

MARK S. BLUMBERG, PH.D.
F. WENDELL MILLER DISTINGUISHED PROFESSOR

Department of Psychological & Brain Sciences
The University of Iowa
Iowa City, Iowa 52242

Website: <http://psychology.uiowa.edu/blumberg-lab>

EDUCATIONAL AND PROFESSIONAL HISTORY

EDUCATION

The University of Chicago, Biopsychology, Ph.D., 1988
The University of Chicago, Biopsychology, M.A., 1987
Brandeis University, Physics, Philosophy, A.B. *cum laude*, 1983

PROFESSIONAL AND ACADEMIC POSITIONS

Chair, Department of Psychological & Brain Sciences, The University of Iowa, 2017-present.
Member, Iowa Neuroscience Institute, 2017-present.
Director, The DeLTA Center, The University of Iowa, 2016-2017.
Professor, Department of Biology, The University of Iowa, 2010-present
Interim Director, The DeLTA Center, The University of Iowa, July-December 2010
Professor, Department of Psychology, The University of Iowa, 2001-present
Associate Professor, Department of Psychology, The University of Iowa, 1996-2001
Assistant Professor, Department of Psychology, The University of Iowa, 1992-1996
Research Associate, Indiana University - Bloomington, 1988-1992
Research Assistant, The University of Chicago, 1983-1988

HONORS AND AWARDS

Scholar of the Year Award, Office of the Vice-President for Research, The University of Iowa, 2016.
MERIT Award (R37), National Institute of Child Health and Human Development, 2014-2024.
Exemplar Award, Center for the Integrative Study of Animal Behavior (CISAB), Indiana University, Bloomington, Indiana, 2014.
Inaugural Starkey Duncan Memorial Lecture, The University of Chicago, 2013.
Fellow, American Psychological Association (APA), Division 3 (Experimental Psychology), 2011.
F. Wendell Miller Distinguished Professor, The University of Iowa, 2009-2019.
Regents Award for Faculty Excellence, The University of Iowa, 2009.
Editor-in-Chief, *Behavioral Neuroscience*, 2008-2014.
President, International Society for Developmental Psychobiology (ISDP), 2007-2008.

Starch Faculty Fellow, The University of Iowa, 2006-2009.

Fellow, American Psychological Association (APA), Division 6 (Behavioral Neuroscience and Comparative Psychology), 2005.

Independent Scientist Award (K02), National Institute of Mental Health, 2002-2012.

Associate Editor, *Behavioral Neuroscience*, 2001-2007.

Faculty Scholar Award, The University of Iowa, 1999-2002.

American Psychological Association (APA) Distinguished Scientific Award for an Early Career Contribution to Psychology in the area of animal learning and behavior, comparative, 1997.

FIRST Award (R29), National Institute of Mental Health, 1994-1999.

Graduate Fellowship, The University of Chicago, 1983-1988.

PUBLICATIONS

JOURNALS

1. Blumberg, M. S., and Dooley, J. C. Phantom limbs, neuroprosthetics, and the developmental origins of embodiment. *Trends in Neurosciences*, in press.
2. Mukherjee, D., Yonk, A., Sokoloff, G., & Blumberg, M. S. Wakefulness suppresses retinal-wave-related activation of visual cortex. *Journal of Neurophysiology*, in press.
3. Del Rio-Bermudez, C., Kim, J., Sokoloff, G., and Blumberg, M. S. Theta oscillations during active sleep synchronize the developing rubro-hippocampal sensorimotor network. *Current Biology*, 27: 1413-1424, 2017.
4. Blumberg, M. S., Spencer, J. P., & Shenk, D. Introduction to the collection "How we develop—Developmental systems and the emergence of complex behaviors." *WIREs Cognitive Science*, 2016. doi: 10.1002/wcs.1413
5. Tiriac, A., & Blumberg, M. S. Gating of reafference in the external cuneate nucleus during self-generated movements in wake but not sleep. *eLife*, 5: p. e18749, 2016.
6. Del Rio-Bermudez, C., Plumeau, A. M., Sattler, N. J., Sokoloff, G., & Blumberg, M. S. Spontaneous activity and functional connectivity in the developing cerebellorubral system. *Journal of Neurophysiology*, 116: 1316-1327, 2016.
7. Tiriac, A., & Blumberg, M. S. The case of the disappearing spindle burst. *Neural Plasticity*, 2016.
8. Blumberg, M. S. Development evolving: The origins and meanings of instinct. *WIREs Cognitive Science*, 2016. doi: 10.1002/wcs.1371
9. Blumberg, M. S., & Plumeau, A. M. A new view of "dream enactment" in REM sleep behavior disorder. *Sleep Medicine Reviews*, 30: 34-42, 2016.
10. Pospelov, A., Yukin, A. Y., Blumberg, M. S., Puskarjov, M., & Kaila, K. Forebrain-independent generation of hyperthermic convulsions in infant rats. *Epilepsia*, 57: e1-e6, 2015.
11. Sokoloff, G., Plumeau, A. M., Mukherjee, D., & Blumberg, M. S. Twitch-related and rhythmic activation of the developing cerebellar cortex. *Journal of Neurophysiology*, 114: 1746-1756, 2015.
12. Del Rio-Bermudez, C., Sokoloff, G., & Blumberg, M. S. Sensorimotor processing in the newborn rat red nucleus during active sleep. *Journal of Neuroscience*, 35: 8322-8332, 2015.

13. Blumberg, M. S., Sokoloff, G., Tiriach, A., & Del Rio-Bermudez, C. A valuable and promising method for recording brain activity in behaving newborn rodents. *Developmental Psychobiology*, 57: 506-517, 2015.
14. Blumberg, M. S. The developmental origins of spatial navigation: Are we headed in the right direction? *Trends in Neurosciences*, 38: 67-68, 2015.
15. Blumberg, M. S., Coleman, C. M., Sokoloff, G., Weiner, J. A., Fritzsche, B., & McMurray, B. Development of twitching in sleeping infant mice depends on sensory experience. *Current Biology*, 25: 656-662, 2015.
16. Blumberg, M. S. Developing sensorimotor systems in our sleep. *Current Directions in Psychological Science*, 24: 32-37, 2015.
17. Tiriach, A., Sokoloff, G., & Blumberg, M. S. Myoclonic twitching and sleep-dependent plasticity in the developing sensorimotor system. *Current Sleep Medicine Reports*, 1: 74-79, 2015.
18. Sokoloff, G., Uitermarkt, B., and Blumberg, M. S. REM sleep twitches rouse nascent cerebellar circuits: Implications for sensorimotor development. *Developmental Neurobiology*, 75: 1140-1153, 2015.
19. Tiriach, A., Del Rio-Bermudez, C., & Blumberg, M. S. Self-generated movements with “unexpected” sensory consequences. *Current Biology*, 24: 2136-2141, 2014.
20. Blumberg, M. S., Gall, A. J., and Todd, W. D. The development of sleep-wake rhythms and the search for elemental circuits in the infant brain. *Behavioral Neuroscience*, 128: 250-263, 2014.
21. Blumberg, M. S., Coleman, C. M., Gerth, A. I., and McMurray, B. Spatiotemporal structure of REM sleep twitching reveals developmental origins of motor synergies. *Current Biology*, 23: 2100-2109, 2013.
22. Blumberg, M. S. Setting the right tone. *Current Biology*, 23: R834-R836, 2013.
23. Blumberg, M. S., Marques, H. G., and Iida, F. Twitching in sensorimotor development from sleeping rats to robots. *Current Biology*, 23: R532-R537, 2013.
24. Tiriach, A., Uitermarkt, B. D., Fanning, A. S., Sokoloff, G., & Blumberg, M. S. Rapid whisker movements in sleeping newborn rats. *Current Biology*, 22: 2075-2080, 2012.
25. Blumberg, M. S. Homology, correspondence, and continuity across development: The case of sleep. *Developmental Psychobiology*, 55: 92-100, 2012.
26. Gall, A. J., Todd, W. D., & Blumberg, M. S. Development of SCN connectivity and the circadian control of arousal: A diminishing role for humoral factors? *PLoS ONE*, 7: e45338, 2012. doi:10.1371/journal.pone.0045338
27. Todd, W. D., Gall, A. J., Weiner, J. A., & Blumberg, M. S. Distinct retinohypothalamic innervation patterns predict the developmental emergence of species-typical circadian preference in nocturnal Norway rats and diurnal Nile grass rats. *Journal of Comparative Neurology*, 520: 3277-3292, 2012.
28. Schmidt, D., Best, J., Blumberg, M. S. Random graph and stochastic process contributions to network dynamics. *AIMS Proceedings*, 2: 1279-1288, 2011.
29. Karlsson, K. Æ., Arnardóttir, H., Robinson, S. R., and Blumberg, M. S. Dynamics of sleep-wake cyclicity across the fetal period in sheep (*Ovis aries*). *Developmental Psychobiology*, 53: 89-95, 2011.
30. Blumberg, M. S. Beyond dreams: Do sleep-related movements contribute to brain development? *Frontiers in Neurology*, 1: 140, 2010.
31. Marcano-Reik, A. J., Prasad, T., Weiner, J. A., & Blumberg, M. S. An abrupt development shift in callosal modulation of sleep-related spindle bursts coincides with the emergence of

- excitatory-inhibitory balance and a reduction of somatosensory cortical plasticity. *Behavioral Neuroscience*, 124: 600-611, 2010.
32. Wasserman, E. A., and Blumberg, M. S. Designing minds: How should we explain the origins of novel behaviors? *American Scientist*, May-June, pp. 183-185, 2010.
 33. Seelke, A. M. H., & Blumberg, M. S. Developmental appearance and disappearance of cortical events and oscillations in infant rats. *Brain Research*, 1324: 34-42, 2010.
 34. Mohns, E. J., & Blumberg, M. S. Neocortical activation of the hippocampus during sleep in newborn rats. *Journal of Neuroscience*, 30: 3438-3449, 2010.
 35. Todd, W. D., Gibson, J. L., Shaw, C. S., and Blumberg, M. S. Brainstem and hypothalamic regulation of sleep pressure and rebound in newborn rats. *Behavioral Neuroscience*, 124: 69-78, 2010.
 36. Wasserman, E. A., and Blumberg, M. S. Evolution of the monkey crouch (letter to editor). *Science*, 325: 812, 2009.
 37. Spencer, J. P., Samuelson, L. K., Blumberg, M. S., McMurray, R., Robinson, S. R., and Tomblin, J. B. Seeing the world through a third eye: Developmental systems theory looks beyond the nativist-empiricist debate. *Child Development Perspectives*, 3: 103-105, 2009.
 38. Spencer, J. P., Blumberg, M. S., McMurray, R., Robinson, S. R., Samuelson, L. K., and Tomblin, J. B. Short arms and talking eggs: Why we should no longer abide the nativist-empiricist debate. *Child Development Perspectives*, 3: 79-87, 2009.
 39. Gall, A. J., Joshi, B., Best, J., Florang, V. R., Doorn, J. A., & Blumberg, M. S. Developmental emergence of power-law wake behavior depends upon the functional integrity of the locus coeruleus. *Sleep*, 32: 920-926, 2009.
 40. Blumberg, M. S. Evolution shapes systems, not just genes (letter to editor). *Nature*, 457: 785 (Feb. 12), 2009.
 41. Marcano-Reik, A. J., & Blumberg, M. S. The corpus callosum modulates spindle-burst activity within homotopic regions of somatosensory cortex in newborn rats. *European Journal of Neuroscience*, 28: 1457-1466, 2008.
 42. Mohns, E. J., & Blumberg, M. S. Synchronous bursts of neuronal activity in the developing hippocampus: Modulation by active sleep and association with emerging gamma and theta rhythms. *Journal of Neuroscience*, 28: 10134-10144, 2008.
 43. Gall, A. J., Todd, W. D., Ray, B., Coleman, C. M., & Blumberg, M. S. The development of day-night differences in sleep and wakefulness in Norway rats and the effect of bilateral enucleation. *Journal of Biological Rhythms*, 23: 232-241, 2008.
 44. Seelke, A. M. H., & Blumberg, M. S. The microstructure of active and quiet sleep as cortical delta activity emerges in infant rats. *Sleep*, 31: 691-699, 2008.
 45. Mohns, E. J., Karlsson, K. Æ., & Blumberg, M. S. Developmental emergence of transient and persistent hippocampal events and oscillations and their association with infant seizure susceptibility. *European Journal of Neuroscience*, 26: 2719-2730, 2007.
 46. Blumberg, M. S., Karlsson, K. Æ., & Seelke, A. M. H. Sleep, development, and human health. *Sleep*, 30: 549-550, 2007.
 47. Blumberg, M. S. Anthropomorphism and evidence (invited commentary). *Comparative Cognition & Behavior Reviews*, 2: 145-146, 2007.
 48. Gall, A. J., Poremba, A., & Blumberg, M. S. Brainstem cholinergic modulation of sleep and wakefulness in infant rats. *European Journal of Neuroscience*, 25: 3367-3375, 2007.

