

February 2016

Anna Y. Klintsova, Ph.D.

**CURRICULUM VITAE**

**ANNA Y. KLINTSOVA, PH.D.**

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**CURRENT APPOINTMENT:**

**September 2010** ASSOCIATE PROFESSOR, Department of Psychological and Brain Sciences,  
**University of Delaware**

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**EDUCATION:**

Ph.D. (Candidate of Science)	Feb. 1992	Department of Medicine <b>Moscow State University of Friendship between Nations Moscow, Russia</b>	Neuroscience, Neuroanatomy
B.S.	June 1980	Biology Department, <b>Moscow State University</b>	Physiology, Histology & Cytology
B.S.	June 1989	<b>Moscow State Institute of Foreign Languages, Moscow, Russia</b>	English

**PROFESSIONAL EMPLOYMENT AND EXPERIENCE:**

<b>September 2004 August 2010</b>	ASSISTANT PROFESSOR, Psychology Department, <b>University of Delaware</b>
<b>September 2002 – August 2004</b>	ASSISTANT PROFESSOR, Department of Psychology, <b>SUNY - Binghamton University</b>
<b>January 1995 – August 2002</b>	RESEARCH ASSISTANT PROFESSOR, Associate Director of the Fetal Alcohol Study Group, Laboratory of Dr. W.T. Greenough, <b>University of Illinois at Urbana-Champaign</b> , Beckman Institute
<b>August 1993 - December 1994</b>	RESEARCH ASSOCIATE IN NEUROBIOLOGY Laboratory of Dr. Peter C. Brunjes, Department of Psychology, <b>University of Virginia</b>
<b>January 1993 - August 1993</b>	POSTDOCTORAL RESEARCH FELLOW <b>(International Brain Research Organization Fellowship)</b> Lab. Dr. William B Levy & Dr. Nancy L Desmond Department of Neurosurgery, <b>University of Virginia</b>
<b>March 1985 - January 1993</b>	RESEARCH ASSOCIATE Laboratory of Clinical Neuromorphology, <b>National Research Center of Mental Health, Russian Academy of Medical Sciences</b> , Moscow

- Completed thesis “Synaptic Plasticity in the Dopaminergic Brain Areas under the Chronic Effect of Amphetamine and Haloperidol” and received PhD degree

1980-1985

JUNIOR RESEARCH ASSOCIATE

Inst. of Radiotechnics and Automatics, Russian Academy of Sciences, Moscow, Russia

**RESEARCH INTERESTS:**

- Brain (neuronal, synaptic and glia) plasticity in normal and damaged state
- Developmental alcohol exposure and potential therapeutic approaches: animal models
- Quantitative anatomy and morphology

**FELLOWSHIPS AND AWARDS**

1993	International Brain Research Organization, Postdoctoral Research Training Fellowship
1993	Women in Neuroscience Travel Award
1997	Neurobehavioral Teratology Society, Award for Excellence in Research
1999	Winter Conference for Brain Research, Fellowship Award
2004	ISBRA Travel Award, to present a paper at 12 <sup>th</sup> World Congress on Biological Alcohol Research
2006	William Evans Visiting Fellow, annual award from the University of Otago, Dunedin, New Zealand, to visit and work in the University for 2 months
