants – students and fellows).
2016 Responsible Conduct of Research (RCR, CIPP907) Session #4 Publications, grants, and the peer review system (10 participants – students and fellows).
2015, 2017 How to write a scientific abstract and poster (8 participants – clinical fellows)
2015 Responsible Conduct of Research (RCR, CIPP907) Session #9 Animal subjects (9 participants – students and fellows).
2014 Developmental Neurobiology course (GPILS 627), Developmental Neurotoxicology lecture (~12 graduate students)
2014 Behavioral Neuroscience course (GPLS 735), Neurobehavioral Developmental Disorders (autism) & animal behavioral models lecture (~12 graduate students)
2012- 2017 Structure and Development lab to MS1 students (~170 medical students)
2012-2017 Co-Director of the Neonatal-Perinatal Medicine Fellowship Program
2012 Pathophysiology, Effects of alcohol on development (8 clinical fellows)

Mentor / Student Committee

2017 – 2019 Abhinav Parikh, University of Maryland Neonatology Fellow, scholarly oversight committee member
2017 – 2018 Shiyu Tang, University of Maryland Ph.D. student, thesis committee member
2015 – 2016 Marie Hanscom, University of Maryland, Ph.D. rotation student, Molecular Medicine program
2015 – 2015 Kaila Noland, University of Maryland, Ph.D. rotation student, Toxicology program
2014 – 2017 Sruthi Polavarapu, University of Maryland Neonatology Fellow, scholarly oversight committee member
2014 – 2017 Nisha Pulimood, University of Maryland, Ph.D. student, thesis committee member
2014 - 2014 Maithri Kondapaka, PRISM Student, University of Maryland, summer student (medical student)
2014 - 2014 Matthew Stefanik, summer student (high school)
2014 - 2014 Max Gold, summer student (high school)

2013 - 2016	Jennifer Alexander MD, University of Maryland Neonatology Fellow, scholarly activity advisor
2013 - 2016	Temitope Akinmboni MD, University of Maryland Neonatology Fellow, scholarly activity advisor
2013 - 2015	Shilpa Das, University of Maryland, Masters student in Molecular Medicine program, laboratory advisor
2013 - 2013	Kay Kulason, Praxis Fellow, Smith College (summer student)
2013 - 2013	Emily Boerger, Smith College (summer student)
2012 - 2014	Jacob Smith, University of Maryland, Ph.D. thesis committee member
2011- 2015	Kristen Wellmann Ph.D., postdoctoral fellowship advisor
2011 - 2014	Finney George MD, University of Maryland Neonatology Fellow, scholarly activity advisor
2011 - 2014	Fares Brnouti MD, University of Maryland Neonatology Fellow, scholarly activity advisor

SUNY Upstate Medical University

Medical Student Teaching

2007-2011	Lecturer MSI Physiology, 1 st year medical students - 8 contact hours/yr, ~170 first year medical students (6 lectures, mostly in Gastrointestinal Physiology + review).
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Graduate School Teaching

2006 - 2007	Co-ordinator of GS892 Introduction to the Presentation and Analysis of Scientific Literature: Journal Club. (15 contact hours/yr, 10 graduate students).
2001- 2011	Course founder, coordinator, and lecturer, 610N Topics in Developmental Neurobiology (40 contact hours/yr, 4-10 1 st and 2 nd year graduate students). Offered odd years.

Mentor/Committee

2010	Sara Green, SUNY Upstate, Summer Undergraduate Research Fellow
2010	Anthony Yuhas, SUNY Upstate, Ph.D. candidate (left program due to family reasons)
2009 - 2009	Jessica Ouderkirk, SUNY Upstate, Summer Undergraduate Research Fellow
2008 - 2008	Susanne Pritchard, SUNY Upstate, Summer Undergraduate Research Fellow
2008 - 2011	Lua Jafari, Syracuse University, Capstone Honors thesis
2007 - 2008	Masters committee for M.S. student Danielle Williams
2007 - 2009	Shannon Pickup, Syracuse University, Capstone Honors thesis
2007	Qualifying committee for Ph.D. student Amber Eade
2006	Thesis committee for Ph.D. student Melinda Tyler
2005	Thesis committee for Ph.D. student Michelle Mader
2004	Qualifying committee for Ph.D. student Melinda Tyler
2003	Qualifying committee for Ph.D. student Michelle Mader
2002	Qualifying committee for Ph.D. student Julie Siegenthaler

University of Otago

Medical Student Teaching

1995-1996	Gross Anatomy lab- to 1 st year students, 2 contact hr/wk (150 students)
1995	Histology (4 lectures) to 2 nd year Dentistry and Physiotherapy students (120 students)