49. Blumberg, M. S., Coleman, C., Johnson, E. D., & Shaw, C. Developmental divergence of sleep-wake patterns in orexin knockout and wild-type mice. *European Journal of Neuroscience*, 25: 512-518, 2007.
50. Wasserman, E. A., & Blumberg, M. S. Designing minds (commentary). *APS Observer*, 19 (10): 25-26, 2006.
51. Karlsson, K. Æ., Mohns, E. J., Vianna di Prisco, G., & Blumberg, M. S. On the co-occurrence of startles and hippocampal sharp waves in newborn rats. *Hippocampus*, 16: 959-965, 2006.
52. Mohns, E. J., Karlsson, K. Æ., & Blumberg, M. S. The preoptic hypothalamus and basal forebrain play opposing roles in the descending modulation of sleep and wakefulness in infant rats. *European Journal of Neuroscience*, 23: 1301-1310, 2006.
53. Blumberg, M. S., Seelke, A. M. H., Lowen, S. B., & Karlsson, K. Æ. Dynamics of sleep-wake cyclicity in developing rats. *Proceedings of the National Academy of Sciences*, 102: 14860-14864, 2005.
54. Middlemis-Brown, J. E., Johnson, E. D., and Blumberg, M. S. Separable brainstem and forebrain contributions to ultrasound production in infant rats. *Behavioral Neuroscience*, 119: 1111-1117, 2005.
55. Kreider, J. C., & Blumberg, M. S. Geotaxis and beyond: Commentary on Motz and Alberts (2005). *Neurotoxicology and Teratology*, 27: 535-537, 2005.
56. Seelke, A. M. H., Karlsson, K. Æ., Gall, A. J., & Blumberg, M. S. Extraocular muscle activity, rapid eye movements, and the development of active and quiet sleep. *European Journal of Neuroscience*, 22: 911-920, 2005.
57. Karlsson, K. Æ., Gall, A. J., Mohns, E. J., Seelke, A. M. H., & Blumberg, M. S. The neural substrates of infant sleep in rats. *PLoS Biology*, 3: 891-901, 2005.
58. Blumberg, M. S., Johnson, E. D., and Middlemis-Brown, J. E. Inhibition of ultrasonic vocalizations by beta-adrenoceptor agonists. *Developmental Psychobiology*, 47: 66-76, 2005.
59. Seelke, A. H., & Blumberg, M. S. Thermal and nutritional modulation of sleep in infant rats. *Behavioral Neuroscience*, 19: 603-611, 2005.
60. Blumberg, M. S., Karlsson, K. Æ., Seelke, A. M. H., & Mohns, E. J. The ontogeny of mammalian sleep: A response to Frank and Heller (2003). *Journal of Sleep Research*, 14: 91-101, 2005.
61. Karlsson, K. Æ., & Blumberg, M. S. Active medullary control of atonia in week-old rats. *Neuroscience*, 130: 275-283, 2005.
62. Blumberg, M. S., Middlemis-Brown, J. E., and Johnson, E. D. Sleep homeostasis in infant rats. *Behavioral Neuroscience*, 118: 1253-1261, 2004.
63. Seelke, A. H., & Blumberg, M. S. Sniffing during sleep and wakefulness in infant rats. *Behavioral Neuroscience*, 118: 267-273, 2004.
64. Karlsson, K. Æ., & Blumberg, M. S. Temperature-induced reciprocal activation of infant hippocampal field activity. *Journal of Neurophysiology*, 91: 583-588, 2004.
65. Karlsson, K. Æ., Kreider, J. C., & Blumberg, M. S. Hypothalamic contribution to sleep-wake cycle development. *Neuroscience*, 123: 575-582, 2004.
66. Blumberg, M. S., & Sokoloff, G. Hard heads and open minds: A reply to Panksepp. *Psychological Review*, 110: 389-394, 2003.
67. Karlsson, K. Æ., & Blumberg, M. S. Hippocampal theta in the newborn rat is revealed under conditions that promote REM sleep. *Journal of Neuroscience*, 23: 1114-1118, 2003.
68. Karlsson, K. Æ., & Blumberg, M. S. The union of the state: Myoclonic twitching is coupled with nuchal muscle atonia in infant rats. *Behavioral Neuroscience*, 116: 912-917, 2002.

69. Sokoloff, G., & Blumberg, M. S. Contributions of endothermy to huddling behavior in infant Norway rats (*Rattus norvegicus*) and Syrian golden hamsters (*Mesocricetus auratus*). *Journal of Comparative Psychology*, 116: 240-246, 2002.
70. Sokoloff, G., Blumberg, M. S., Boline, E. A., Johnson, E. D., & Streeper, N. M. Thermoregulatory behavior in infant Norway rats (*Rattus norvegicus*) and Syrian golden hamsters (*Mesocricetus auratus*): Arousal, orientation, and locomotion. *Journal of Comparative Psychology*, 116: 228-239, 2002.
71. Blumberg, M. S., Lewis, S. J., & Sokoloff, G. Incubation temperature modulates post-hatching thermoregulatory behavior in the Madagascar ground gecko, *Paroedura pictus*. *Journal of Experimental Biology*, 205: 2777-2784, 2002.
72. Blumberg, M. S., Sokoloff, G., Kirby, R. F., Knoot, T. G., & Lewis, S. J. Effects of antihypertensive drugs on ultrasound production and cardiovascular responses in 15-day-old rats. *Behavioural Brain Research*. 131: 37-46, 2002.
73. Blumberg, M. S., Knoot, T. G., & Kirby, R. F. Neural and hormonal control of arterial pressure during thermal challenge in unanesthetized infant rats. *American Journal of Physiology*. 281: R1514-R1521, 2001.
74. Sokoloff, G., & Blumberg, M. S. Competition and cooperation among huddling infant rats. *Developmental Psychobiology*, 39: 65-75, 2001.
75. Blumberg, M. S., & Sokoloff, G. Do infant rats cry? *Psychological Review*, 108: 83-95, 2001.
76. Kreider, J. C., & Blumberg, M. S. Mesopontine contribution to the expression of active "twitch" sleep in decerebrate week-old rats. *Brain Research*, 872: 149-159, 2000.
77. Sokoloff, G., Blumberg, M. S., & Adams, M. M. A comparative analysis of huddling in infant Norway rats and Syrian golden hamsters: Does endothermy modulate behavior? *Behavioral Neuroscience*, 114: 585-593, 2000.
78. Blumberg, M. S., Kreber, L., Sokoloff, G., Kent, K. Cardiovascular mediation of clonidine-induced ultrasound production in infant rats. *Behavioral Neuroscience*: 114: 602-608, 2000.
79. Robinson, S. R., Blumberg, M. S., Lane, M., & Kreber, L. Spontaneous motor activity in fetal and infant rats is organized into discrete multilimb bouts. *Behavioral Neuroscience*: 114: 328-336, 2000.
80. Blumberg, M. S., Sokoloff, G., & Kent, K. J. A developmental analysis of clonidine's effects on cardiac rate and ultrasound production in infant rats. *Developmental Psychobiology*: 36: 186-193, 2000.
81. Blumberg, M. S., & Sokoloff, G., Kirby, R. F., & Kent, K. J. Distress vocalizations in infants: What's all the fuss about? *Psychological Science*, 11: 78-81, 2000.
82. Blumberg, M. S., Sokoloff, G., & Kent, K. J. Cardiovascular concomitants of ultrasound production during cold exposure in infant rats. *Behavioral Neuroscience*, 113: 1274-1282, 1999.
83. Kirby, R. F., Sokoloff, G., Perdomo, E., & Blumberg, M. S. Thermoregulatory and cardiac responses of infant spontaneously hypertensive and Wistar-Kyoto rats to cold exposure. *Hypertension*, 33: 1465-1469, 1999.
84. Kreider, J. C., & Blumberg, M. S. Geotaxis in two-week-old Norway rats (*Rattus norvegicus*): A reevaluation. *Developmental Psychobiology*, 35: 35-42, 1999.
85. Blumberg, M. S., Deaver, K., & Kirby, R. F. Leptin disinhibits BAT thermogenesis in infants after maternal separation. *American Journal of Physiology*, 276: R606-R610, 1999.
86. Sokoloff, G., & Blumberg, M. S. Active sleep in cold-exposed infant Norway rats and Syrian golden hamsters: The role of brown adipose tissue thermogenesis. *Behavioral Neuroscience*, 112: 695-706, 1998.

87. Sokoloff, G., Kirby, R. F., & Blumberg, M. S. Further evidence that BAT thermogenesis modulates cardiac rate in infant rats. *American Journal of Physiology*, 274: R1712-1717, 1998.
88. Blumberg, M. S., & Sokoloff, G. Thermoregulatory competence and behavioral expression in the young of altricial species -- Revisited. *Developmental Psychobiology*, 33: 107-123, 1998.
89. Kirby, R. F., & Blumberg, M. S. Maintenance of arterial pressure in infant rats during moderate and extreme thermal challenge. *Developmental Psychobiology*, 32: 169-176, 1998.
90. Blumberg, M. S. Ontogeny of cardiac rate regulation and brown fat thermogenesis in golden hamsters (*Mesocricetus auratus*). *Journal of Comparative Physiology B*, 167: 552-557, 1997.
91. Blumberg, M. S., & Sokoloff, G. Dynamics of brown fat thermogenesis in week-old rats: Evidence of relative stability during moderate cold exposure. *Physiological Zoology*, 70: 324-330, 1997.
92. Blumberg, M. S., Sokoloff, G., & Kirby, R. F. Brown fat thermogenesis and cardiac rate regulation during cold challenge in infant rats *American Journal of Physiology*, 272: R1308-R1313, 1997.
93. Sokoloff, G., & Blumberg, M. S. Thermogenic, respiratory, and ultrasonic responses of week-old rats across the transition from moderate to extreme cold exposure. *Developmental Psychobiology*, 30: 181-194, 1997.
94. Blumberg, M. S., & Wasserman, E. A. Animals have minds? *American Psychologist*, 51: 59-60, 1996.
95. Blumberg, M. S., & Stolba, M. A. Thermogenesis, myoclonic twitching, and ultrasonic vocalization in neonatal rats during moderate and extreme cold exposure. *Behavioral Neuroscience*, 110: 305-314, 1996.
96. Blumberg, M. S., & Lucas, D. E. A developmental and component analysis of active sleep. *Developmental Psychobiology*, 29: 1-22, 1996.
97. Blumberg, M. S., Schalk, S. L., & Sokoloff, G. Pontine and basal forebrain transections disinhibit brown fat thermogenesis in neonatal rats. *Brain Research*, 699: 214-220, 1995.
98. Gagliardi, J. L., Kirkpatrick-Steger, K. K., Thomas, J., Allen, G. J., & Blumberg, M. S. Seeing and knowing: Knowledge attribution versus stimulus control in adult humans (*Homo sapiens*). *Journal of Comparative Psychology*, 109: 107-114, 1995.
99. Blumberg, M. S., & Wasserman, E. A. Animal mind and the argument from design. *American Psychologist*, 50: 133-144, 1995.
100. Blumberg, M. S., & Lucas, D. E. Dual mechanisms of twitching during sleep in neonatal rats. *Behavioral Neuroscience*, 108: 1196-1202, 1994.
101. Blumberg, M. S., Efimova, I. V., & Alberts, J. R. Thermogenesis during ultrasonic vocalization by rat pups isolated in a warm environment: A thermographic analysis. *Developmental Psychobiology*, 25: 497-510, 1992.
102. Blumberg, M. S., Mennella, J. A., McClintock, M. K., & Moltz, H. Facultative sex ratio adjustment in Norway rats: Litters born asynchronously are female-biased. *Behavioral Ecology and Sociobiology*, 31: 401-408, 1992.
103. Blumberg, M. S. Rodent ultrasonic short calls: Locomotion, biomechanics, and communication. *Journal of Comparative Psychology*, 106: 360-365, 1992.
104. Blumberg, M. S., & Alberts, J. R. Functions and effects in animal communication: Reactions to Guilford & Dawkins. *Animal Behaviour*, 44: 382-383, 1992.
105. Blumberg, M. S., Efimova, I. V., & Alberts, J. R. Ultrasonic vocalizations by rat pups: The primary importance of ambient temperature and the thermal significance of contact comfort. *Developmental Psychobiology*, 25: 229-250, 1992.

106. Blumberg, M. S., & Alberts, J. R. Both hypoxia and milk deprivation diminish metabolic heat production and ultrasound emission by rat pups during cold exposure. *Behavioral Neuroscience*, 105: 1030-1037, 1991.
107. Blumberg, M. S. Prostaglandin E₂ accelerates sexual behavior in male rats. *Physiology and Behavior*, 50: 95-99, 1991.
108. Blumberg, M. S., & Alberts, J. R. On the significance of similarities between ultrasonic vocalizations of infant and adult rats. *Neuroscience and Biobehavioral Reviews*, 15: 383-390, 1991.
109. Blumberg, M. S., & Alberts, J. R. Ultrasonic vocalizations by rat pups in the cold: An acoustic by-product of laryngeal braking? *Behavioral Neuroscience*, 104: 808-817, 1990.
110. Mennella, J. A., Blumberg, M. S., McClintock, M. K., & Moltz, H. Inter-litter competition and communal nursing among Norway rats: advantages of birth synchrony. *Behavioral Ecology and Sociobiology*, 27: 183-190, 1990.
111. Blumberg, M. S. An allometric analysis of hippocampal theta: The significance of brain metabolic rate. *Brain, Behavior and Evolution*, 34: 351-356, 1989.
112. Blumberg, M. S., & Moltz, H. How the nose cools the brain during copulation in the male rat. *Physiology and Behavior*, 43: 173-176, 1988.
113. Blumberg, M. S., & Moltz, H. Hypothalamic temperature and the 22 kHz vocalization of the male rat. *Physiology and Behavior*, 40: 637-640, 1987.
114. Blumberg, M. S., Mennella, J. A., & Moltz, H. Hypothalamic temperature and deep body temperature during copulation in the male rat. *Physiology and Behavior*, 39: 367-370, 1987.
115. Wingfield, A., Milstein, G., & Blumberg, M. S. Cerebral specialization and hemispheric performance asymmetries in narrative memory. *Perceptual and Motor Skills*, 59: 39-42, 1984.

BOOKS AND EDITED COLLECTIONS

1. Blumberg, M. S., Spencer, J. P., and Shenk, D. (eds.) ***How we develop—Development systems and the emergence of complex behaviors.*** [WIREs Cognitive Science](#), 2016.
2. Blumberg, M. S., Freeman, J. H., and Robinson, S. R. (eds.) ***The Oxford Handbook of Developmental Behavioral Neuroscience.*** New York: Oxford University Press, 2010.
 Reviewed in Doody's *Health Sciences*.
3. Blumberg, M. S. ***Freaks of Nature: What Anomalies Tell Us about Development and Evolution.*** New York: Oxford University Press, 2009.
 Reviewed in *Science*, *Nature*, *Times Literary Supplement*, *The Scientist*, *Chronicle of Higher Education*, *Boldtype*, *New Scientist*, *Science News*, *io9*, *Discover*, *Daily Telegraph*, *Financial Times*, *Neurotopia (blog)*, *Evolving Thoughts (blog)*, *The Guardian*, *Choice*, *Skeptical Inquirer*, *Doody's Health Sciences Review*, *Jewish Exponent (Philadelphia)*, *Journal of Clinical Investigation*, *Lab Times*, *Reports of the National Center for Science Education*.
 Korean Translation: Alma, Inc.
4. Blumberg, M. S. ***Basic Instinct: The Genesis of Behavior.*** New York: Thunder's Mouth Press (now Basic Books), 2005.
 Reviewed in *Publisher's Weekly*, *Science News*, *Developmental Psychobiology*, *The Quarterly Review of Biology*, *Scientific American Mind*, *AAAS Science Books and Films*, *Journal of Behavioral Finance*.

Reprinting of Chapter 2, "Designer Thinking," in *Annual Editions, Physical Anthropology 07/08*, McGraw-Hill.

Japanese Translation: Hayakawa Publishing, Inc.

Korean Translation: Ludens Book

5. Blumberg, M. S. ***Body Heat: Temperature and Life on Earth***. Cambridge: Harvard University Press, 2002.

Reviewed in *Publisher's Weekly*, *The Los Angeles Times*, *Times Literary Supplement*, *The Sunday Telegraph*, *New Scientist*, *Natural History*, *Science News*, *American Scientist*, *American Scholar*, *Netsurfer Science*, *JAMA*, *Choice*, *2Think.org*, *Bulletin of the American Meteorological Society*, *Developmental Psychobiology*, *M2 Best Books*, *Northeastern Naturalist*, *The Physiologist*, *Canadian Literature*, *The Quarterly Review of Biology*, *Journal of Mammalogy*.