2007	Grant from the Faculty of Arts Endowment Fund, University of Manitoba, to give a lecture in Psychology Department and at the Manitoba Institute of Child Health

**PUBLISHED SCHOLARLY WORK**(Note: \* = data collected in the University of Delaware; underlined – corresponding author)**I. PUBLICATIONS IN PEER REVIEWED JOURNALS****Manuscripts Published (H-index = 26)**

1. Valenzuela CF, Medina AE, Wozniak JR, Klintsova AY, (2015) Proceedings of the 2015 Annual Meeting of the Fetal Alcohol Spectrum Disorders Study Group. *Alcohol*, epub ahead of print. PMID: 26695590
2. Hamilton GF, Criss K, Klintsova AY (2015) Voluntary Exercise Partially Reverses Neonatal Alcohol-Induced Deficits in mPFC Layer II/III Dendritic Morphology of Male Adolescent Rats. *Synapse*, 69(8), 405-415. PMID: 25967699
3. Boschen KE, Criss KJ, Palamarchouk V, Roth TL, Klintsova AY (2015) Effects of developmental alcohol exposure vs. intubation stress on BDNF and TrkB expression in the hippocampus and prefrontal cortex of neonatal rats. *International Journal of Developmental Neuroscience*, 43: 16-24. PMID: 25805052
4. Boschen KE, Hamilton GF, Delorme JE, Klintsova AY (2014) Activity and Social Behavior in a Complex Environment in Rats Neonatally Exposed to Alcohol. *Alcohol*, 48(6):533-41. PMID: 25150044
5. Hamilton GF, Jablonski SA, Schuffino FL, St Cyr SA, Stanton ME, Klintsova AY (2014) Exercise and environment as an intervention for neonatal alcohol effects on hippocampal adult neurogenesis and learning. *Neuroscience*, 265: 274-290. PMCID: PMC4005875
6. Wagner JL, Klintsova AY, Greenough WT, Goodlett CR (2013) Rehabilitation training using complex motor learning rescues deficits in eyeblink classical conditioning in female rats induced by binge-like neonatal alcohol exposure. *Alcohol Clin Exp Res*. 37(9):1561-70. PMID: 23647404
7. Klintsova, AY, Hamilton, GF, Boschen, KE (2013) Long-Term consequences of Developmental Alcohol Exposure on Brain Structure and Function: Therapeutic Benefits of Physical Activity. *Brain Sci.* 3, 1-38; doi:10.3390/brainsci3010001
8. Schreiber, W.B. , St. Cyr, S.A. ,Jablonski, S.A. , Hunt, P.S. , Klintsova, A. Y., Stanton, M.E (2013) Effects of Exercise and Environmental Complexity on Deficits in Trace and Contextual Fear Conditioning Produced by Neonatal Alcohol Exposure in Rats. *Developmental Psychobiology* 55(5):483-95. PMID:22644967
9. Murawski, N.J., Klintsova, A.Y., Stanton, M.E. (2012) Neonatal alcohol exposure and the hippocampus in developing male rats: effects of behaviorally induced CA1 c-Fos expression, CA1 pyramidal cell number and contextual fear conditioning, *Neuroscience*, 206:89-99. Epub 2012 Jan 18. doi: 10.1016/j.neuroscience. 2012.01.006.