1990-1996 Histology lab to 2nd year Medical, Dentistry and Physiotherapy students, 4 contact hr/wk (200 students per year)
Microscopic Anatomy (practical classes)- to 2nd and 3rd year Anatomy students, 4 contact hr/wk (30 students per year)

Grants/Awards

Active

10/01/18-6/30/19 (Co-PI)
"Do PAE and Choline Polymorphisms Alter Maternal-Fetal Choline Requirements?"
NRI
Total direct costs \$100,000

07/01/17-05/31/19 (Co-I: PI Blanchard)
"Collaborative Initiative on Fetal Alcohol Spectrum Disorders: Prenatal alcohol effects on the gut microbiome contributing to failure to thrive and altered immune function"
NIH/NIAAA UH2 AA026109-01
Total costs: \$146,515

2/1/2017 – 1/31/2022 (PI)
"Model of Fetal Alcohol Spectrum Disorder"
NIH/NIAAA R01 AA024980
Total direct costs: \$1,250,000

09/01/14 - 08/31/19 Project 5 (Co-I: PI Varlinskaya: Center Director Spear)
"Developmental Exposure Alcohol Research Center"
NIH/NIAAA P50 AA017823
Total costs to SMM (direct + indirect): \$314,000

05/05/14 -04/30/19 (PI)
(NCE)
"Experimental Factors in Fetal Alcohol Spectrum Disorder"
NIH/NIAAA R01 AA022413
Total direct costs: \$1,125,000

Completed

09/01/10 – 08/31/12 (PI) Center Director L. Spear
"Developmental Exposure Alcohol Research Center Pilot Project 3"
NIH/NIAAA P50 AA178231
Total direct costs: \$44,500

07/15/10 – 04/30/16 (Co-PI) Co-PI Middleton
"Experimental Fetal Alcohol Syndrome"
NIH/NIAAA R01 AA006916
Total costs to SMM (direct + indirect): \$400,000

12/05/09-11/30/16 (PI)
"Effects of developmental ethanol exposure on brain development"
NIH/NIAAA R01 AA018693
Total direct costs: \$827,500

- 09/01/09 - 01/31/11 (Co-PI) Center Director Miller
 “Developmental Exposure Alcohol Research Center
 Neuroanatomy Core Facility”
 NIH/NIAAA P50 AA178231
 Total direct costs: \$825,000
- 09/01/09 - 08/31/10 (Co-PI) Center Director Miller
 “Developmental Exposure Alcohol Research Center Animal Core
 Facility”
 NIH/NIAAA P50 AA178231
 Total direct costs: \$1,000,000
- 12/01/08 - 3/31/12 (PI)
 “Social behavior deficits in autism: role of amygdala”
 Autism Speaks 4946
 Total direct costs: \$240,000
- 08/01/05-07/031/08 (PI)
 “Ethanol, neurotrophins, and thalamocortical matching”
 NIH/NIAAA R21 AA015413
 Total direct costs: \$250,000

Administrative Service

Institutional Service

SUNY Upstate Medical University

- 2009 – 2011 Member Rules and Regulations committee, SUNY Upstate
- 2007 - 2010 Curriculum Review committee for Dept. Neuroscience and Physiology,
 SUNY Upstate
- 2005 - 2007 Chair Neurofest committee
- 2003 - 2010 Space/Equipment committee for Dept. Neuroscience and Physiology,
 SUNY Upstate

University of Maryland School of Medicine

- 2016 – 2018 Member Internal Advisory Board McKenna P01 Grant
- 2015 Inquiry Committee, University of Maryland Office of Research Integrity
- 2014 – 2018 Member Department of Pediatrics Research Committee
- 2014 Judge, Medical Student Research Day
- 2013 - 2018 Judge, Pediatric Research Day
- 2012 – 2018 Member Department of Pediatrics Scholarly Oversight Committee

University of North Carolina at Chapel Hill

- 2019 Member search committee Business Manager

Local Service

- 2012 Session moderator at the Baltimore, Washington, and Virginia Perinatal
 Club annual meeting.
- 2005 – 12/10 Member Subcommittee for Animal Studies (IACUC) at Syracuse VAMC

National Service

- 2019 Reviewer, ZAA1 CC (04) 1, NIAAA Special Emphasis Panel
- 2018 Reviewer, ZAA1 CC (04) 1, NIAAA Special Emphasis Panel
- 2018 Reviewer, ZAA1 AA (30), NIAAA Special Emphasis Panel
- 2018 Chair, ZRG1 NAL-Z (07) S, NIH Special Emphasis Panel