CHAPTERS

1. Sokoloff, G. & Blumberg, M. S. Recording extracellular activity and behavior in the developing cerebellum. In R. Sillitoe (Ed.), *Neuromethods: Extracellular Recording Techniques*, Springer, in press.
2. Blumberg, M. S. & Rattenborg, N. C. Decomposing the evolution of sleep: Comparative and developmental approaches. In J. H. Kaas (Ed.), *The Evolution of Nervous Systems 2e, Volume 3*, Oxford: Elsevier, 2017, pp. 523-545.
3. Harshaw, C., Blumberg, M. S., & Alberts, J. R. Thermoregulation, energetics, and behavior. In J. Call (Ed.), *APA handbook of Comparative Psychology: Volume 2. Concepts, History, and Methods*. Washington, DC: American Psychological Association, 2017.
4. Blumberg, M. S. Ontogeny of sleep. In C. Kushida (Ed.), *Encyclopedia of Sleep*. Waltham, MA: Academic Press, 2013, pp. 32-37.
5. Blumberg, M. S. Phenomenology and function of myoclonic twitching in developing rats. In: Rapid eye movement sleep: Regulation and function. In B. N. Mallick, S. R. Pandi-Perumal, R. W. McCarley, and A. Morrison (Eds.). Cambridge: Cambridge University Press, 2011, pp. 130-139.
6. Marcano-Reik, A. J., & Blumberg, M. S. Neuroscience. In: *The Corsini Encyclopedia of Psychology and Behavioral Science*. Hoboken, NJ: John Wiley, 2010, pp. 1086-1088.
7. Blumberg, M. S., & Seelke, A. M. H. The form and function of infant sleep: From muscle to neocortex. In M. S. Blumberg, J. H. Freeman, and S. R. Robinson (Eds.), *The Oxford Handbook of Developmental Behavioral Neuroscience*. New York: Oxford University Press, 2010, pp. 391-423.
8. Blumberg, M. S., & Freeman, J. H., and Robinson, S. R. Introduction: A new frontier for developmental behavioral neuroscience. In M. S. Blumberg, J. H. Freeman, and S. R. Robinson (Eds.), *The Oxford Handbook of Developmental Behavioral Neuroscience*. New York: Oxford University Press, 2010, pp. 1-4.
9. Mohns, E. J., & Blumberg, M. S. Hippocampal EEG in the neonatal rat: Development of normal and pathological activity. In P. A. Schwartzkroin (Ed.), *Encyclopedia of Basic Epilepsy Research*, Vol. 2. Oxford: Academic Press, 2009, pp. 1061-1065.
10. Sokoloff, G., & Blumberg, M. S. Vocalization. In B. Kolb and I. Q. Whishaw (Eds.), *The Behaviour of the Laboratory Rat: A Handbook With Tests*. Oxford: Oxford University Press. 2004, pp. 371-380.
11. Blumberg, M. S. Behavioral thermoregulation. In M. Bekoff (Ed.), *Encyclopedia of Animal Behavior*. Westport, CT: Greenwood Press, 2004, pp. 104-107.
12. Blumberg, M. S. The developmental context of thermal homeostasis. In E. M. Blass (Ed.), *The Handbook of Behavioral Neurobiology, Volume 13, Developmental Psychobiology*. New York: Springer, 2001, pp. 199-228.

13. Blumberg, M. S., & Alberts, J. R. Incidental emissions, fortuitous effects, and the origins of communication. In D. H. Owings, M. D. Beecher, and N. S. Thompson (Eds.), *Perspectives in Ethology, Volume 12*. New York, Plenum Press, 1997, pp. 225-249.

PERIODICALS

1. Spencer, J. P., Blumberg, M. S., & Shenk, D. Moving beyond nature-nurture: a problem of science or communication? IEEE Newsletter of the Technical Committee on Cognitive and Developmental Systems. 13: 4-5, 2016. (A [dialogue](#) with 12 responses and a reply.)
2. Spencer, J. P., Blumberg, M. S., & Shenk, D. Wanted: A new language to move beyond "Nature/Nurture." IEEE Newsletter of the Technical Committee on Cognitive and Developmental Systems. 13: 18-19, 2016.
3. Blumberg, M. S., Tiriach, A., & Del Rio-Bermudez, C. Twitching in your sleep is more about mapping the brain than chasing rabbits. [The Conversation](#), October 3, 2014.
4. Blumberg, M. S. The animal zealotry that destroyed our lab. *The Washington Post*, Sunday Outlook, July 17, 2005.
5. Blumberg, M. S. A few degrees of separation. *The Sunday Times* (London), May 26, 2002.

BOOK REVIEWS

Blumberg, M. S. Review of "Temperature regulation in laboratory rodents," by C. J. Gordon. *Animal Behaviour*, 48: 996-997, 1994.

BLOGS

Blumberg, M. S. Challenging the *New York Times*: Is FOXP2 really a "speech gene"? [The Atlantic.com](#), November 19, 2009.

Blumberg, M. S., A brave new world in China? [The Atlantic.com](#), August 8, 2009.

Blumberg, M. S., Bridgeless gaps. [OUP blog](#), November, 25, 2008.

GRANTS

Pending: Principal Investigator, New Submission (R21), Greta Sokoloff (Co-I), National Institute of Child Health and Human Development (NICHD), entitled "Cortical activity and phasic REM sleep in human newborns." 2018-2019. Total direct costs over 2 years: \$275,000.

Pending: Principal Investigator, Competitive Renewal (R01), Greta Sokoloff (Co-I), National Institute of Child Health and Human Development (NICHD), entitled "Activity-dependent processes of neural plasticity in early development." 2017-2022. Total costs over 5 years: \$2,664,359.

Principal Investigator, Ted Abel (Consultant), Simons Foundation SFARI Explorer Award, entitled "Neurodevelopmental assessment of motor behavior in a mouse model of autism." 2017-2018. Total direct costs over 1 year: \$70,000.

Principle Investigator, Bill & Melinda Gates Foundation Grand Challenges Exploration Round 14 grant (OPP1129031), entitled, "Using REM sleep twitches to detect and assess neurodevelopmental disorders." Total direct costs over 18 months (May 1, 2015-October 31, 2016): \$100,000.

Principal Investigator, MERIT Award (R37), Greta Sokoloff (Co-I), National Institute of Child Health and Human Development (NICHD), entitled "State-dependent sensory processing across early development" (HD081168). 2014-2024. Total costs over 10 years: \$4,939,592.

Principal Investigator, R21, Joshua Weiner and Bernd Fritzsch (co-Is), National Institute of Nervous Diseases and Stroke (NINDS), entitled "Sleep, proprioception, and forebrain activity in infant mutant mice" (NS073869). 2012-2013. Total costs over 2 years: \$394,165.

Principal Investigator, RO1, National Institute of Child Health and Human Development (NICHD), entitled "Behavioral state development in infants" (HD063071). 2010-2015. Total costs over 5 years: \$1,500,000. (No-cost extension through June, 2016.)

Principal Investigator, KO2, Independent Scientist Award, National Institute of Mental Health (NIMH), entitled "Homeostasis and behavioral state organization in infants" (MH066424). 2007-2012. Total costs over 5 years: \$630,340.

Principal Investigator, RO1, National Institute of Mental Health (NIMH), entitled "Behavioral state development in infants" (MH050701). 2004-2009. Total costs over 5 years: \$1,279,990.

Principal Investigator, KO2, Independent Scientist Award, National Institute of Mental Health (NIMH), entitled "Homeostasis and behavioral state organization in infants" (MH066424). 2002-2007. Total costs over 5 years: \$554,960.

Principal Investigator, RO1, National Institute of Mental Health (NIMH), entitled "Endothermy and behavioral thermoregulation in infants" (MH050701). 2000-2004. Total costs over 4 years: \$824,626.

Principal Investigator, RO1, National Institute of Child Health and Human Development (NICHD), entitled "Cardiovascular concomitants of ultrasonic vocalizations" (HD038708). 2000-2003. Total costs over 3 years: \$595,350. (Minority supplement, 2001-2003, total costs over two years: \$27,928.)

Faculty Scholar Award, 1999-2002, includes a 50% reduction in teaching and service for three consecutive years, as well as modest (\$2,000-\$4,500) support for research from the Office of the Provost.

Principal Investigator, FIRST Award (R29), National Institute of Mental Health (NIMH), entitled "Development of autonomic and behavioral thermoregulation" (MH050701). 1994-1999. Total direct costs over 5 years: \$349,924. (Minority supplement, 1997-1999, total direct costs over two years: \$36,187.)

Co-Investigator with Jeffrey Alberts (PI), RO1, National Institute of Child Health and Human Development (NICHD), entitled "Thermal imaging of perinatal behavior and physiology," 1991-1994. Total direct costs over 3 years: \$133,956.

INVITED LECTURES, COLLOQUIA, AND CONFERENCE PRESENTATIONS

INVITED LECTURES, COLLOQUIA, SYMPOSIA

Invited speaker in symposium entitled "Sleep ontogeny across phylogeny: Examining the role of sleep during development using model systems." Sleep Research Society, Boston, Massachusetts, June 6, 2017.

Co-chair of session entitled "The interplay between sleep and development." structure-function relations in early brain development." Sleep Research Society, Boston, Massachusetts, June 6, 2017.

Colloquium, "Developing the sensorimotor system in our sleep: Implications for typical and atypical human development," Department of Pediatrics, University of Iowa Carver College of Medicine, April 10, 2017.

Colloquium, "Development evolving: From innateness to epigenesis," DeLTA Center, University of Iowa, September 9, 2016.

Chair of symposium entitled "Emerging structure-function relations in early brain development." International Conference on Infant Studies (ICIS), New Orleans, Louisiana, May 26-28, 2016.

Invited colloquium, "Developing the sensorimotor system in our sleep," Center for Sleep and Circadian Neurobiology, Perelman School of Medicine, University of Pennsylvania, February 18, 2016.

Invited colloquium, "Developing the sensorimotor system in our sleep," Department of Physiology, Pharmacology, & Neuroscience, City College of New York (CCNY), December 14, 2015.

Invited speaker, "A new view of "dream enactment" in REM sleep behavior disorder," International REM Sleep Behavior Disorder Study Group Meeting, Ft. Lauderdale, Florida, December 4-6, 2015.

Invited colloquium, "Developing the sensorimotor system in our sleep," Department of Molecular, Cellular, and Developmental Biology, University of Michigan, Ann Arbor, November 13, 2015.

Invited colloquium, "Developing the sensorimotor system in our sleep," Department of Neuroscience and Physiology, New York University Medical Center, New York, November 10, 2015.

Invited speaker, "Developing the sensorimotor system in our sleep," NeuroDevNet Brain Development Conference, Ottawa, Canada, September 20, 2015.

Invited colloquium, "Developing the sensorimotor system in our sleep," Department of Psychology, New York University, New York, September 17, 2015.

Invited speaker, "Developing the sensorimotor system in our sleep," The Barcelona Cognition, Brain, and Technology summer school, Barcelona, Spain, August 31-September 4, 2015.

Harley Hotchkiss Memorial Lecture, "Developing the sensorimotor system in our sleep," Department of Neuroscience and the Canadian Centre for Behavioural Neuroscience, University of Lethbridge, Lethbridge, Canada, April 9, 2015.

Invited colloquium, "Developing the sensorimotor system in our sleep," Department of Psychology, Ohio State University, Columbus, Ohio, March 26, 2015.

Brown bag talk, "Developing the sensorimotor system in our sleep," Department of Psychology, University of Iowa, February 18, 2015.

Invited colloquium, "Beyond dreams: Developing the sensorimotor system in our sleep," Department of Psychological and Brain Sciences, University of Massachusetts, Amherst, February 4, 2015.

Invited colloquium, "Development evolving: From innateness to epigenesis," Center for Studies in Behavioral Neurobiology, Concordia University, Montreal, Canada, January 30, 2015.

Invited colloquium, "Mapping the sensorimotor system in our sleep," Center for Studies in Behavioral Neurobiology, Concordia University, Montreal, Canada, January 29, 2015.

Invited colloquium, "Mapping the sensorimotor system in our sleep," University of Lyon, Lyon, France, November 24, 2014.

Plenary speaker, French Sleep Research and Medicine Society, Lille, France, November 21, 2014.

Invited speaker, "Developing the sensorimotor system in our sleep," NIH Sleep and Neurodevelopment Symposium, Bethesda, Maryland, October 8, 2014.

Symposium participant, "Developing the sensorimotor system in our sleep," 22nd Congress of the European Sleep Research Society, Tallinn, Estonia, September 16-20, 2014.

Symposium participant, "REM sleep without atonia and dream enactment: The view from early infancy," Symposium entitled "Clinical and Basic Science Perspectives on Mechanisms of REM Sleep Behavior Disorder." Annual meeting of the Associated Professional Sleep Societies, Minneapolis, Minnesota, June 1, 2014.

Symposium participant, "Developing sensorimotor memories in our sleep," Symposium entitled "Ground-breaking Theories on Sleep Regulation and Function." Annual meeting of the Associated Professional Sleep Societies, Minneapolis, Minnesota, June 1, 2014.

Keynote speaker, Animal Behavior Conference, Center for the Integrative Study of Animal Behavior (CISAB), Indiana University, Bloomington, Indiana, April 24-26, 2014.

Invited speaker, "Developing sensorimotor memories in our sleep," Gordon Research Conference on Sleep Regulation and Function, Galveston, Texas, March 16-21, 2014.

Invited colloquium, "Development evolving: From innateness to epigenesis," Department of Psychology, State University of New York at New Paltz, December 2, 2013.

Invited speaker, "Beyond dreams: Developing sensorimotor memories in our sleep," Helmut S. Schmidt Memorial Keynote Symposium: Sleep Medicine, Ohio Sleep Medicine Institute, Columbus, Ohio, November 16, 2013.

Keynote address, "On the origins of complex behaviors: From innateness to epigenesis." Conference entitled "Hormonal Control of Circuits for Complex Behaviors," Janelia Farm Research Campus, Howard Hughes Medical Institute, Ashburn, Virginia, October 27-30, 2013.

Invited speaker, "Developing sensorimotor memories in our sleep," Department of Neurosurgery, University of Iowa Hospitals & Clinics, Iowa City, July 12, 2013.

Invited colloquium, Distinguished Speaker Series, "Beyond dreams: Developing sensorimotor memories in our sleep," Department of Psychology, UC Davis, Davis, California, May 23, 2013.

Inaugural Starkey Duncan Memorial Lecture, "Beyond dreams: Developing sensorimotor memories in our sleep," Department of Psychology, The University of Chicago, May 2, 2013.

Invited speaker, Sleep Disorders Clinic, Department of Neurology, University of Iowa Hospitals & Clinics, Iowa City, April 19, 2013.