10. Hamilton GF, Boschen KE, Goodlett CR, Greenough WT, **Klintsova AY** (2012) Housing in Environmental Complexity Following Wheel Running Augments Survival of Newly-Generated Hippocampal Neurons in a Rat Model of Binge Alcohol Exposure during the Third Trimester Equivalent. *Alcoholism: Clinical and Experimental Research*, 36(7):1196-2042. PMID: PMC4543282
11. Hamilton GF, Murawski NJ, St. Cyr SA, Jablonski SA, Schiffino FL, Stanton ME, **Klintsova AY**. (2011) Neonatal alcohol exposure disrupts hippocampal neurogenesis and contextual fear conditioning in adult rats. *Brain Research*, 1412: 88-101. doi: 10.1016/j.brainres.2011.07.027.
12. Vetreno RP, **Klintsova AY** and Savage LM (2011) Stage-dependent alterations of progenitor cell proliferation and neurogenesis in an animal model of Wernicke-Korsakoff syndrome. *Brain Research*, 1391:132-46.
13. Hamilton GF, Whitcher LT and **Klintsova AY** (2010) Postnatal binge-like alcohol exposure decreases dendritic complexity while increasing the density of mature spines in mPFC layer III pyramidal neurons. *Synapse*, 64:127-135.
14. Helfer, JL, Goodlett, CR, Greenough, WT, **Klintsova, AY**. (2009) The Effects of Exercise on Adolescent Hippocampal Neurogenesis in a Rats Model of Binge Alcohol Exposure During the Brain Growth Spurt. *Brain Research*, 1294: 1-11.
15. Helfer JL, Calizo LH, Dong WK, Goodlett CR, Greenough WT, **Klintsova AY** (2009) Binge-like Postnatal Alcohol Exposure Triggers Cortical Gliogenesis in Adolescent Rats. *Journal of Comparative Neurology*, 514(3): 259-271.
16. Whitcher LT, **Klintsova AY**. (2008) Postnatal binge-like alcohol exposure reduces spine density without affecting dendritic morphology in rat mPFC. *Synapse*, 62(8):566-73.
17. **Klintsova AY**; Helfer JL; Calizo LH; Dong WK; Goodlett CR; Greenough WT. (2007) Persistent impairment of hippocampal neurogenesis in young adult rats following early postnatal alcohol exposure. *Alcoholism: Clinical and Experimental Research*, 31(12): 2073-2082.
18. **Klintsova AY**, Helfer JL, Goodlett CR, Greenough WT (2007) Neurogenesis in adult hippocampus: Postnatal alcohol and adult exercise effects. In: Structural, functional, neurochemical and immunochemical aspects of brain plasticity and asymmetry. Ed: Illarioshkin SN. Ikar, Moscow, pp. 300-304.
19. Uranova NA, Vikhрева OV, Zimina IS, Rakhmanova VI, **Klintsova AY**, Black J, Greenough WT, Orlovskaya DD (2007) Abnormal patterns of cortical synaptic connectivity in schizophrenia. *Vestn Ross Akad Med Nauk*. 3:8-14 (in Russian).
20. Savage LM, Roland J, **Klintsova A**. (2007) Selective septohippocampal – but not forebrain amygdalar – cholinergic dysfunction in diencephalic amnesia. *Brain Research*, 1139:210-219.
21. Roegge CS, Morris JR, Villareal S, Wang VC, Powers BE, **Klintsova AY**, Greenough WT, Pessah IN, Schantz SL. (2006) Purkinje cell and cerebellar effects following developmental exposure to PCBs and/or MeHg. *Neurotoxicol Teratol*. 28(10), 74-85.
22. Guerri C, Pascual M, Garcia-Minguillan MC, Charness ME, Wilkemeyer MF, **Klintsova AY**, Goodlett CR, Greenough WT, Sakata-Haga H, Dominguez HD, Thomas JD (2005) Fetal Alcohol Effects: Potential Treatments From Basic Science. *Alcoholism: Clinical and Experimental Research*, 29(6): 1074-1079.
23. **Klintsova AY**, Dickson E, Yoshida R, Greenough WT (2004) Altered expression of BDNF and its high-affinity receptor TrkB in response to complex motor learning and moderate exercise. *Brain Research*, 1028(1):92-104.
24. Briones TL, **Klintsova AY**, Greenough WT (2004) Stability of synaptic plasticity in the adult rat visual cortex induced by complex environmental exposure. *Brain Research*, 1018: 130-135.
25. Weiler IJ, Spangler CC, **Klintsova AY**, Grossman AW, Kim SH, Bertaina-Anglade V, Khaliq H, de Vries FE, Lambers FA, Hatia F, Base CK, Greenough WT (2004) Fragile X mental retardation protein is necessary for neurotransmitter-activated protein translation at synapses. *Proc Natl Acad Sci U S A*, 101 (50):17504-9.
26. Black JE, Kodish IM, Grossman AW, **Klintsova AY**, Orlovskaya D, Vostrikov V, Uranova N, Greenough WT. (2004) Quantitative Pathology of Layer V Pyramidal Neurons in Schizophrenic Prefrontal Cortex. *Am J of Psychiatry*, 161(4):742-4.
27. Roegge CS, Wang VC, Powers BE, **Klintsova AY**, Villareal S, Greenough WT, Schantz SL. (2004) Motor Impairment in Rats Exposed to PCBs and Methylmercury During Early Development. *Toxicol Sci*, 77(2):315-24.
28. F. Angenstein, R.E. Settlage, J.E. Kacharina, S.T. Moran, S.-C. Ling, **A. Klintsova**, J. Eberwine, D.F. Hunt, W.T. Greenough. RACK1, a receptor for activated C kinase, links metabotropic glutamate receptor activation with dendritic translational control. (2002) *J Neurosci*, 22(20):8827-37.
29. **Klintsova AY**, Scamra C., Hoffman M., Goodlett CR., Napper RMA and WT. Greenough. Therapeutic effect of complex motor skill learning on binge-like postnatal alcohol-induced motor performance deficits: II. Quantitative Study of Synaptic Plasticity Using Unbiased Stereology.(2002) *Brain Research*, 937, p. 83-93.
30. J.D.Churchill, A.W.Grossman, S.A.Irwin, R.Galvez, **A.Y.Klintsova**, I.J.Weiler, W.T.Greenough. (2002) A Converging-Methods Approach to Fragile X Syndrome. *Dev. Psychobiol*, 40:323-338.