2017 - 2018 Member Program Committee, Research Society on Alcoholism
 2017 Reviewer, ZAA1 AA (30), NIAAA Special Emphasis Panel
 2017 Reviewer, ZNS1 SRB-M (01), NINDS Special Emphasis Panel
 2017 Reviewer, ZES1 LAT-D (K1) 1, NIEHS Special Emphasis Panel
 2016 – current Member Executive Committee for Fetal Alcohol Spectrum Disorders Study Group
 2016 - 2018 Chair, NIH Study Section Neurotoxicology and Alcohol (NAL)
 2016 External Reviewer for the Southwest National Primate Research Center (SNPRC) Pilot Research Program
 2016 Reviewer, ZES1 LWJ-D (K) 1, NIEHS Special Emphasis Panel
 2015 – current Member Neuroscience Editorial Board, Experimental Biology and Medicine
 2015 Abstract Reviewer for the Pediatric Academic Societies' Annual Meeting
 2015 - 2016 Member Program Committee, Research Society on Alcoholism
 2014 Reviewer, ZAA1 EE (30) 1 NIAAA Special Emphasis Panel
 2013 – 2016 Member Advisory Board for Fetal Alcohol Spectrum Disorders Study Group
 2013 - 2016 Standing Member NIH Study Section Neurotoxicology and Alcohol (NAL)
 2013 – 2015 Chair of Sub-committee for Student Lunch at Research Society on Alcoholism
 2013 Ad-hoc Member NIAAA Study Section AA-4
 2012 Ad-Hoc Member NIH Study Section Neurotoxicology and Alcohol
 2012 Ad-Hoc Member NIAAA Study Section AA-4
 2011 Ad-Hoc Member NIH Study Section Neurotoxicology and Alcohol
 2011 Ad-Hoc Member NIAAA Study Section AA-4
 2009 Reviewer, ZAA1 CC (03) R "The Effects of Alcohol on Glial Cells (RFA-AA-09-003/004)" NIAAA Special Emphasis Panel
 2007 - 2015 Member Education Committee, Research Society on Alcoholism
 2007 – 2015 Abstract Reviewer for Enoch Gordis Research Recognition Awards for Graduate Students and Postdoctoral Fellows, Research Society on Alcoholism
 2007 – 2015 Judge for Enoch Gordis Research Recognition Awards for Graduate Students and Postdoctoral Fellows, Research Society on Alcoholism

International Service

April 2016 Grant review for Israel Science Foundation (ISF)
 March 2015 Grant review for Research Grants Council (RGC) of Hong Kong

Ad Hoc Reviewer

2019 Scientific Reports
 Neurobiology of Disease
 Alcohol
 Experimental Biology and Medicine (x2)
 Birth Defects Research
 Pediatric Research (x2)
 2018 Birth Defects Research
 Psychopharmacology
 Hormones and Behavior
 eNeuro
 Drug and Alcohol Dependence
 Hippocampus
 Neurotoxicology (x2)

Genes, Brain and Behavior (x3)
 Cerebral Cortex (x2)
 The FASEB Journal
 Journal of Neuroinflammation (x2)
 2017 International Journal of Developmental Neuroscience
 Learning and Motivation
 Acta Physiologica
 International Journal of Environmental Research and Public Health (x2)
 Behavioral Brain Research
 Alcoholism: Clinical and Experimental Research (x4)
 Biochemistry and Cell Biology
 Journal of Neurophysiology
 Autism Research
 2016 Acta Physiologica
 Journal of Neuroscience Research (x2);
 Behavioral Brain Research (x2);
 Neurotoxicology
 Alcohol (x4)
 Brain Sciences
 2015 Physiology and Behavior;
 Behavioral Brain Research (x2);
 Alcoholism: Clinical and Experimental Research;
 Journal of Comparative Neurology (x3);
 Acta Physiologica;
 Neurotoxicology and Teratology;
 Alcohol (x5);
 Brain Research;
 Neurochemistry International (x2);
 International Journal of Developmental Neuroscience (x2);
 Frontiers in Integrative Neuroscience;
 Neural Regeneration Research;
 Neurotoxicology;
 Experimental Biology and Medicine (x2);
 2014 Journal of Neuroscience Research;
 Alcoholism: Clinical and Experimental Research (x3);
 Neuroscience (x 3);
 Behavioral Brain Research;
 Pharmacology, Biochemistry, and Behavior (x2);
 Brain Research;
 2013 Journal of Neuroscience Research;
 Alcohol;
 Journal of Neurochemistry (x 5);
 Neuroscience;
 Neurotoxicology and Teratology;
 Cerebral Cortex;
 Alcoholism: Clinical and Experimental Research
 2012 Neuroscience (x 3);
 Alcohol (x 4);
 Journal of Neurodevelopmental Disorders (x 2);
 Behavioral Brain Research (x 2);
 Journal of Neuroscience;
 Neurotoxicology
 2011 Brain Research;

International Journal of Developmental Neuroscience;
Alcoholism: Clinical and Experimental Research;
Alcohol