Invited colloquium, "Developing sensorimotor memories in our sleep," Department of Informatics, University of Zurich, Zurich, Switzerland, December 6, 2012.

Invited colloquium, "Development evolving: From innateness to epigenesis." Department of Psychology, Princeton University, November 30, 2012.

Grand Rounds, "Beyond dreams: How sleep-related movements contribute to sensorimotor development and recovery of function," Department of Neurology, University of Iowa Hospitals & Clinics, Iowa City, November 13, 2012.

Invited colloquium, "Developing sensorimotor memories in our sleep," Department of Psychology, University of Wisconsin, Madison, November 1, 2012.

Invited colloquium, "Development evolving: From innateness to epigenesis," Department of Psychology, Rutgers University, Newark, NJ, September 21, 2012.

Invited colloquium, "Developing sensorimotor memories in our sleep," Center for Molecular and Behavioral Neuroscience, Rutgers University, Newark, NJ, September 20, 2012.

Symposium speaker, "Motor activity during sleep in infants activates cortical and hippocampal circuits: Relations to sensorimotor integration and plasticity." In symposium entitled "Early cortical activity patterns in rodents and humans: From basics to clinic," 8th FENS Forum of Neuroscience, Barcelona, Spain, July 14-18, 2012.

Invited speaker, "Development evolving: From innateness to epigenesis." International Conference on Infant Studies, Minneapolis, Minnesota, June, 2012.

Invited workshop, "Designer thinking and developmental systems." University of Verona, Verona, Italy, April 28, 2012.

Invited colloquium, "Beyond dreams: How twitches during active sleep contribute to sensorimotor development." University of Verona, Verona, Italy, April 27, 2012.

Invited speaker, Reasonfest, "Freaks of nature and intelligent design." University of Kansas, Lawrence, Kansas, February 11, 2012.

Invited colloquium, "Beyond dreams: How twitches during active sleep contribute to sensorimotor development." Department of Cell and Systems Biology, University of Toronto, Toronto, Canada, February 3, 2012.

Discussant, "Legacies and systems." In symposium entitled "Developmental pathways of species-typical behavior." International Society for Developmental Psychobiology, Washington, D.C., November, 2011.

Invited speaker, "A twitch in time." Cognitive Development Society Pre-Conference Event entitled "Creating development: Integrating processes over multiple timescales." Philadelphia, Pennsylvania, October, 2011.

Invited participant, "How will behavioral homology survive in an age of developmental plasticity?" NSF-sponsored workshop on "Exploring the Concept of Homology in Developmental Psychology." Dalhousie University, Halifax, Nova Scotia, August, 2011.

Keynote speaker for Brain Awareness Week, "Beyond dreams: Do sleep-related movements contribute to brain development?" Neuroscience Program, Tulane University, New Orleans, Louisiana, March 17, 2011.

Keynote speaker for Darwin Week, "Developing creations and creating development: Why monsters matter." University of Northern Iowa, Cedar Falls, Iowa, February 9, 2011.

Invited colloquium, "Beyond dreams: Do sleep-related movements contribute to brain development?" Department of Physics, University of Iowa, February 7, 2011.

Invited colloquium, "Beyond dreams: Do sleep-related movements contribute to brain development?" Neuroscience Program, University of Maryland – College Park, November 5, 2010.

Invited colloquium, "Beyond dreams: Do sleep-related movements contribute to brain development?" Neuroscience Seminar, University of Iowa, October 5, 2010.

Invited colloquium, "The form and function of infant sleep: From muscle to neocortex to developmental plasticity." Department of Biology, University of Iowa, September 24, 2010.

Invited participant, Opportunities at the Interface of Physics and Biology Symposium, Chicago, Illinois, July 27-29, 2010.

Invited speaker, "The form and function of infant sleep: From muscle to neocortex to developmental plasticity." Workshop entitled "Emerging locomotor skills, emotion regulation, and the tasks of the sleeping infant." University of Haifa, May 3-5, 2010.

Keynote speaker, "Developing creations and creating development: Why monsters matter." Annual meeting of the Iowa Academy of Science, Graceland University, Lamoni, Iowa, April 16, 2010.

Invited colloquium, "Sleep and the development of body, brain, and behavior." The Center for Psychiatric Neuroscience, University of Mississippi Medical Center, Jackson, Mississippi, March 12, 2010.

Invited speaker, "Developing creations and creating development: Why monsters matter." Mütter Museum at the College of Physicians of Philadelphia, Philadelphia, Pennsylvania, September 11, 2009.

Invited colloquium, "Sleep and the development of body, brain, and behavior." Center for Neurobiology and Behavior, University of Pennsylvania, September 11, 2009.

Invited speaker, "Sleep and the development of body, brain, and behavior." Distinguished Speakers in Behavioral and Brain Sciences Seminar Series, Department of Psychology, Cornell University, Ithaca, NY, September 3-4, 2009.

Invited speaker, "Spontaneous motor activity during active sleep modulates neocortical and hippocampal events and oscillations in newborn rats." Spring Hippocampal Research Conference, Verona, Italy, June 14-19, 2009.

Invited participant, ANR-NSF Meeting on Cognitive, Behavioural and Social Complexity Cognitive Sciences. Reims, France, April 27-28, 2009.

Invited discussant, "Are animals sentient beings?" Obermann Center Dinner Conversations, University of Iowa, April 16, 2009.

Invited Darwin Day address, "Developing creations and creating development: Why monsters matter." University of Iowa, February 13, 2009.

Invited colloquium, "Sleep and the development of body, brain, and behavior." Department of Psychology, Ohio State University, January, 15, 2009.

Presidential address, "Developing creations and creating development: Toward a developmental psychobiology of 'monsters'" International Society for Developmental Psychobiology, Washington, DC, November, 2008.

Invited speaker, "Developing creations and creating development," for symposium entitled "What is the nature of creativity," Kyoto University, Kyoto, Japan, October, 2008.

Invited panelist for colloquium entitled "Writing science at the science university," University of Iowa, October 8, 2008.

Invited speaker, "Sleep and the development of body, brain, and behavior," for ICDLS workshop entitled "Neural plasticity across multiple time scales," University of Iowa, October, 2008.

Invited participant and speaker, Neurobiological Basis of Circadian Rhythms Interaction with Complex Behaviors Workshop, Sponsored by NIMH, Bethesda, Maryland, July 22-23, 2008. Talk entitled "Epigenesis of ultradian and circadian sleep-wake rhythms."

Invited keynote speaker. "Nativism, evolutionary psychology, and creationism," for symposium entitled "Reconciling nature and nurture in the study of behavior." Indiana University, Bloomington, Indiana, March 23-25, 2007.

Invited colloquium, "The form and function of infant sleep: From muscle to neocortex." Mayo Clinic College of Medicine, Rochester, Minnesota, December 5, 2006.

Invited colloquium, "The form and function of infant sleep: From muscle to neocortex." Department of Biological Sciences, The University of Iowa, Iowa City, Iowa, December 1, 2006.

Invited participant, Consensus meeting on the development of neocortical rhythms, University of Helsinki, Helsinki, Finland, November 10-11, 2006.

Invited colloquium, "Tracking the developmental dynamics of sleep and wakefulness." Workshop on New Approaches to Modeling Sleep/Wake Dynamics and Cognitive Performance, Mathematical Biosciences Institute, Ohio State University, Columbus, Ohio, October 26-27, 2006.

Invited colloquium, "The form and function of infant sleep: From muscle to neocortex." Medical College of Wisconsin, Milwaukee, Wisconsin, March 30, 2006.

Invited colloquium, "The form and function of infant sleep: From muscle to neocortex." New York University, New York, NY, December 14, 2005.

Invited colloquium, "The ontogeny of mammalian sleep: From muscle to neocortex." University of Massachusetts, Amherst, MA, December 6, 2005.

APA fellow presentation, "Unraveling the mysteries of infant sleep." Annual Conference of the American Psychological Association, Washington, DC, August, 2005.

Invited colloquium, "Unraveling the mysteries of infant sleep." Department of Neurosurgery, University of Iowa Hospitals and Clinics, May 27, 2005.

Invited colloquium, "Unraveling the mysteries of infant sleep." Department of Psychology and the Center for the Integrative Study of Animal Behavior, Indiana University, February 25, 2005.

Departmental colloquium, "Unraveling the mysteries of infant sleep." Department of Psychology, The University of Iowa, Iowa City, Iowa, Feb. 23, 2005.

Invited colloquium, "In search of the elemental sleep circuit." Department of Psychology, University of Tennessee, October 13, 2005.

Invited participant, Pediatric Epilepsy Workshop, Sponsored by NINDS, Bethesda, Maryland, May 13-14, 2004.

Invited colloquium, "In search of the elemental sleep circuit." Neuroscience Program, Albert Einstein College of Medicine, Bronx, New York, April 7, 2004.

Departmental colloquium, "Do infants really sleep? And do they really need it?" Department of Psychology, The University of Iowa, Iowa City, Iowa, Feb. 22, 2004.

Departmental colloquium, "What can infant rats teach us about sleep, cataplexy, orexin, and the hippocampus?" Department of Psychology, The University of Iowa, Iowa City, Iowa, March 5, 2003.

Invited colloquium, "Dissecting the neural substrates of sleep in infant rats." Neuroscience Program, Michigan State University, February 13, 2003.

Invited colloquium, "The pup who came in from the cold: Explorations in physiological ecology." Ecology, Evolutionary Biology, and Behavior Program, Michigan State University, February 12, 2003.

Invited colloquium, "Do infant rats cry? And why should we care?" Department of Psychology, University of California at Davis, December 4, 2001.

Invited colloquium, "Do infant rats cry? And why should we care?" Saturday Scholars Program, College of Liberal Arts, The University of Iowa, October 6, 2001.

Invited colloquium, "Do infant rats cry? Recent developments in an ongoing controversy." Midwestern Psychological Association, May, 2001.

Departmental colloquium, "Leading with your chin: Dissecting the components of behavioral thermoregulation in infant rats and hamsters." Department of Psychology, The University of Iowa, Iowa City, Iowa, October 11, 2000.

Invited colloquium, "Cardiovascular causes and consequences of ultrasonic 'crying' in infant rats." Department of Biological Sciences, The University of Iowa, Iowa City, Iowa, March 31, 2000.

Departmental colloquium, "Cardiovascular causes and consequences of ultrasonic 'crying' in infant rats." Department of Psychology, The University of Iowa, Iowa City, Iowa, September 8, 1999.

Departmental colloquium, "What distinguishes a good department from a great department? An open discussion." Department of Psychology, The University of Iowa, Iowa City, Iowa, May 5, 1999.

Departmental colloquium with Gregg Oden, "Why is the concept of set point so unsettling?" Department of Psychology, The University of Iowa, Iowa City, Iowa, February 3, 1999.

Award address, "The developmental context of sleep and homeostasis," American Psychological Association, San Francisco, California, August, 1998.

Invited symposium discussant, "Emergence of motor organization in the fetus and neonate: Congruent themes in human and animal models," 11th Biennial International Conference on Infant Studies (ICIS), Atlanta, Georgia, April, 1998.

Invited speaker for the Brain Awareness Week Symposium, "To sleep, perchance to twitch," The University of Iowa, March 26, 1998.

Invited workshop, "Developmental approaches to the study of REM sleep," Department of Psychology, The University of Chicago, January 16, 1998.

Invited colloquium, "The developmental context of homeostasis," Department of Psychology, The University of Chicago, January 15, 1998.

Invited colloquium at the Center for Developmental Psychobiology, "The squeaky wheel gets the grease, and other deep thoughts on animal communication," State University of New York at Binghamton, February, 1993.

Invited colloquium, Department of Psychology, The University of Iowa, 1991.

Invited colloquium, Department of Psychology, Duke University, 1991.

Invited participant, Animal Models of SIDS Workshop, sponsored by the National Institute of Child Health and Human Development, Washington, D.C., October, 1990.

CONFERENCE PRESENTATIONS: TALKS

Tiriac, A., Del Rio-Bermudez, C., & Blumberg, M. S. Differential processing of sensory reafference from self-generated movements. International Society for Developmental Psychobiology, Washington, DC, November, 2014.

Tadjalli, A., Tiriac, A., G., Sokoloff, G., Sattler, N., & Blumberg, M. S. The self-tuning sleeping brain: Activity-dependent scaling of network activity in the developing brain. Annual meeting of the Associated Professional Sleep Societies, Minneapolis, June, 2014.

Dyken, E. M., Zimmerman, M. B., Kyoungbin, I., Lin-Dyken, D. C., Glenn, C., Blumberg, M. S., Rodnitzky, R., & Sokoloff, G. et al. Comparing periodic limb movements in sleep in subjects with and without waking paretic/plegic limbs. American Academy of Neurology 66th Annual Meeting, Philadelphia, April 26-May 3, 2014.

Uitermarkt, B. D., Tiriac, A., Fanning, A. S., Sokoloff, G., & Blumberg, M. S. "Rapid whisker movements" during active sleep in newborn rats. Associated Professional Sleep Societies, Baltimore, Maryland, June, 2013.

Blumberg M. S., Coleman, C. M., and Gerth, A. I. A twitch in time. International Society for Developmental Psychobiology, New Orleans, LA, October, 2012.

Tiriac A., Fanning, A. S., Uitermarkt, B. D., Coleman C. M., Sokoloff G., & Blumberg M. S. "Rapid whisker movements" in sleeping newborns. International Society for Developmental Psychobiology, New Orleans, LA, October, 2012.

Gall, A. J., Todd, W. D., & Blumberg, M. S. Developmental influences of the suprachiasmatic nucleus on circadian and ultradian rhythms of sleep and wakefulness in infant rats. Society for Neuroscience, Washington, D.C., November, 2011.

Todd, W. D., Gall, A. J., & Blumberg, M. S. The developmental emergence of circadian preference is predicted by distinct patterns of retinohypothalamic innervation in nocturnal Norway rats and diurnal Nile grass rats. International Society for Developmental Psychobiology, Washington, D.C., November, 2011.

Blumberg, M. S. Beyond dreams: Do sleep-related movements contribute to brain development? Winter Animal Behavior Conference, Steamboat Springs, Colorado, January, 2011.

Gall, A. J. & Blumberg, M. S. Influences of the suprachiasmatic nucleus on ultradian and circadian rhythms of sleep and wakefulness in infant rats. International Society for Developmental Psychobiology, San Diego, California, November, 2010.

Blumberg, M. S. Beyond dreams: Do sleep-related movements contribute to brain development? International Society for Developmental Psychobiology, San Diego, California, November, 2010.

Todd, W., & Blumberg, M. S. Brainstem and hypothalamic regulation of sleep pressure and rebound in newborn rats. International Society for Developmental Psychobiology, Chicago, Illinois, October, 2009.