31. Greenough, W.T., **Klintsova, A.Y.**, Irwin, S.A., Galvez, R., Bates, K.E., and Weiler, I.J. (2001) Synaptic regulation of protein synthesis and the fragile X protein. *PNAS*, 98: 7101-7106.
32. E.P.Riley, J.D. Thomas, C.R.Goodlett, **A.Y.Klintsova**, W.T.Greenough, B.L.Hungund, F.Zhou, Y.Sari, T.Powrozek, T.-K.Li. (2001) Fetal Alcohol Effects: Mechanisms and Treatment. *Alcoholism: Clinical and Experimental Research*, v.25, 5, 110S-116S.
33. **A.Y.Klintsova**, C.R.Goodlett, W.T.Greenough. (1999) Therapeutic motor training ameliorates cerebellar effects of postnatal binge alcohol. *Neurotoxicology and Teratology*, 22, 125-132.
34. **A.Y.Klintsova**, W.T.Greenough. (1999) Synaptic plasticity in cortical systems. *Current Opinions in Neurobiology*, v.9, p.203-208. PMID: 10322189
35. T.A. Jones, N. Hawrylak, **A.Y. Klntsova**, W.T. Greenough. (1998) Brain Damage, Behavior, Rehabilitation, Recovery, and Brain Plasticity. *Mental Retardation and Developmental Disabilities Research Reviews*, 4, 231-237.
36. **A.Y. Klntsova**, R.M. Cowell, R.A. Swain, R.M.A. Napper, C.R. Goodlett, W.T.Greenough. (1998) Therapeutic effect of complex motor skill learning on binge-like postnatal alcohol-induced motor performance deficits: I. Behavioral results. *Brain Research*, 800(1), p. 48-61.
37. N.S.Waters, **A.Y.Klntsova**, T.C.Foster. (1997) Insensitivity of the hippocampus to environmental stimulation during postnatal development. *J. Neuroscience*, 17(20), p. 7967-7973.
38. **A.Y.Klntsova**, J.T.Matthews, C.R.Goodlett, R.M.A.Napper, W.T.Greenough. (1997) Therapeutic motor training increases parallel fiber synapse number per Purkinje neuron in cerebellar cortex of rats given postnatal binge alcohol exposure: Preliminary report. *Alcoholism: Clinical and Experimental Research*, v.21, No. 7, 1257-1263.
39. I.J.Weiler, S.A.Irwin, **A.Y.Klntsova**, C.M.Spencer, A.D.Brazelton, K.Miyashiro, T.A.Comery, B.Patel, J.Eberwine, W.T. Greenough. (1997) Fragile X mental retardation protein is translated near synapses in response to neurotransmitter activation. *Proc. Natl. Acad. Sci. USA*, 94, p.5395-5400.
40. T.A.Jones, **A.Y.Klntsova**, V.L.Kilman, A.M.Sirevaag, W.T.Greenough. (1997) Induction of multiple synapses by experience in the visual cortex of adult rats. *Neurobiology of Learning and Memory*, 68, p.13-20.
41. **Klntsova A.Y.**, Levy W.B., Desmond N.L. (1995) Astrocytic volume fluctuates in the hippocampal CA1 region across the estrous cycle. *Brain Research*, 690, p. 269-274.
42. **Klntsova A.Y.**, Philpot B.D., Brunjes P.C. (1995) Expression of *c-fos* in pre- and postnatal development of the rat olfactory bulb. *Dev. Brain Research*, v.86, pp.114-122.
43. Philpot B.D., **Klntsova A.Y.**, Brunjes P.C. (1995) Oligodendrocyte/Myelin-Immunoreactivity in the developing olfactory system. *Neuroscience*, v.67, 4, pp.1009-1019.
44. Uranova, N.A., Orlovskaya, D.D., Apel, K., **Klntsova, A.Yu.**, Haselhorst, U., Schenk, H. (1991) Morphometric study of synaptic patterns in the rat caudate nucleus and hippocampus under haloperidol treatment. *Synapse*, v.7, pp.253-259.
45. Burbaeva, G.S., Androsova, L.V., **Klntsova, A.Yu.** (1988) The influence of Psychotropic Drugs on the Brain Tubulin. *J.of Neuropath. & Psychiat.*, v.88, 5 (in Russ.).
46. **Klntsova, A.Yu.**, Uranova, N.A., Schenk, H. and Haselhorst U. (1990) Synaptic Plasticity in Rat's Medial Prefrontal Cortex under Chronic Haloperidol Treatment Produced Behavioral Sensitization. *J. Hirnforsch.*, v.31, 2 (in Engl.), 175-179.
47. Uranova, N.A., **Klntsova, A.Yu.**, Schenk, H. and Haselhorst U. (1989) The effects of Amphetamine on Synaptic Plasticity in Rat's Medial Prefrontal Cortex. *J. Hirnforsch.*, v.30, 1 (in Engl.),45-50.
48. **Klntsova, A.Yu.**, Uranova, N.A., Schenk, H., Haselhorst, U. and Istomin, V.V. (1989) The effects of Haloperidol on Synaptic Plasticity in Rat's Medial Prefrontal Cortex. *J.Hirnforsch.*, v.30, 1 (in Engl.), 51-57.
49. **Klntsova, A.Yu.**, Uranova, N.A. (1987) The effects of Haloperidol on the Ultrastructure of some structures of Dopaminergic system of the brain. *J. of Neuropath. & Psychiat.*, v.87, 7 (in Russ.).
50. **Klntsova, A.Yu.**, Uranova, N.A., Schenk, H. and Haselhorst U. (1986) Ultrastructure of the synapses in Tuberculum olfactorium under the haloperidol treatment. In: *Scientific publications of the Institute of Brain, Acad. Med. Sci. USSR*, (in Russ.).
51. Uranova, N.A., and **Klntsova, A.Yu.** (1986) Ultrastructure of the synapses of Helix pomatia ganglions. *Arch. anat., histol. and embryol.*, v.5 (in Russ.)

## II. BOOK CHAPTERS:

W. T. Greenough, J. E. Black, **A. Y. Klntsova**, K. E. Bates, I. J. Weiler. Experience and Plasticity in Brain Structure: Possible Implications of Basic Research Findings for Developmental Disorders. In: S.H. Broman and J. M. Fletcher, Eds., "Neurobehavioral Consequences of Early Brain Disorders", Oxford University Press, 1999.

## ABSTRACTS PRESENTED AND PUBLISHED FROM KLINTSOVA LAB IN 2004-2015

\* - undergraduate student

1. M.J. Ruggiero, K.E. Boschen, **A.Y. Klintsova**. Microglial activation in the developing rodent brain following binge alcohol exposure during the third trimester equivalent. December 2015 - DE neuroscience symposium
2. Boschen, K.E., Criss, K.J., Roth, T.L. and Klintsova, A.Y. (2015). Long-term impact of neonatal ethanol exposure on hippocampal adult neurogenesis, BDNF expression, and *bdnf* DNA methylation in rats. Delaware Chapter of Society for Neuroscience, Newark, DE.
3. Z. Gursky, K. J. Criss, R. M. A. Napper, **A. Y. Klintsova**; Increase in apoptosis following a single binge ethanol exposure is followed by subsequent compensatory events in hippocampal CA1 in rats. Presented at Society for Neuroscience meeting, Chicago, IL, October 2015
4. Boschen, K.E., Criss, K.J., Roth, T.L. and Klintsova, A.Y. (2015). Long-term impact of neonatal ethanol exposure on hippocampal adult neurogenesis, BDNF expression, and *bdnf* DNA methylation in rats. Society for Neuroscience Annual Meeting, Chicago, IL.
5. Boschen, K.E., Ruggiero, M.J. & Klintsova, A.Y. (2015). Effect of neonatal alcohol exposure on microglial activation in the developing rat hippocampus. Research Society on Alcoholism Annual Meeting, San Antonio, TX.
6. Z.H. Gursky, K.J. Criss, R.M.A. Napper, **A.Y. Klintsova**; DEVELOPMENTAL PATTERNS OF APOPTOSIS IN RAT HIPPOCAMPUS FOLLOWING ONE-DAY BINGE ALCOHOL EXPOSURE - Presented at Research Society on Alcoholism meeting, San Antonio, TX, June 2015
7. K.E. Boschen, V. Palamarchouk, T.L. Roth & **AY Klintsova** Alterations to BDNF and TrkB expression in the hippocampus and prefrontal cortex of rats exposed to alcohol on postnatal days 4-9 – Presented at Research Society on Alcoholism meeting, Seattle, June 2014
8. R.M.A. Napper, **A.Y. Klintsova** Acute cell death induced by moderate ethanol in PD4 rat pup CA1 region is ameliorated during adolescence. Presented at Research Society on Alcoholism meeting, Seattle, June 2014
9. **AY Klintsova** Behavioral interventions to ameliorate the outcomes of FASD: Lessons from animal model. Presented as a symposium talk at Research Society on Alcoholism meeting, Seattle, June 2014
10. KJ Criss, V Palamarchouk, KE Boschen, **AY Klintsova**. Immediate and long-term impact of developmental alcohol exposure on BDNF and TrkB in the frontal cortex. Presented at Society for Neuroscience meeting, Washington, DC, November 2014
11. KE Boschen, V Palamarchouk, KJ Criss, TL Roth, **AY Klintsova**. Immediate and long-term impact of developmental alcohol exposure on BDNF gene expression and protein in the hippocampus. Presented at Society for Neuroscience meeting, Washington, DC, November 2014
12. Hamilton, G.F., Boschen, K.E., Castiglione\*, M.P. , Delorme\*, J.E. , Hetterly\*, E.G. and **Klintsova, A.Y.** Behavior in a complex environment following voluntary exercise in rats exposed to alcohol neonatally. RSA Annual Meeting, San Francisco, June 2012.
13. Hamilton, G.F., Criss\*, K.J. and **Klintsova, A.Y.** Effects of voluntary exercise on cell morphology in the medial prefrontal cortex of rats exposed to alcohol during the third trimester equivalent. RSA Annual Meeting, San Francisco, 2012.
14. Boschen, K.E., Hamilton, G.F., Morales\*, A.F. and **Klintsova, A.Y.** Voluntary wheel running increases FosB/ $\Delta$ FOSB expression in the dentate gyrus of rats exposed to alcohol during third trimester equivalent. RSA Annual Meeting, San Francisco, June 2012.
15. Boschen, K.E., Hamilton, G.F., Hetterly\*, E., Stanton, M.E. and **Klintsova, A.Y.** Wheel running enhances hippocampal cell proliferation in a rodent model of binge-like exposure to alcohol as revealed by a single injection of BrdU. SFN Annual Meeting, Washington, D.C., 2011.
16. Murawski, NJ, **Klintsova, AY**, and Stanton, ME. Neonatal alcohol exposure and the hippocampus in developing rats: effects on behaviorally induced CA1 c-Fos expression, CA1 pyramidal cells, and contextual fear conditioning. International Society on Developmental Psychobiology, Washington D.C., 2011.
17. Schreiber, W. B., St. Cyr, S.A., Jablonski, S.A., **Klintsova, A.Y.**, Stanton, M.E. The Effects of Environmental Enrichment on Fear Conditioning in a Neonatal Alcohol Rodent Model. International Society on Developmental Psychobiology, Washington D.C., 2011.
18. Neonatal alcohol exposure decreases adult hippocampal neurogenesis and impairs contextual fear conditioning in adult male and female rats. G.F. Hamilton, N.J. Murawski, S.A. St. Cyr, S.A. Jablonski, F.L. Schifano, M.E. Stanton & **A.Y. Klintsova**. RSA Annual Meeting, Atlanta, 2011.