Marcano-Reik, A. J., & Blumberg, M. S. Developmental plasticity after acute and chronic transection of the corpus callosum: Evidence for recovery of function and GABAergic inhibition during the early postnatal period. International Society for Developmental Psychobiology, Chicago, Illinois, October, 2009.

Blumberg, M. S. Freaks and sleep. Winter Animal Behavior Conference, Steamboat Springs, Colorado, January, 2009.

Gall, A. J., Todd, W. D., Ray, B., Coleman, C. M., & Blumberg, M. S. The development of circadian sleep-wake rhythms in intact and enucleated Norway rats. International Society for Developmental Psychobiology, Washington, DC, November, 2008.

Mohns, E. J., & Blumberg, M. S. Synchronous bursts of activity in the developing hippocampus: Modulation by active sleep, and association with emerging gamma and theta rhythms. International Society for Developmental Psychobiology, Washington, DC, November, 2008.

Blumberg, M. S. Carpe diem: The epigenesis of diurnality. Winter Animal Behavior Conference, Steamboat Springs, Colorado, January, 2008.

Grobe, J. L., Grobe, C. L., Gall, A. J., Sakai, K., Rahmouni, K., Blumberg, M. S., Johnson, A. K., & Sigmund, C. D. Increased metabolic rate in transgenic mice overexpressing the central Renin-Angiotensin System. Annual High Blood Pressure Research Conference, American Heart Association, Tucson, Arizona, September, 2007.

Seelke, A. M. H., Marcano-Reik, A. J., & Blumberg, M. S. The infant rat neocortex exhibits multiple forms of state-dependent activity before the emergence of delta waves. International Society for Developmental Psychobiology, San Diego, October, 2007.

Seelke, A. M. H., & Blumberg, M. S. Three novel waveforms exhibit state-dependent activity before the developmental emergence of delta waves in the infant rat cortex. Associated Professional Sleep Societies, Minneapolis, Minnesota, June, 2007.

Blumberg, M. S. Nativism and creationism. Society for Research in Child Development, Boston, Massachusetts, April 1, 2007.

Blumberg, M. S., Johnson, E. D., Shaw, C., & Coleman, C. M. Narcolepsy as the reversion to an infantile state of sleep-wake organization. International Society for Developmental Psychobiology, Atlanta, October, 2006.

Seelke, A. M. H., & Blumberg, M. S. Development of state-dependent neocortical activity in infant rats. Associated Professional Sleep Societies, Salt Lake City, Utah, June, 2006.

Blumberg, M. S. Nativism, evolutionary psychology, and creationism. Midwestern Psychological Association, Chicago, Illinois, May, 2006.

Blumberg, M. S. Sleeping like a baby. Winter Animal Behavior Conference, Steamboat Springs, Colorado, January, 2006.

Blumberg, M. S. Progress in the study of infant sleep, its development, and its neural substrates. International Society for Developmental Psychobiology, Washington, DC, November, 2005.

Seelke, A. M. H., Karlsson, K. Æ., Gall, A. J., & Blumberg, M. S. The ontogeny of sleep-related phasic activity in the infant rats. International Society for Developmental Psychobiology, Washington, DC, November, 2005.

Blumberg, M. S. Infant sleep: Problems and mechanisms. Winter Conference on Current Issues in Developmental Psychobiology, Panama, January, 2005.

Karlsson, K. Æ., Kreider, J. C., & Blumberg, M. S. Hypothalamic contribution to sleep-wake cycle development. Associated Professional Sleep Societies, Philadelphia, June, 2004.

Blumberg, M. S., Middlemis-Brown, J. E., and Johnson, E. D. Infant rats deprived of sleep exhibit increased sleep pressure and homeostasis. Associated Professional Sleep Societies, Philadelphia, June, 2004.

Blumberg, M. S., Stough, S. D., Middlemis-Brown, J. E., and Johnson, E. D. Cardiopulmonary and thermal factors influencing ultrasonic vocalizations in infant rats. International Society for Developmental Psychobiology, New Orleans, November, 2003.

Karlsson, K. Æ., Kreider, J. C., & Blumberg, M. S. Hypothalamic contribution to sleep-wake cycle development. International Society for Developmental Psychobiology, New Orleans, November, 2003.

Blumberg, M. S. Dissecting the neural substrates of sleep in infant rats. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 2003.

Blumberg, M. S. & Bjelica, M. Venous return increases during ultrasonic vocalizations in adult rats: Implications for infant rat ultrasound production. International Society for Developmental Psychobiology, Orlando, October, 2002.

Sokoloff, G., & Blumberg, M. S. The contributions of endothermy to huddling in altricial infants. International Society for Developmental Psychobiology, San Diego, November, 2001.

Karlsson, K. Æ., & Blumberg, M. S. Myoclonic twitching and nuchal muscle EMG in infant rats: Implications for the development of REM sleep. International Society for Developmental Psychobiology, San Diego, November, 2001.

Blumberg, M. S. The epigenesis of behavioral thermoregulation in a lizard. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 2001.

Blumberg, M. S., Sokoloff, G, Boline, E. A., & Streeper, N. M. Behavioral thermoregulation in infant rats and hamsters. International Society for Developmental Psychobiology, New Orleans, November, 2000.

Sokoloff, G., Blumberg, M. S., Gorby, T. A., Lewis, S. J., & Kirby, R. F. Sodium nitroprusside decreases blood pressure and evokes ultrasound production in infant rats. International Society for Developmental Psychobiology, New Orleans, November, 2000.

Blumberg, M. S. For crying out loud, blood is thicker than water. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 2000.

Robinson, S. R., Blumberg, M. S., Lane, M. S., & Kreber, L. A. Spontaneous motor activity of fetal and neonatal rats is organized into discrete multilimb bouts. International Society for Developmental Psychobiology, Coral Gables, Florida, October, 1999.

Blumberg, M. S., Sokoloff, G., Kirby, R. F., & Kent, K. J. Cardiovascular causes and consequences of ultrasound production in infant rats. International Society for Developmental Psychobiology, Coral Gables, Florida, October, 1999.

Sokoloff, G., Blumberg, M. S., Kreber, L. A., & Kent, K. J. Does clonidine induce ultrasound production in infant rats via its effects on the cardiovascular system? International Society for Developmental Psychobiology, Coral Gables, Florida, October, 1999.

Sokoloff, G., & Blumberg, M. S. Comparative aspects of huddling behavior in infant rats and hamsters: Contributions of endogenous heat production. International Society for Developmental Psychobiology, Orleans, France, July, 1998.

Blumberg, M. S., & Sokoloff, G. Cardiovascular changes accompanying cold exposure and ultrasound production in infant rats. International Society for Developmental Psychobiology, Orleans, France, July, 1998.

Blumberg, M. S. The P word. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 1998.

Kirby, R. F., Perdomo, E., Deaver, K., Sokoloff, G., & Blumberg, M. S. Diminished BAT thermogenesis in infant SHR compared to WKY rats. International Society for Developmental Psychobiology, New Orleans, October, 1997.

Blumberg, M. S., Sokoloff, G., & Kirby, R. F. BAT thermogenesis contributes directly to the maintenance of cardiac rate in infant rats and hamsters during cold exposure. International Society for Developmental Psychobiology, New Orleans, October, 1997.

Sokoloff, G., & Blumberg, M. S. Protection of myoclonic twitching by brown adipose tissue in cold-exposed infant rats and hamsters. International Society for Developmental Psychobiology, New Orleans, October, 1997.

Blumberg, M. S. Matters of the heart. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 1997.

Blumberg, M. S. The union of the state. Winter Conference on Current Issues in Developmental Psychobiology, Anguilla, British West Indies, January, 1997.

Kirby, R. F., Sokoloff, G., & Blumberg, M. S. Thermoregulatory responses to cold challenge in infant spontaneously hypertensive and Wistar-Kyoto rats. International Society for Developmental Psychobiology, Washington, D.C., November, 1996.

Sokoloff, G., & Blumberg, M. S., Mendella, P., & Brown, R. E. Clonidine- and separation-induced ultrasound production in infant rats: Cardiovascular interactions. International Society for Developmental Psychobiology, Washington, D.C., November, 1996.

Blumberg, M. S., G. Sokoloff, & Kirby, R. F. Infant rat ultrasound as by-product: Cardiovascular considerations. International Society for Developmental Psychobiology, Washington, D.C., November, 1996.

Blumberg, M. S. Beyond homeostasis. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 1996.

Blumberg, M. S. Does brown fat thermogenesis protect sleep-related behaviors during cold exposure in neonatal rats? International Society for Developmental Psychobiology, San Diego, California, November, 1995.

Blumberg, M. S. A sleeping tail. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 1995.

Blumberg, M. S., & Lucas, D. E. A developmental approach to the study of REM sleep. International Society for Developmental Psychobiology, Islamorada, Florida, November, 1994.

Blumberg, M. S. To sleep, perchance to twitch. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 1994.

Blumberg, M. S. Physiological, biomechanical, and evolutionary issues in rodent ultrasonic communication. Winter Animal Behavior Conference, Jackson Hole, Wyoming, January, 1993.

Blumberg, M. S., Efimova, I. V., & Alberts, J. R. Thermal imaging of brown fat activation during pup transfer to a warm environment. International Society for Developmental Psychobiology, Newport Beach, California, October, 1992.

Blumberg, M. S., & Alberts, J. R. Reinterpretation of the physiological and communicatory significance of infant rat ultrasonic vocalizations. Symposium on Perinatal Behavior and Physiology. Midwestern Psychological Association, Chicago, Illinois, April, 1992.

Blumberg, M. S., & Alberts, J. R. Ultrasonic vocalizations by rat pups: Isolation, huddling, and air temperature. International Society for Developmental Psychobiology, New Orleans, Louisiana, November, 1991.

Alberts, J. R., & Blumberg, M. S. Ultrasonic vocalizations as acoustic by-products of laryngeal braking: An overview. International Society for Developmental Psychobiology, New Orleans, Louisiana, November, 1991.

Blumberg, M. S., & Alberts, J. R. Is there a physiological connection between the 40 kHz vocalization of rat pups and the 22 kHz vocalization of adult rats? International Society for Developmental Psychobiology, Cambridge, England, July, 1990.

Blumberg, M. S., & Alberts, J. R. Ultrasonic vocalizations by rat pups in the cold are an acoustic by-product of increased oxygen consumption. International Society for Developmental Psychobiology, San Francisco, California, October, 1989.

Blumberg, M. S., & Moltz, H. Brain temperature, sexual behavior and the 22 kHz vocalization of the male rat. Conference on Reproductive Behavior, Tlaxcala, Mexico, June, 1987.

Blumberg, M. S., & Moltz, H. The 22 kHz vocalization of the male rat: evidence for a role in thermoregulation. Animal Behavior Society, Williamstown, Massachusetts, June, 1987.

CONFERENCE PRESENTATIONS: POSTERS

Sokoloff, G., Del Rio-Bermudez, C., Plumeau, A., Mukherjee, D., & Blumberg, M. S. Rhythmic and active-sleep-dependent neural activity during periods of rapid developmental change, Gordon Research Conference on Sleep Regulation and Function, Galveston, Texas, March 13-18, 2016.

Mukherjee, D. & Blumberg, M. S. Sleep-dependent activity in visual cortex before eye opening in infant rats, Gordon Research Conference on Sleep Regulation and Function, Galveston, Texas, March 13-18, 2016.

Del Rio-Bermudez, C., Sokoloff, G. & Blumberg, M. S., Theta oscillations in the developing red nucleus during active sleep, Gordon Research Conference on Sleep Regulation and Function, Galveston, Texas, March 13-18, 2016.

Blumberg, M. S. & Sokoloff, G. REM sleep twitching in human newborns: A potentially sensitive indicator of neurodevelopmental trajectories. Grand Challenges Meeting, Beijing, China, October, 2015.

Del Rio-Bermudez, C., Sokoloff, G., & Blumberg, M. S. Sensorimotor integration in the red nucleus of infant rats during active sleep. Society for Neuroscience, Chicago, October, 2015.

Sattler, N. J., Yonk, A. J., Coleman, C. M., Sokoloff, G., & Blumberg, M. S. Lack of muscle spindles in infant ErbB2 knockout mice is associated with deficits in functional and anatomical cerebellar development. Society for Neuroscience, Chicago, October, 2015.

Plumeau, A., Del Rio-Bermudez, C., Sokoloff, G., & Blumberg, M. S. Twitches drive neural activity in the deep cerebellar nuclei of sleeping newborn rats: Implications for sensorimotor development. Society for Neuroscience, Chicago, October, 2015.

Mukherjee, D., Sokoloff, G., & Blumberg, M. S. The inferior olive processes twitch-related information during active sleep in newborn rats: Evidence of corollary discharge. Society for Neuroscience, Chicago, October, 2015.

Puskarjov, M., Pospelov, A., Blumberg, M. S., Yukin, A. Y., Kaila, K. The brainstem is an independent generator of febrile seizures. Society for Neuroscience, Chicago, October, 2015.

Tiriac A., Del Rio-Bermudez, C., & Blumberg, M. S. Self-generated movements with “unexpected” sensory consequences. Society for Neuroscience, Washington, DC, November, 2014.

Plumeau, A., Sokoloff, G., Mukherjee, D., & Blumberg, M. S. Sleep- and twitch-dependent Purkinje cell activity across early postnatal cerebellar development. Society for Neuroscience, Washington, DC, November, 2014.

Del Rio-Bermudez, C., Sokoloff, G., & Blumberg, M. S. Neuronal firing properties of the red nucleus during sleep-related twitches and wake movements in newborn rats. International Society for Developmental Psychobiology, Washington, DC, November, 2014.

Sattler, N. J., Sokoloff, G., & Blumberg, M. S. Somatotopic organization of the cerebellum in early development. International Society for Developmental Psychobiology, Washington, DC, November, 2014.

Sokoloff, G., Plumeau, A. M., Mukherjee, D., & Blumberg, M. S. The role of active sleep in postnatal cerebellar development. International Society for Developmental Psychobiology, Washington, DC, November, 2014.

Tiriac A., Sokoloff, G., Del Rio-Bermudez, C., & Blumberg, M. S. Differential processing of sensory feedback from sleep-related twitches and wake movements in the motor cortex of infant rats. Annual meeting of the Associated Professional Sleep Societies, Minneapolis, June 1, 2014.

Del Rio-Bermudez, C., Tiriac A., & Blumberg, M. S. Mechanisms underlying the differential processing by motor cortex of reafference from sleep-related twitches and wake movements. Annual meeting of the Associated Professional Sleep Societies, Minneapolis, June 1, 2014.

Blumberg, M. S., Coleman, C. M., McMurray, B., Gerth, A. I., Weiner, J. A., & B. Fritsch, B.. Spatiotemporal patterning of limb twitching during active sleep in newborn rats and ErbB2 knockout mice lacking muscle spindles. Society for Neuroscience, San Diego, November, 2013.