19. Voluntary exercise followed by enriched environment: promoting adult hippocampal neurogenesis in rats exposed to alcohol postnatally. G.F. Hamilton, J.L. Helfer, C.R. Goodlett, W.T. Greenough, **A.Y. Klintsova**. RSA Annual Meeting, San Antonio, 2010.
20. Voluntary exercise and enriched environment promoting adult hippocampal neurogenesis in rats exposed to alcohol postnatally. J.L. Helfer, G.F. Hamilton, C.R. Goodlett, W.T. Greenough, and **A.Y. Klintsova**. SFN Annual Meeting, Chicago, IL, 2009.
21. Voluntary Exercise and Hippocampal Neurogenesis: Effect of Daily Running Duration and Social Environment. J.L. Helfer, C. Rocha and **A.Y. Klintsova**. SFN Annual Meeting, Washington, D.C., 2008.
22. Rats Exposed to Binge-Like Ethanol on PD4-9 Show Altered Basal Dendritic Complexity in Medial Prefrontal Cortex Neurons. G.F. Hamilton, L.T. Whitcher and **A.Y. Klintsova**. SFN Annual Meeting, Washington, D.C., 2008.
23. Neonatal One-Day Binge-Like Ethanol Exposure Results in the Loss of Neurons in the CA1/CA3 Subfields of Rat Hippocampus. C.E. Schnell\*, R.M.A. Napper, **A.Y. Klintsova**. SFN Annual Meeting, Washington, D.C., 2008.
24. Rats exposed to binge-like alcohol on PD4-9 show altered basal dendritic complexity in medial prefrontal cortex neurons. G.F. Hamilton, L.T. Whitcher, **A.Y. Klintsova**. RSA Annual Meeting, Washington, D.C., 2008.
25. A single binge ethanol exposure on postnatal day four produces significant reduction of hippocampal CA1 neurons in adolescent rats. **A.Y. Klintsova**; C. Schnell; R.M.A. Napper. RSA Annual Meeting, Washington, D.C., 2008.
26. Voluntary exercise increases adult hippocampal neurogenesis in postweaning rats exposed to alcohol during the brain growth spurt. J.L. Helfer, C.R. Goodlett, W.T. Greenough, **A.Y. Klintsova**. SFN Annual Meeting, San Diego, 2007.
27. Decreased dendritic complexity in mPFC of rats exposed to binge-like ethanol during the third trimester equivalent. L.T. Whitcher, **A.Y. Klintsova**. RSA Annual Meeting, Chicago, IL, 2007.
28. Voluntary exercise increases adult hippocampal neurogenesis in postweaning rats exposed to alcohol during the third trimester equivalent. J.L. Helfer, C.R. Goodlett, W.T. Greenough, **A.Y. Klintsova**. RSA Annual Meeting, Chicago, IL, 2007.
29. A single binge ethanol exposure on postnatal day four does not produce deficits in spatial learning in adolescent rats. R.M.A. Napper; **A.Y. Klintsova**. RSA Annual Meeting, Chicago, IL, 2007.
30. Postweaning voluntary exercise effect on neurogenesis in hippocampus after neonatal alcohol exposure. J.L. Helfer, L.H. Calizo, L.T. Whitcher, W.K. Dong, C.R. Goodlett, W.T. Greenough, **A.Y. Klintsova**. SFN Annual Meeting, Atlanta, 2006.
31. Postweaning wheel running effect on cytogenesis in adult rat motor cortex after neonatal alcohol exposure. J.L. Helfer, L.H. Calizo, W.K. Dong, C.R. Goodlett, W.T. Greenough, **A.Y. Klintsova**. RSA Annual Meeting, Baltimore, MD, 2006.
32. Persistent impairment of adult hippocampal neurogenesis in rats exposed to alcohol during the third trimester equivalent. **A.Y. Klintsova**, W.K. Dong, L. H. Calizo, J.L. Helfer, C.R. Goodlett, W.T. RSA Annual Meeting, Baltimore, MD, 2006.
33. Cyto- and neurogenesis in the adult motor cortex of rat exposed to alcohol during the third trimester equivalent. **A.Y. Klintsova**, L.H. Calizo, W.K. Dong, C.R. Goodlett, W.T. Greenough. SFN Annual Meeting, Washington, D.C., 2005.
34. Adult hippocampal cytogenesis in a rat model of alcohol exposure during the rat equivalent of the third trimester. **A.Y. Klintsova**, W.K. Dong, C.R. Goodlett, W.T. Greenough. SFN Annual Meeting, Washington, D.C., 2005.
35. Adult hippocampal cytogenesis in rat model of alcohol exposure during third trimester equivalent. **A.Y. Klintsova**; W.K. Dong; C.R. Goodlett; W.T. Greenough. RSA Annual Meeting, Santa Barbara, CA, 2005.

### INVITED PRESENTATIONS AND LECTURES

1. 1997 Research Society on Alcoholism Meeting, San Francisco, CA
2. 1998 NeuroBehavioral Teratology Society Meeting, San Diego, CA
3. 1998 Winter Conference on Brain Research, Aspen, CO
4. 1999 Western Michigan University, Kalamazoo, MI
5. 1999 Oregon Health Sciences University, Portland, OR
6. 2000 Research Society on Alcoholism Annual Meeting, session organizer and presenter
7. 2000 University of Otago, Dunedin, New Zealand
8. 2001 5<sup>th</sup> Annual Conference on Neurobiology of Learning and Memory, Park City, UT
9. 2002 Neurofest, Annual Meeting of Central New York Neuroscience Programs, Geneva, NY
10. 2004 12<sup>th</sup> ISBRA Congress, Mannheim, Germany (symposium speaker)
11. 2005 Department of Neurobiologie des Processus Adaptatifs, Universite Paris VI Pierre et Marie Curie (invited lecture)

12. 2005 Biomechanics and Movement Science Program seminar, University of Delaware, invited speaker, November 4<sup>th</sup>.
13. 2006 Resilience in Children, New York Academy of Sciences Meeting, February, Arlington, VA
14. 2006 International Society for Biomedical Research on Alcoholism (ISBRA), World Congress, September, (symposium – invited speaker)
15. 2006 Department of Anatomy, University of Otago, Dunedin, New Zealand, November
16. 2007 American Physical Therapy Association Meeting, Pediatric Section, Boston, MA, February 14
17. 2007 International conference “Structural and functional bases of brain plasticity”, Russian Academy of Medical Sciences, Moscow, Russia. October 24, 2007.
18. 2008 University of Manitoba, Winnipeg, Canada. Invited lecture in the Department of Psychology. February 27.
19. 2008 Manitoba Institute of Child Health, University of Manitoba Medical School, Winnipeg, Canada. Invited lecture, February 28.
20. 2009 Delaware State University, Invited Talk, November 14<sup>th</sup>, 2009.
21. 2009 Indy Society for Neuroscience Annual Meeting, Invited Talk, October 30<sup>th</sup>, 2009
22. 2010 Children’s Hospital of Philadelphia, University of Pennsylvania, Invited Talk, February 5<sup>th</sup>, 2010.
23. 2013 Department of Neurobiologie des Processus Adaptatifs, Universite Paris VI Pierre et Marie Curie (invited lecture), January 2013
24. 2013 Research Society on Alcoholism Annual Meeting, Orlando, FL, Symposium talk, June 2013.
25. 2013 14<sup>th</sup> ESBR Congress, Warsaw, Poland (symposium speaker)
26. 2013 FENS Regional Meeting, Prague, Czech Republic (symposium speaker)
27. 2013 SUNY-Binghamton, Invited Talk, October 11<sup>th</sup>, 2013.
28. 2014 Keynote speaker, Midwest Regional Fetal Alcohol Spectrum Disorder Training Center Summit, Kansas City, MO, March 21, 2014
29. 2014, Symposium speaker, Research Society on Alcoholism Annual Meeting, Seattle, WA, June 2014
30. 2014 Symposium presenter, Federation of European Neuroscience Societies Meeting, Milan, Italy, July 2014
31. 2015 Session Speaker, Winter Conference on Brain Research, Big Sky, Montana, January 2015

### PROFESSIONAL ACTIVITIES – ORGANIZED SYMPOSIA:

- 2015 Chair, “Experience-related plasticity in the mammalian brain: A tribute to William Greenough”, 48<sup>th</sup> Annual Winter Conference on Brain Research, Big Sky, Montana, January 24-30, 2015.
- 2013 Co-Chair, “Restoring the Alcohol-Damaged Brain”, Symposium at RSoA, Orlando, FL.
- 2010 Chair, “Rehabilitation vs Neuroprotection: Use of Exercise, Environmental and Dietary Therapies to Reduce Brain Damage”, 43<sup>rd</sup> Annual Winter Conference on Brain Research, Breckenridge, Colorado, January 23-30, 2010.
- 2006 Chair, “Fetal Alcohol and Intervention: To Live and To Die For?”, International Society for Biomedical Research on Alcoholism (ISBRA), World Congress, (symposium)
- 2000 Symposium organizer and Chair, “Neuroplasticity after Developmental Exposure to Alcohol”, Research Society on Alcoholism (RSoA), 23rd Annual Meeting, Denver, Colorado
- 1999 Chair, “From Jogging to High Wire Acrobatics: Brain Adaptation in Response to Exercise and Motor Skill Learning” (panel), Winter Conference on Brain Research (WCBR), Snowmass Village, Colorado

### TEACHING

#### University of Delaware:

- Spring 2015:** Introduction to Neuroscience Honors (NSCI320-080); Seminar *Neuroplasticity* (NSCI633)
- Fall 2015:** Introduction to Neuroscience (NSCI320-010); Integrative Neuroscience I (NSCI629)
- Spring 2015:** Advanced Research in Neuroscience (NSCI368)
- Fall 2014:** Advanced Neuroanatomy (*new course development*) (NSCI626-010 and NSCI626-011); Research in Neuroscience (NSCI368)
- Spring 2014:** Introduction to Neuroscience Honors (NSCI320-080); Brain and Behavior (PSYC314)
- Fall 2013:** Sabbatical leave
- Spring 2013:** Introduction to Neuroscience (PSYC320)
- Fall 2012:** Brain and Behavior (PSYC314); Integrative Neuroscience I (PSYC667)
- Spring 2012:** Seminar *Neuroplasticity* (PSYC 467/667)
- Fall 2011:** Brain and Behavior (PSYC314)
- Spring 2011:** Brain and Behavior (PSYC314); Introduction to Neuroscience (PSYC320)

- Fall 2010:** Brain and Behavior (PSYC314); Integrative Neuroscience I (PSYC667)  
**Spring 2010:** Seminar *Neuroplasticity* (PSYC 467/667) – *new seminar*  
**Fall 2009:** Physiological Psychology (PSYC318);  
**Summer 2009:** Developmental Neurobiology (course taught in the University of Otago, New Zealand)  
**Spring 2009:** Introduction to Neuroscience (PSYC320, honors section)  
**Fall 2008:** Physiological Psychology (PSYC318); Integrative Neuroscience I (PSYC667)  
**Spring 2008:** Physiological Psychology (PSYC318)  
**Fall 2007:** Biological Bases of Behavior (PSYC316)  
**Spring 2007:** Biological Bases of Behavior (PSYC316)  
**Fall 2006:** *no teaching (research sabbatical)*  
**Spring 2006:** Biological Bases of Behavior (PSYC316)  
**Fall 2005:** Integrative Neuroscience I (PSYC667/867) – *new course development*  
**Spring 2005:** Biological Bases of Behavior (PSYC367)  
**SUNY-Binghamton:**  
**Spring 2004:** Physiological Psychology (PSYC362)  
**Fall 2003:** Neurochemistry (PSYC573)  
**Spring 2003:** Neuronal and Cellular Basis of Brain Plasticity, Learning and Memory (PSYC609)  
**Fall 2002:** Physiological Psychology (PSYC362)