Mukherjee, D. & Blumberg M. S. Sleep-dependent neural activity in the medial septum as hippocampal theta emerges in newborn rats. Society for Neuroscience, San Diego, November, 2013.

Uitermarkt, B. D., Sokoloff, G., Weiner, J., Fritsch, B., & Blumberg, M. S. Newborn mice lacking muscle spindles exhibit reduced twitch-related Purkinje cell activity during active sleep. Society for Neuroscience, San Diego, November, 2013.

Sokoloff, G., Uitermarkt, B. D., & Blumberg, M. S. Purkinje cell complex spike activity during active sleep in newborn rats. Society for Neuroscience, San Diego, November, 2013.

Tiriac A., & Blumberg, M. S. Sleep-dependent neural activity in the superior colliculus of newborn rats. Society for Neuroscience, San Diego, November, 2013.

Tadjalli, A. S., & Blumberg, M. S. Society for Neuroscience, San Diego, November, 2013.

Blumberg, M. S., Coleman, C. M., & Gerth, A. I. Spatiotemporal properties of myoclonic twitching in the forelimbs of newborn rats during active sleep. Associated Professional Sleep Societies, Baltimore, Maryland, June, 2013.

Sokoloff, G., Uitermarkt, B. D., Fanning, A. S., Mukherjee, D., & Blumberg, M. S. Twitch-dependent cerebellar activity during active sleep in newborn rats. Associated Professional Sleep Societies, Baltimore, Maryland, June, 2013.

Sokoloff, G., Uitermarkt, B. D., Todd, W. D., & Blumberg, M. S. Cerebellar activity during sleep and wakefulness in week-old rats. International Society for Developmental Psychobiology, New Orleans, October, 2012.

Fanning, A. S., Tiriac A., & Blumberg M. S. State-dependent neural activity in whisker thalamus. International Society for Developmental Psychobiology, New Orleans, October, 2012.

Uitermarkt, B. D., Sokoloff, G., Tiriac A., & Blumberg M. S. Spontaneous motor activity in the neonatal whisker system. III. State-dependent barrel cortex activity revealed by voltage-sensitive dye imaging. International Society for Developmental Psychobiology, New Orleans, October, 2012.

Tiriac A., Sokoloff, G., Coleman, C. M., & Blumberg M. S. Spontaneous motor activity in the neonatal whisker system. I. Behavioral evidence of whisker twitching during active sleep. Society for Neuroscience, New Orleans, October, 2012.

Fanning, A. S., Tiriac A., & Blumberg M. S. Spontaneous motor activity in the neonatal whisker system. II. State-dependent neural activity in whisker thalamus. Society for Neuroscience, New Orleans, October, 2012.

Uitermarkt, B. D., Sokoloff, G., Tiriac A., & Blumberg M. S. Spontaneous motor activity in the neonatal whisker system. III. State-dependent barrel cortex activity revealed by voltage-sensitive dye imaging. Society for Neuroscience, New Orleans, October, 2012.

Sokoloff, G., Uitermarkt, B. D., Todd, W. D., & Blumberg, M. S. Cerebellar activity during sleep and wakefulness in infant rats. Society for Neuroscience, New Orleans, October, 2012.

Todd, W. D., Gall, A. J., & Blumberg, M. S. Distinct retinohypothalamic innervation patterns predict the developmental emergence of species-typical circadian preference. Society for Neuroscience, Washington, D.C., November, 2011.

Tiriac, A., Fanning, A., & Blumberg, M. S. State-dependent thalamic activity in infant rats. Society for Neuroscience, Washington, D.C., November, 2011.

Tiriac, A., Fanning, A., & Blumberg, M. S. State-dependent thalamic activity in infant rats. International Society for Developmental Psychobiology, Washington, D.C., November, 2011. (Co-winner, Best Poster Award)

Todd, W. D., Gall, A. J., & Blumberg, M. S. Developmental comparative exploration of the neural mechanisms underlying phase preference in diurnal Nile grass rats and nocturnal Norway rats. International Society for Developmental Psychobiology, San Diego, California, November, 2010. (Co-winner, Best Poster Award)

Marcano-Reik, A. J., Prasad, T., Weiner, J. A., & Blumberg, M. S. An abrupt development shift in callosal modulation of sleep-related spindle bursts coincides with the emergence of excitatory-inhibitory balance and a reduction of somatosensory cortical plasticity. International Society for Developmental Psychobiology, San Diego, California, November, 2010.

Gall, A. J. & Blumberg, M. S. Neural and non-neural suprachiasmatic influences on sleep and wakefulness in infant rats. Associated Professional Sleep Societies, San Antonio, Texas, June, 2010.

Todd, W. D., Gall, A. J., & Blumberg, M. S. The development of day-night differences in sleep-wake behavior and Fos-immunoreactivity in diurnal Nile grass rats and nocturnal Norway rats. Associated Professional Sleep Societies, San Antonio, Texas, June, 2010.

Gall, A. J., Joshi, B., Best, J., Florang, V. R., Doorn, J. A., & Blumberg, M. S. Developmental transition from exponential to power-law wake behavior depends upon the functional integrity of the locus coeruleus. International Society for Developmental Psychobiology, Chicago, IL, 2009. (Co-winner, Best Poster Award)

McMurray, M. S., Zeskind, P. S., Blumberg, M. S., Meiners, S., Cox, E. T., Williams, S. K., Johns, J. M. Gestational cocaine affects rat pup brown adipose tissue thermogenesis, ultrasonic vocalizations, and urine characteristics. Society for Neuroscience, Chicago, IL, October, 2009.

Marcano-Reik, A. J., & Blumberg, M. S. The corpus callosum modulates spindle burst activity within homotopic regions of somatosensory cortex in newborn rats. Society for Neuroscience, Washington, DC, November, 2008.

Mohns, E. J., & Blumberg, M. S. Synchronous bursts of activity in the developing hippocampus: Modulation by active sleep, and association with emerging gamma and theta rhythms. Society for Neuroscience, Washington, DC, November, 2008.

Joshi, B. S., Best, J. A., Terman, D. H., Blumberg, M. S. (2007). Developmental dynamics of sleep-wake cycles: a mathematical model. Society for Neuroscience, San Diego, November, 2007.

Seelke, A. M. H., Marcano-Reik, A. J., & Blumberg, M. S. The infant rat neocortex exhibits multiple forms of state-dependent activity before the emergence of delta waves. Society for Neuroscience, San Diego, November, 2007.

Todd, W. D., & Blumberg, M. S. Sleep regulation in neonatal rats: A reexamination. International Society for Developmental Psychobiology, San Diego, October, 2007.

Marcano-Reik, A. J., Todd, W. D., Seelke, A. M. H., & Blumberg, M. S. Development, state dependence, and somatotopic organization of neocortical activity during the early postnatal period in rats. International Society for Developmental Psychobiology, San Diego, October, 2007.

Gall, A. J., Ray, B., Todd, W. D., Coleman, C. M., & Blumberg, M. S. Circadian rhythmicity in normal and enucleated infant rats: Implications for the development of nocturnality and diurnality. 72nd Cold Spring Harbor Laboratories Symposium: Clocks & Rhythms, Cold Spring Harbor, New York, May 30-June 4, 2007.

Mohns, E., Karlsson, K. Æ., & Blumberg, M. S. Transient co-occurrence of ripple- and gamma-frequency oscillations during a period of hyperexcitability in the neonatal rat hippocampus *in vivo*. International Society for Developmental Psychobiology, Atlanta, October, 2006.

Seelke, A. M. H., & Blumberg, M. S. State-dependent neocortical activity is present before the onset of delta waves in infant rats. International Society for Developmental Psychobiology, Atlanta, October, 2006.

Gall, A. J., Ray, B., & Blumberg, M. S. Circadian variations in sleep and wakefulness in developing rats. Society for Neuroscience, Atlanta, Georgia, October, 2006. International Society for Developmental Psychobiology, Atlanta, October, 2006.

Gall, A. J., Ray, B., & Blumberg, M. S. Circadian variations in sleep and wakefulness in developing rats. Society for Neuroscience, Atlanta, Georgia, October, 2006.

Mohns, E., Karlsson, K. Æ., & Blumberg, M. S. Development of ripple and gamma frequency oscillations in the neonatal rat hippocampus *in vivo*. Society for Neuroscience, Atlanta, Georgia, October, 2006.

Viana di Prisco, G., Mohns, E., & Blumberg, M. S. CRF can evoke seizures in infant rats through its effects on the brainstem. Society for Neuroscience, Atlanta, Georgia, October, 2006.

Ray, B., Gall, A. J., & Blumberg, M. S. Circadian variations in sleep and wakefulness in developing rats. Associated Professional Sleep Societies, Salt Lake City, Utah, June, 2006.

Mohns, E. J., Karlsson, K. Æ., & Blumberg, M. S. Effects of modafinil on developing sleep patterns in infant rats. International Society for Developmental Psychobiology, Washington, DC, November, 2005.

Seelke, A. M. H., Freeman, J. H., Jr., & Blumberg, M. S. State-dependent thalamic activity in infant rats and its developmental relations with slow-wave neocortical activity. Society for Neuroscience, Washington, D.C, November, 2005.

Gall, A. J., Poremba, A., & Blumberg, M. S. Contributions of the dorsolateral pontine tegmentum to the regulation of sleep and wakefulness in early infancy. Society for Neuroscience, Washington, D.C, November, 2005.

Vianna Di Prisco, G., & Blumberg, M. S. Effects of serotonin depletion on sleep-related motor activity in infant rats. Society for Neuroscience, Washington, D.C, November, 2005.

Mohns, E. J., Karlsson, K. Æ., & Blumberg, M. S. Effects of modafinil on developing sleep patterns in infant rats. Society for Neuroscience, Washington, D.C, November, 2005.

Karlsson, K. Æ., Mohns, E. J., Vianna di Prisco, G., & Blumberg, M. S. Are hippocampal sharp waves and startles causally linked? Society for Neuroscience, Washington, D.C, November, 2005.

Blumberg, M. S., Karlsson, K. Æ., Seelke, A. M. H., Gall, A. J., & Mohns, E. J. The neural substrates of infant sleep. Associated Professional Sleep Societies, Denver, June, 2005.

Seelke, A. M. H., Karlsson, K. Æ., & Blumberg, M. S. The ontogeny of spontaneous sleep-related phasic activity in the rat. Associated Professional Sleep Societies, Denver, June, 2005.

Mohns, E. J., Karlsson, K. Æ., & Blumberg, M. S. The ventrolateral preoptic area and basal forebrain play opposing roles in the descending modulation of sleep-wake cyclicity in infant rats. Associated Professional Sleep Societies, Denver, June, 2005.

Karlsson, K. Æ., & Blumberg, M. S. Medullary control of REM sleep atonia in infant rats. Society for Neuroscience, San Diego, November, 2004.

Seelke, A. M. H., & Blumberg, M. S. Ontogeny of sleep-related phasic activity during early infancy. Society for Neuroscience, San Diego, November, 2004.

Mohns, E. J., Karlsson, K. Æ., & Blumberg, M. S. Hypothalamic modulation of sleep-wake cyclicity in infant rats. Society for Neuroscience, San Diego, November, 2004.

Blumberg, M. S., Middlemis-Brown, J. E., & Johnson, E. D. Sleep homeostasis in infant rats. Society for Neuroscience, San Diego, November, 2004.

Seelke, A. M. H., & Blumberg, M. S. Sensory threshold increases during active sleep in infant rats. Associated Professional Sleep Societies, Philadelphia, June, 2004.

Seelke, A. M. H., & Blumberg, M. S. Double dissociation between sniffing and arousal in infant rats. International Society for Developmental Psychobiology, New Orleans, November, 2003.

Karlsson, K. Æ., & Blumberg, M. S. Effects of brain temperature on spontaneous hippocampal activity in anesthetized infant rats. Society for Neuroscience, New Orleans, November, 2003.

- Blumberg, M. S., Karlsson, K. Æ., & Kreider, J. C. Hypothalamic contribution to sleep cycle development. Society for Neuroscience, New Orleans, November, 2003.
- Seelke, A. M. H., & Blumberg, M. S. Double dissociation between sniffing and arousal in infant rats. Society for Neuroscience, New Orleans, November, 2003.
- Karlsson, K. Æ., & Blumberg, M. S. Nuchal atonia and hippocampal theta characterize the sleep of rats as young as two days of age. Associated Professional Sleep Societies, Chicago, June, 2003.
- Karlsson, K. Æ., & Blumberg, M. S. Active sleep or REM sleep? Let's call the whole thing off. Society for Neuroscience, Orlando, November, 2002.
- Kreider, J. C., Blumberg, M. S., & Spencer, J. P. Selective electrolytic lesions in the mesopontine region disrupt active sleep in week-old rats. Society for Neuroscience, Orlando, November, 2002.
- Karlsson, K. Æ., & Blumberg, M. S. The ontogeny of the hippocampal theta rhythm and its relation with behavioral state. International Society for Developmental Psychobiology, Orlando, October, 2002.
- Kreider, J. C., & Blumberg, M. S. Selective electrolytic lesions in the mesopontine region disrupt active sleep in week-old rats. International Society for Developmental Psychobiology, Orlando, October, 2002.
- Johnson, E. D., & Blumberg, M. S. Orientation responses toward heat localized to the snout during bodily cooling in infant rats and hamsters. International Society for Developmental Psychobiology, San Diego, November, 2001.
- Streeper, N. M., Sokoloff, G., & Blumberg, M. S. Effects of maternal contact on ultrasonic vocalizations in infant rats. International Society for Developmental Psychobiology, San Diego, November, 2001.
- Kreider, J. C., & Blumberg, M. S. Mesopontine distribution of c-fos immunoreactivity during active sleep in infant rats. Associated Professional Sleep Societies, Chicago, June, 2001.
- Kreider, J. C., & Blumberg, M. S. Mesopontine contributions to active 'twitch' sleep in infant rats. Society for Neuroscience, New Orleans, November, 2000.
- Sokoloff, G., Blumberg, M. S., Lewis, S. J., & Kirby, R. F. Ultrasonic vocalizations and the autonomic nervous system in infant rats. Society for Neuroscience, New Orleans, November, 2000.
- Lewis, S. J., Blumberg, M. S., & Sokoloff, G. Incubation temperature modulates posthatching thermoregulatory behavior in the Madagascar ground gecko. International Society for Developmental Psychobiology, New Orleans, November, 2000.
- Kreider, J. C., & Blumberg, M. S. Mesopontine c-fos immunoreactivity during active sleep in week-old rats. International Society for Developmental Psychobiology, New Orleans, November, 2000.
- Boline, E. A., Sokoloff, G., & Blumberg, M.S. Behavioral responses to thermal stimulation in infant rats and hamsters. International Society for Developmental Psychobiology, New Orleans, November, 2000.
- Lewis, S. J., Blumberg, M. S., & Sokoloff, G. Sodium nitroprusside-induced venodilation increases ultrasonic vocalization in infant rats. Experiment Biology, San Diego, California, April, 2000.
- Sokoloff, G., & Blumberg, M. S. An infrared thermographic study of the thermal advantage gained by huddling in infant rats: Contributions of endothermy and behavior. Experimental Biology, San Diego, California, April, 2000.
- Blumberg, M. S., Sokoloff, G., Kirby, R. F., & Kent, K. J. Increased venous return accompanying clonidine-induced vocalizations in young rats. Society for Neuroscience, Miami Beach, Florida, October, 1999.

Sokoloff, G., Blumberg, M. S., & Kent, K. J. Do cold exposure and clonidine administration stimulate infant rat ultrasound production through similar effects on the cardiovascular system? Society for Neuroscience, Miami Beach, Florida, October, 1999.

Kreider, J. C., & Blumberg, M. S. Effects of pontine and midbrain transections on myoclonic twitching in week-old rats. International Society for Developmental Psychobiology, Coral Gables, Florida, October, 1999.

Kreider, J. C., & Blumberg, M. S. Geotaxis in 2-week-old Norway rats (*Rattus Norvegicus*): A reevaluation. International Society for Developmental Psychobiology, Orleans, France, July, 1998.

Karlen, S. J., & Blumberg, M. S. Relations between cardiac rate and active sleep behaviors in developing rats. International Society for Developmental Psychobiology, Orleans, France, July, 1998.

Kosinski, C. J., Sokoloff, G., & Blumberg, M. S. Sensory modulation of myoclonic twitching during active sleep in infant rats. International Society for Developmental Psychobiology, Washington, D.C., November, 1996.

Sokoloff, G., & Blumberg, M. S. Dynamics of thermogenesis in neonatal rats. International Society for Developmental Psychobiology, San Diego, California, November, 1995.

Blumberg, M. S., & Lucas, D. E. A developmental and component analysis of active sleep. Society for Neuroscience, San Diego, California, November, 1995.

Schalk, S. L., & Blumberg, M. S. Decerebration and BAT thermogenesis in neonatal rats. International Society for Developmental Psychobiology, Islamorada, Florida, November, 1994.

Blumberg, M. S. Effect of mid-thoracic spinal transection on the occurrence and coordination of "REM-related" muscular twitches in neonatal rats. International Society for Developmental Psychobiology, Alexandria, Virginia, November, 1993.

Alberts, J. R., Blumberg, M.S., & Ronca, A. E. Thermal imaging of brown fat activation in perinatal rats. International Society for Developmental Psychobiology, New Orleans, Louisiana, November, 1991.

Blumberg, M. S., Mennella, J. A., & Moltz, H. Rapid brain cooling following ejaculation in the male rat. Conference on Reproductive Behavior, Montreal, Canada, June, 1986.

SYMPOSIA ORGANIZED

Sleep Development and Plasticity. Mark Blumberg (Chair), Robert Vertes, James Shaffery. Winter Conference on Current Issues in Developmental Psychobiology, Panama, January, 2005.

Conflict, Controversy, and Self-Discovery: Three Scientists Tell Their Stories. Mark Blumberg (Chair), Celia Moore, Jerry Rudy, and Douglas Wahlsten. International Society for Developmental Psychobiology, Orlando, October, 2002.

TEACHING AT THE UNIVERSITY OF IOWA

UNDERGRADUATE AND GRADUATE TEACHING

Semester, Year	Course	Students Enrolled	Selected Median ACE Summary Scores (Scale from 1 to 6); Analogous SPOT scores reported prior to Fall, 1998; Electronic forms instituted in 2016				
			The instructor is effective in teaching the course material	The instructor supports student learning in class	This course is well planned and organized	I learned a great deal in this class	Student questions are encouraged
Spring, 2016	PSY:4090 Senior Seminar: Developmental Psychobiology	17	5.90	5.90	5.90	5.90	5.90
			This course is well planned and organized	Overall this instructor is an effective teacher OR I would recommend a course taught by this instructor to other students	Important points are clarified with good examples	Student questions are encouraged	This instructor is effective in presenting materials in lecture/ discussion
Spring, 2015	PSY:7210 Graduate Seminar: Developmental Behavioral Neuroscience	9	5.88	5.94	5.88	6.00	5.94
Spring, 2015	31:002 Biological Psychology	165	5.83	5.81	5.84	5.91	5.83
Spring, 2014	31:002 Biological Psychology	195	5.75	5.75	5.68	5.84	5.77
Spring, 2014	31:242 Foundations of Behavioral and Cognitive Neuroscience	6	5.50	5.90	5.90	5.90	5.90
Spring, 2013	31:190 Senior Seminar: Developmental Psychobiology	14	5.29	5.96	5.96	5.91	5.78
	31:338 Advanced						

Spring, 2012	Topics in Behavioral and Cognitive Neuroscience	12	5.81	6.00	5.95	6.00	6.00
Spring, 2010	31:002 Biological Psychology	193	5.74	5.54	5.41	5.85	5.68
Spring, 2008	31:190 Psychology Seminar: Sleep	21	5.31	5.97	5.79	6.00	5.97
Fall, 2006	31:338 Advanced Topics in Behavioral and Cognitive Neuroscience	12					
Spring, 2006	31:234 Developmental Psychobiology	16					
Spring, 2005	31:012 Introduction to Brain and Behavior	240	5.59	5.53	5.50	5.90	5.62
Spring, 2004	31:190 Psychology Seminar	21	5.91	5.91	5.82	5.97	5.77
Spring, 2003	31:338 Advanced Topics in Behavioral and Cognitive Neuroscience	11					
Spring, 2002	31:012 Introduction to Brain and Behavior	240	5.68	5.59	5.54	5.85	5.70
Fall, 2000	31:012 Introduction to Brain and Behavior	240	5.56	5.58	5.57	5.83	5.70
Fall, 1999	31:3 General Psychology	80	5.69	5.73	5.80	5.90	5.83
Spring, 1999	31:132 Biopsychology of Motivated Behaviors	50	5.80	5.79	5.80	5.97	5.77
Fall, 1998	31:3 General Psychology	80	5.87	5.80	5.84	5.93	5.87
Spring, 1998	31:132 Biopsychology of Motivated Behaviors	60	5.70	5.91	5.89		5.98

Fall, 1997	31:003 General Psychology	52	5.39	5.63	5.64		5.65
Spring, 1997	31:132 Biopsychology of Motivated Behaviors	50	5.65	5.84	5.77		5.94
Fall, 1996	31:003 General Psychology	52	5.53	5.61	5.79		5.82
Fall, 1995	31:132 Biopsychology of Motivated Behaviors	42	5.65	5.33	5.41		5.50
Spring, 1995	31:003 General Psychology	61	5.30	5.63	5.63		5.56
Spring, 1995	31:234 Developmental Psychobiology	11	5.64	5.82	6.00		6.00
Fall, 1994	31:132 Motivation	50	5.66	5.59	5.68		5.71
Spring, 1994	31:003 General Psychology	60	5.17	5.26	5.51		5.40
Fall, 1993	31:132 Motivation	64	5.16	5.51	5.42		5.47
Spring, 1993	31:003 General Psychology	48	5.42	5.55	5.58		5.45
Spring, 1993	31:234 Developmental Psychobiology	16	5.19	5.75	5.38		5.63
Fall, 1992	31:132 Motivation	61	5.02	5.51	5.32		5.51

GUEST LECTURES (INCOMPLETE)

Spring, 2013 02;184 Developmental Neurobiology (1 lecture)

Spring, 2012 02;184 Developmental Neurobiology (1 lecture)

Spring, 2011 31;242 Fundamentals of Learning and Behavior (1 lecture)

GRADUATE TEACHING (PRE-2003)

Fall, 2002 31:241 Proseminar in Behavioral and Cognitive Neuroscience (16)

Fall, 2001 31:241 Proseminar in Behavioral and Cognitive Neuroscience (18)

Fall, 2000 31:241 Proseminar in Behavioral and Cognitive Neuroscience (11)

Fall, 1999 31:338 Advanced Topics in Behavioral and Cognitive Neuroscience (16)

Fall, 1998 31:241 Behavioral and Cognitive Neuroscience I (Course coordinator) (12)

Spring, 1998 31:242 Behavioral and Cognitive Neuroscience II (Course coordinator + 10 lectures) (6)

Fall, 1997 31:241 Behavioral and Cognitive Neuroscience I (Course coordinator) (18)
 Spring, 1997 31:242 Behavioral and Cognitive Neuroscience II (7 lectures) (8)
 31/338 Advanced Topics in Behavioral and Cognitive Neuroscience (5)
 Fall, 1996 31:241 Behavioral and Cognitive Neuroscience I (3 lectures) (10)
 Spring, 1994 31:338 Advanced Topics in Neuroscience and Behavior (10)
 31:244 Behavioral Neuroscience (2 lectures) (7)
 Spring, 1993 31:244 Behavioral Neuroscience (2 lectures) (4)

OTHER TEACHING

Summer, 2003 31:185 Research Practicum (Jonathan Mowers)

STUDENTS SUPERVISED

Degree Objective	Student Name	Years	Outcome	Postdoctoral Placement
Ph.D.	Alejandra Gomez	2017-		
	Carlos Del Rio-Bermudez ³⁵⁶⁷	2013-		
	Didhiti Mukherjee ⁴⁷	2012-		
	Alexandre Tiriac ²⁶⁸	2010-2016	Ph.D., 2016	UC-Berkeley
	William Todd ⁵	2006-2012	Ph.D., 2012	Harvard Medical School
	Andrew Gall ⁴⁶	2004-2011	Ph.D., 2011	Michigan State University
	Ethan Mohns ³⁶	2003-2009	Ph.D., 2009	HHMI (Janelia Farm); Yale Univ.
	Adele Seelke ²⁵⁶	2001-2007	Ph.D., 2007	UC Davis
	Karlsson, Karl ²⁶	2000-2005	Ph.D., 2005	UCLA
	Kreider, Joy	1996-2003	Ph.D., 2003	Univ. of Colorado; Univ. of Texas
Sokoloff, Greta ¹²⁵	1996-2001	Ph.D., 2001	Indiana Univ.; Univ. of Chicago	
Master's	Alan Plumeau	2012-2016	M.A., 2016	
	Brandt Uitermarkt	2011-2013	M.A., 2013	
	Lewis, Sean	1999-2001	M.A., 2001	

- 1 Spence Award from the Department of Psychology
- 2 Dissertation Award from the International Society for Developmental Psychobiology (ISDP).
- 3 Simon Award from the Department of Psychology
- 4 Ballard Seashore Dissertation Year Fellowship.
- 5 Lewis Award from the Department of Psychology.
- 6 Gormezano Award for the best student-authored paper in BCN.
- 7 Graduate College Post-Comprehensive Research Award
- 8 Graduate Deans' Distinguished Dissertation Award

Degree Objective	Student Name	Year	Outcome
Undergraduates	See complete list below		
Honors	Alex Yonk	2016	B.S.
	Alexander Fanning	2013	B.S. (Grad School, Univ. of Texas)
	Jessica E. Middlemis-Brown	2005	B.S. (Grad. School, Univ. of Michigan)
	Eric D. Johnson	2003	B.S.
	Elizabeth A. Boline	2001	B.S. (Grad. School, Finch Health Sciences)
	Pleskac, Timothy	2000	B.S. (Grad. School, Univ. of Maryland)
	Kreber, Lisa	1999	B.S. (Grad. School, Univ. of Colorado)
	Karlen, Sarah, J.	1999	B.S. (Grad. School, UC-Davis)
	Kosinski, Catherine	1997	B.S. (Grad. School, UIC)
	Beenken, Beth Ann	1996	B.S. (Medical School, Univ. of Iowa)
	Bunten, Carol	1995	B.S. (Medical School, Univ. of Iowa)
	Mueller, Thomas	1995	B.S.

PH.D. THESES SUPERVISED

Alexandre Tiriac, State-dependent processing of reafference arising from self-generated movements in infant rats, 2016. (Current position: Postdoc, University of California, Berkeley)

William Todd, Night and day: Distinct retinohypothalamic innervation patterns predict the development of nocturnality and diurnality in two Murid rodent species, 2012. (Current position: Postdoc, Harvard Medical School)

Andrew Gall, The developmental emergence of a wake-promoting pathway regulating ultradian and circadian rhythms in infant rats, 2011. (Current position: Assistant Professor, Hope College, Michigan)

Ethan Mohns, Interactions between the developing neocortex and hippocampus during active sleep, 2009. (Current position: Postdoc, Yale University)

Adele Seelke, The developmental emergence of state-dependent neocortical activity in infant rats, 2007. (Current position: Research Associate II, UC-Davis)

Karl Karlsson, The neural substrates of atonia and myoclonic twitching during sleep in infant rats, 2005. (Current position: Associate Professor, Reykjavik University, Iceland)

Joy Kreider, The neural substrates of active sleep in infant rats, 2003. (Out of science)

Greta Sokoloff, Physiological and behavioral interactions during huddling by infant rats and hamsters, 2001. (Current position: Research Scientist, University of Iowa)

POSTDOCTORAL SUPERVISION

James C. Dooley, Ph.D. 2016-present.

Arash Tadjalli, Ph.D., 2012-2014.

Greta Sokoloff, Ph.D., 2011-2012. (Current position: Research Scientist, University of Iowa)

Baishali Ray, Ph.D., 2006-2007.

Yossi Rathner, Ph.D., 2006-2007. (Current position: Lecturer, Latrobe University)

Gonzalo Viana di Prisco, M.D., Ph.D., 2005-2006. (Current position: Research Scientist, MIT)

OTHER CONTRIBUTIONS TO INSTRUCTIONAL PROGRAMS

Comprehensive Exam Committees

A. Korthank (1995); G. Sokoloff, (1998); J. Kreider (1998); A. Grippo (2000); Shujing Xu (2000); D. Nicholson (2000); J. Vaidya (2001); A. Grippo (2001); S. J. Lewis (2001); K. Karlsson (2002); Adele Seelke (2003); Imelda Pasley (2004); Michael Morris (2004); Ethan Mohns (2005); Damon Ng (2005); Andy Gall (2006); Amy Jo Marciano-Reik (2006); Dan Brooks (2007); William Todd (2008); Aaron Buss (2009); Ryan Opheim (2009); Marcus Galle (2009); Jeremy Duncan (Biology, 2009); Mary Goldsberry (2010); Adam Steinmetz (2011, chair); Alex Tiriack (2012); Brandt Uitermarkt (2013); Stephen Brzycky (2013, chair); Victória Augusta Müller Ewald (Neuroscience, 2016); Sean Farley (2016); Carlos Del Rio-Bermudez (2016), Benton Purnell (Neuroscience, 2017).

M.A. Committee Service

M. Henry (Johnson, 1993); M. Cicha (Johnson, 1993); J. Gagliardi (Wasserman, 1994); J. Xu (Johnson, 1995); Edison Perdomo (Johnson, 1996).