### SYNERGISTIC ACTIVITIES

#### Institutional Service

- Chair of the faculty (tenure-track) search committee (2011)  
 Member of the Department Chair search committee, Psychology department (2010, 2013)  
 IACUC, member since September 2010  
 Faculty Search Committee for Behavioral Neuroscience position (2006, 2008, 2009)  
 Ph.D. prelim and thesis committees (6)  
 Health Science Advisory and Evaluation Committee, Member, 2004 -present  
 International Travel Award Committee, member – Spring 2005

#### Departmental Service

- Neuroscience major faculty advising director, Fall 2008 – present  
 Mentor of a tenure-track Assistant Professor, Dr. Jackie Schwarz, 2013 - present

#### Service to the Scientific Community outside the University of Delaware

- NSF ad-hoc grant reviewer (2007, 2010, 2013, 2015)  
 NIH (NIAAA) AA-4 1 Neuroscience Review Subcommittee (*ad hoc reviewer*) (2010, 2011, 2013, 2014, 2015)  
 NIH (NIMH) ZMH1 ERB-L Review panel (*ad hoc reviewer*) (2010)  
 Reviewer for the Netherlands Organization for Scientific Research (NOW)(Earth and Life Sciences) (2008)  
 Peer reviewer for *Acta Neurobiologiae Experimentalis*, *Alcohol*, *Alcoholism: Clinical and Experimental Research(ACER)*, *Behavioral Neuroscience*, *Biological Psychiatry*, *Brain*, *Brain Research*, *European Journal of Neuroscience*, *Frontiers in Behavioral Neuroscience*, *International Journal of Developmental Neuroscience*, *International Journal of Neuropsychopharmacology*, *Neurological Sciences*, *Neuropsychologia*, *Neuroscience*, *Neurobiology of Aging*, *NeuroReport*, *PLOS One*, *Proceedings of the National Academy of Science (PNAS)*, *Synapse*

#### Research Supervision

- Doctoral students (3), undergraduate students (20), Senior Thesis research (7)  
 Gillian Hamilton (2007-2012) received her PhD on October 8, 2012

### MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Society for Neuroscience  
 International Brain Research Organization  
 Neurobehavioral Teratology Society  
 Research Society on Alcoholism  
 Electron Microscopy Society of America  
 Women in Neuroscience  
 Faculty for Undergraduate Neuroscience



**CURRENT AND PENDING SUPPORT**

1. Project/Proposal Title: **“FAS Model: Structure and Function of Prefrontal Cortex”**  
 Source of Support: COBRE (P20) Center of Biomedical Research Excellence  
 Total Award Amount: \$1,223,998  
 Starting Date: 09/26/2012  
 Ending Date: 08/30/2017  
 Support Type: Active

**RECENT SUPPORT**

1. Project/Proposal Title: **“Rehabilitation for developmental alcohol exposure: Can neurotrophic factors help?”**  
 Source of Support: UDRF Research Grant  
 Total Award Amount: \$25,000  
 Starting Date: 06/01/2005  
 Ending Date: 12/31/2006  
 Support Type: Completed
2. Project/Proposal Title: **“Therapeutic Motor Training and Fetal Alcohol Effects”** (with professors William T. Greenough and Charles R. Goodlett)  
 Source of Support: NIAAA  
 Total Award Amount: \$383,983  
 Starting Date: 07/01/2004  
 Ending Date: 03/31/2008  
 Support Type: Completed
3. Project/Proposal Title: **“Effect of Exercise and Environment on Adult Neurogenesis”**  
 Source of Support: Undergraduate Research Fellowship (Cesar Rocha)  
 Total Award Amount: \$3,000  
 Starting Date: 06/01/2007  
 Ending Date: 08/31/2007  
 Support Type: Completed
4. Project/Proposal Title: **“Exercise and Social Environment Effects on Adult Neurogenesis in the Dentate Gyrus of the Hippocampus”**  
 Source of Support: Undergraduate Research Fellowship (Stephen St. Cyr)  
 Total Award Amount: \$1,500  
 Starting Date: 06/01/2008  
 Ending Date: 08/31/2008  
 Support Type: Completed
5. Project/Proposal Title: **“A Single Binge Ethanol Exposure on Postnatal Day Four Produces Significant Reduction of Hippocampal CA1 and CA3 Neurons in Adolescent Rats”**  
 Source of Support: Undergraduate Research Fellowship (Courtney Schnell)  
 Total Award Amount: \$3,000  
 Starting Date: 06/01/2008  
 Ending Date: 08/31/2008  
 Support Type: Completed
6. Project/Proposal Title: **“Therapeutic Motor Training and Fetal Alcohol Effects”** (PI - William T. Greenough)  
 Source of Support: NIAAA (under ARRA 2-year support, no cost extension)  
 Total Award Amount: \$613,095  
 Starting Date: 07/01/2009  
 Ending Date: 06/30/2012  
 Support Type: Completed