Ph.D. Committee Service

Kim Kirkpatrick-Steger (Wasserman, 1995); Jennifer Thomas (Wasserman, 1995); Y. Moon (Gormezano, 1995); A. Eisenberg (Markovsky, Sociology, 2000); Lynn Nietfeld (Gerkin, Education, 2000); Edison Perdomo (Johnson, 2000); Greta Sokoloff (Blumberg, 2001); Joy Kreider (Blumberg, 2003); Dan Nicholson (Freeman, 2003); Gale Kleven (Robinson, 2005); Michele Brumley (Robinson, 2005); Karl Karlsson (Blumberg, 2005); Andrea Frank (Wasserman, 2007); Adele Seelke (Blumberg, 2007); Hunter Halverson (Freeman, 2008); Valerie Mendez-Gallardo (Robinson, 2011); Mark Lobas (Weiner, Neuroscience Graduate Program); Jeremy Duncan (Fritsch, Biology); Adam Steinmetz (Freeman, 2013); Seth Hurley (Johnson, 2015); Mary Goldsberry (Freeman, 2015); Sean Farley (2016); Carlos Del Rio-Bermudez (2016); Eric Emmons (Narayanan, Neuroscience Graduate Program, 2016); Caitlin Cosme (LaLumiere, 2016).

Research Advisory Committees (RAC) and Other Advising

Greta Sokoloff (Blumberg); Joy Kreider (Blumberg); Penney Nichols-Whitehead (Plumert); David Medina (Wasserman); Brenda Donaghy (Gormezano); Maura Stansfield (Robinson), Dan Nicholson (Freeman); Gale Kleven (Robinson); Sean Lewis (Blumberg); Michele Brumley (Robinson); Andrea Frank (Wasserman); Karl Karlsson (Blumberg); Adele Seelke (Blumberg); Ethan Mohns (Blumberg); Chi Wing Ng (Poremba); Amy Jo Marcano (Robinson); Jeffrey Anderson (Blumberg); Andrew Gall (Blumberg); Daniel Brooks (Wasserman); William Todd (Blumberg); Valerie Mendez-Gallardo (Robinson); Katie Devine (Robinson); Jang Jin Kim (Lee); Yongsang Jo (Lee); Mary Levillain (Freeman); Seth Hurley (Johnson); Alexandre Tiriac (Blumberg); Xin Huang (Neuroscience Graduate Program); Brandt Uitermarkt (Blumberg); Joshua Richmond (Radley); Caitlin Cosme (Lalumiere); Sean Farley (Freeman); Justin Reber (Tranel); Mathew Broschard (Freeman).

Undergraduate Honors Committees

C. Novak (Johnson, 1993); S. Ulrich (Wasserman, 1993); J. Tremmel (Christensen, 1994); C. Betti (Wasserman, 1994); T. Mueller (Blumberg, 1995); C. Bunten (Blumberg, 1995); S. Pertzborn (Robinson, 1995); B. A. Beenken (Blumberg, 1996); D. Peterson (Robinson, 1996). C. J. Kosinski (Blumberg, 1997); S. Karlen (Blumberg, 1999); L. Kreber (Blumberg, 1999); T. Pleskac (Blumberg, 2000); K. Bennett (Robinson, 2000); O. Bailey (Robinson, 2000); E. Johnson (Blumberg, 2003); J. Middlemis-Brown (Blumberg, 2005); A. Fanning (Blumberg, 2013); Alex Yonk (Blumberg, 2016).

Undergraduates Supervised in the Laboratory (Inc. 031:185, Research Practicum)

Matthew Stolba, Donald Peterson, Robert Hoover, Colin MacMurray, Carol Bunten, Wayne Lance, Tom Mueller, Kristi Kelly, Greta Sokoloff, Nancy Beach, Mary Lou Schneider, Robert Legislador, Tim Hunsicker, Beth Ann Beenken, Catherine Kosinski, Gregory Garner (SRPOP), Everett Nixon (SREP), Sarah Karlen*, Nigel Kopp, Lisa Kreber, Megan Adams, Jeremy Bertsch, Jayson Eiberg, Elizabeth Boline, Tara Goldader, Necole Streeper, Eric Johnson; Jessica Middlemis-Brown*†; Lastascia Granger; Erin Nelson; Cassandra Coleman#; James Gibson; Colorado Reed; Lauren Jones; James Willey; Jordan Williams, Ashlynn Gerth (IBA), Alexander Fanning#, Ben Peterson, Sheela Hussey, Nicholas Sattler (IBA), Josie Delgado, Breanne Peterson, Alex Yonk, Erin Halstead, Katherine von Fosson, Lester Moy, Anya Egense, Zipeng You, Rikki Laser, Asia Banks (SRPOP).

* Recipient of the Collegiate Scholar Award

† Recipient of the Robbie Prize (Biological Sciences)

Recipient of Iowa Center for Research by Undergraduates (ICRU) Fellowship

Iowa Biosciences Initiative (IBA) Trainees

Necole Streeper, James Gibson, Ashlynn Gerth, Josie Delgado, Nicholas Sattler, Rikki Laser

SERVICE

DEPARTMENT

Chair, Faculty Search Committee, Developmental Science, 2016-2017.

Departmental Reorganization Committee, 2015.

Faculty Search Committee, Joint hire in Psychology and Neurology, 2014-2015.

Faculty Advisory Committee: 2014-2017 (3-year elected term).

Strategic Communications Committee, 2013-2014.

Chair, Promotion and Tenure Committee for Prof. Larissa Samuelson, 2013.

Faculty Search Committee, Department of Psychology (BCN), 2004-2005, 2009-2010.

Committee for Departmental Self-Study: 2000-2002.

Volunteered as "Departmental Web Czar," a job that included reorganizing, rewriting, and updating the department's web pages: 1999-2002.

Renovation Planning Committee: 1998-2003.

Departmental Colloquium Committee: 1998-2002.

Training Area Coordinator (Behavioral and Cognitive Neuroscience): 1996-2002.

Chair of BCN faculty recruiting committee: 1996-1997, 1999-2000.

Committee on Graduate Studies: 1996-2002.

Chair, Animal Care and Use Committee: 1999.

Organized and chaired four "Good-to-Great" meetings: Summer, 1999.

Ad-Hoc Graduate Student Recruiting Committee: 1995-1996.

Endowment Committee: 1994-1995.

Professional Concerns Committee: 1994-1995.

Faculty Advisory Committee: 1994-1997 (3-year elected term).

Committee on Undergraduate Studies: 1993-1994.

COLLEGE

Promotion and Tenure Committee, 2012-2013; 2013-2014.

Ad hoc member, Executive Board, DeLTA Center, 2011-present.

Interim Director, DeLTA Center, July-December, 2010.

Named Chairs and Professorships ad hoc committee, College of Liberal Arts and Sciences, 2009-2012.

Student Appeals Committee, College of Liberal Arts and Sciences, 2005-2006.

Promotion review committee, School of Social Work, 2003-2004.

Elected to Faculty Assembly: 2003-2006

Chair, Dean's Task Force for the Promotion of Excellence in the College of Liberal Arts and Sciences, 2002.

Internal review committee of the Department of Anthropology: Fall, 2001.

Faculty Evaluation Committee for Semester Assignments, College of Liberal Arts and Sciences: Fall, 1998.

UNIVERSITY

CLAS representative on the Graduate Council, 2016-2019.

Search Committee for Director of Iowa Neuroscience Institute, 2014-2016.

Faculty Senate, 2014-2017.

Principles of Scholarly Integrity (650:270/604) Faculty Facilitator, Graduate College, University of Iowa, 2012-2013.

Provost Search Committee, 2010-2011.

Neurosensory Genetics of Aging faculty search committee (cluster hire), Department of Biology, 2010-2011, 2011-2012.

Admissions Committee, Neuroscience Graduate Program: 2010-2011, 2011-2012.

Executive Committee, Neuroscience Graduate Program: 2000-2002.

Curriculum Committee, Neuroscience Graduate Program: 1997-1999; Summer, 2000-2001.

Biosciences Advisory Council, Office of the Vice-President for Research: 1997-1999.

Curriculum and Comprehensives Committee, Neuroscience Graduate Program: 1996-1997.

Admissions Committee, Neuroscience Graduate Program: 1993-1994; 1994-1995.

PROFESSION

Journal Editorial Positions

Editorial Board, *The American Psychologist*, 2016-present.

Editor-in-Chief, *Behavioral Neuroscience*, 2008-2014.

Associate Editor, *Archives of Scientific Psychology*, 2012-2015.

Co-Editor (with John Spencer and David Shenk) of a collection of articles entitled "How we develop—Developmental systems and the emergence of complex behaviors" for Wiley's WIREs series, 2014-present.

Consulting Editor, *Behavioral Neuroscience*, 2007, 2014-present.

Blumberg, M. S. & Dess, N. K., co-editors of (and authors of an introduction for) a special section entitled "Speaking up, speaking out: Views on advocating for our science." *International Journal of Comparative Psychology*, 20: 1-24, 2007.

Associate Editor, *Behavioral Neuroscience*, 2001-2007.

Editorial Board, *Developmental Psychobiology*, 1997-present.

Journal Reviewing

Ad hoc reviewer for:

American Journal of Physiology

American Psychologist

Animal Behaviour

Behavioral & Brain Sciences

Behavioral Neuroscience

Behaviour

Behavioural Brain Research

Biological Psychiatry

Biological Reviews

Brain Research

Brain Structure and Function

Canadian Journal of Physiology and Pharmacology
Cerebral Cortex
Child Development
Child Development Perspectives
Current Biology
Developmental Psychobiology
Developmental Psychology
Developmental Reviews
eLife
Epilepsia
European Journal of Pharmacology
Frontiers in Human Neuroscience
Frontiers in Neurology
Infant Behavior and Development
Journal of Comparative Psychology
Journal of Experimental Biology
Journal of Neuroscience
Nature Communications

Neural Plasticity
Neuroscience and Biobehavioral Reviews
Neuroscience Letters
Physiology & Behavior
PLoS ONE
Proceedings of the National Academy of Sciences
Psychological Bulletin
Psychological Review
Psychonomic Bulletin & Review
Seminars in Cell and Developmental Biology
Sleep
Trends in Neurosciences
Trends in Cognitive Sciences

NIH and NSF Grant Review Panels

Ad Hoc member, Neurobiology of Learning and Memory (LAM), NIH, June, 2017.
Member, NIH Special Emphasis Panel, ZRG1 IFCN-Z (02), February, 2016.
Member, NIH Special Emphasis Panel, ZRG1 IFCN-Z (02), September, 2013.
Panel member, Spring 2013 Preliminary Proposals Review Panel in the Neural Systems Cluster, Division of Integrative Organismal Systems, NSF, March 11-13, 2013.
Mail reviewer, Pathway to Independence (K99) program, NIH, July 2011, February 2012.
Member, Special Emphasis Panel for evaluation of K18 awards through OppNet, BBBP-L, NIH, June, 2010.
Ad Hoc Member, Neurobiology of Circadian Rhythm and Sleep (IFCN-D 3), NIH, March, 2007
Ad Hoc Member, Biobehavioral and Behavioral Processes-1 (BBBP-1), NIH, June, 2002; June, 2003; October, 2005.
Member of grant review panel, "Animal models of SIDS" RFA, National Institute of Child Health and Human Development, August 1991.

Other Grant Reviewing

Citizens United for Research in Epilepsy (CURE), Member of Scientific Review Board, 2004-2005.

Professional Societies and Conferences

Publication Policy Committee, Sleep Research Society, 2016-present.
Conference organizer, Winter Animal Behavior Conference, Steamboat, Colorado, January 14-21, 2012.
President, International Society for Developmental Psychobiology (ISDP), 2007-2008.
Executive Committee, International Society for Developmental Psychobiology (ISDP), 2006-2009.

American Psychological Association/Bureau of Scientific Affairs (APA/BSA) liaison to the Society for Neuroscience, 2005-2007.

Program Committee (Division 6), American Psychological Association, 2005-2007 (Chair, 2005-2006).

Member, Committee on Animal Research and Ethics (CARE), American Psychological Association, 2002-2005 (Chair, 2005).

Board Member, International Society for Developmental Psychobiology, 1998-2002.

Co-organizer of the annual Winter Animal Behavior Conference, Jackson, Wyoming, January, 2001.

Invited participant, American Psychological Association's (APA) 3rd annual Science Leadership Conference (SciLC), Adventures in Advocacy: Training the Civic Scientist, October 13-15, 2007.

Outside reviewer for promotion evaluations:

Department of Pediatrics, Columbia University Medical School

Department of Cell and Systems Biology, University of Toronto

Department of Psychology, Princeton University

Department of Psychology, University of Texas, Austin

Department of Psychology, Cornell University, Ithaca

Department of Neurology, Medical College of Wisconsin, Milwaukee

Department of Psychological Sciences, Purdue University (twice)

Department of Psychology, Indiana University, Bloomington

Department of Psychology, University of California at Davis

Department of Education, Rutgers University, New Brunswick

Department of Psychology, University of Tennessee, Knoxville

Textbook Reviews

Rosenzweig, M. R., Breedlove, S. M., & Leiman, A. L. *Biological Psychology, Second Edition*, Sinauer Associates, Inc.

External Departmental Reviews

Department of Psychology, University of Massachusetts at Boston, evaluation of readiness for a Ph.D. program, August 2010.

Department of Psychology, University of Nebraska at Omaha, February 1999.

External Examiner of Doctoral Dissertation

Graduate Program in Neuroscience, University of British Columbia, March 2013 (Candidate: David McVea; Mentor: Timothy Murphy).

Miscellaneous

Member, committee to review nominees for the APA Early Career Award in Behavioral and Cognitive Neuroscience, 2016.

Member, Eleanor Maccoby Book Award Selection Committee, APA Division 7, 2016.

Internal Advisory Board, SIDS Program Project Grant, Harvard Medical School and Children's Hospital Boston, Dec. 9, 2011.

COMMUNITY

Invited speaker, Secular Humanist Group, Iowa City, February 21, 2017.

Invited speaker, Secular Students at Iowa, February 2, 2016.

Evolution and Intelligent Design, Trinity Episcopal Church, Iowa City, February 28, 2010.

Co-organizer of the 2nd Annual Iowa City Darwin Day Celebration, February 15-16, 2008.

Invited speaker, Secular Humanist Group, Iowa City, January 31, 2006.

One of four participants in a panel discussion on Intelligent Design sponsored by the UI Freethinkers, October 19, 2005.

One of several authors “auctioned off” for the Iowa City Public Library’s “Celebrating Iowa Authors Annual Fundraiser,” May 1, 2005.

MEMBERSHIPS

American Association for the Advancement of Science

American Physiological Society

American Psychological Association

International Society for Developmental Psychobiology

Sleep Research Society

Society for Neuroscience