

CURRICULUM VITAE
ANNA Y. KLINTSOVA

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Permanent Resident of the U.S.A.

CURRENT POSITION:

Since

September, 2004 ASSISTANT PROFESSOR, Psychology Department, University of Delaware

EDUCATION:

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

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

PROFESSIONAL EMPLOYMENT AND EXPERIENCE:

September 2002 - ASSISTANT PROFESSOR, Department of Psychology,
 August 2004 SUNY Binghamton University

- January 1995 - August 2002 RESEARCH ASSISTANT PROFESSOR, Associate Director of the Fetal Alcohol Study Group, Laboratory of Dr. W.T. Greenough, University of Illinois, Beckman Institute
- August 1995 - August 1999 MANAGER OF ELECTRON MICROSCOPY SUITE (25% time) Visualization Facility, Beckman Institute of Advanced Science and Technology, University of Illinois in Urbana-Champaign
- August 1993 - December 1994 RESEARCH ASSOCIATE IN NEUROBIOLOGY Laboratory of Dr. Peter C. Brunjes, Department of Psychology, University of Virginia
- January 1993- August 1993 POSTDOCTORAL RESEARCH FELLOW
(International Brain Research Organization Fellowship)
Lab. Dr. William B Levy & Dr. Nancy L Desmond
Department of Neurosurgery, University of Virginia
- March, 1985- January, 1993 RESEARCH ASSOCIATE
Laboratory of Clinical Neuromorphology, National Research Center of Mental Health, Russian Academy of Medical Sciences, 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

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 12th 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

CURRENT GRANTS AND FUNDING

August 2002 - Co-PI of the NIAAA R01 grant “Therapeutic Motor Training and Fetal Alcohol Effects” (\$1,250,000 direct cost; \$590,400 subcontract)
 March 2008

June 2005 - University of Delaware Research Foundation Grant
 December 2006 “Rehabilitation for developmental alcohol exposure: Can neurotrophic factors help?” (\$25,000/year)

GRANTS SUBMITTED AND UNDER REVIEW

October 2006 “Prefrontal Cortex Plasticity in Fetal Alcohol Syndrome”, R21 grant submitted to NIAAA, \$275,000 direct cost

October 2006 “Effect of Chronic Typical and Atypical Neuroleptics on Gliogenesis in Adult Brain”, R03 grant submitted to NIMH, \$151,000 direct cost

TEACHING EXPERIENCE

- Physiological Psychology 300 (undergraduate) level course
- Graduate level course “Integrative neuroscience” (played major role in the development of this new course)
- Psychology 400 (graduate) level course: “Cellular Mechanisms of Developmental and Adult Brain Plasticity, Learning and Memory”
- Graduate level course in Neurochemistry and Neurophysiology
- Invited lectures in the course “Theory and Practice of Biological Electron Microscopy”
- Continuous teaching and supervising independent student research (five students graduated with High Distinction, nine - with Distinction; currently two students working on Honors projects)

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

REVIEWER FOR JOURNALS

Alcoholism: Clinical and Experimental Research
 Biological Psychiatry
 Brain Research
 Neuropsychologia
 Neuroscience
 Neurobiology of Aging
 Proceedings of the National Academy of Science (PNAS)
 Synapse

INVITED TALKS

- 1997 Research Society on Alcoholism Meeting, San Francisco, CA
- 1998 NeuroBehavioral Teratology Society Meeting, San Diego, CA
- 1999 Winter Conference on Brain Research, Aspen, CO
- 1999 Western Michigan University, Kalamazoo, MI
- 1999 Oregon Health Sciences University, Portland, OR
- 2000 Research Society on Alcoholism Annual Meeting, session organizer and presenter
- 2000 University of Otago, Dunedin, New Zealand
- 2001 25th Annual Conference on Neurobiology of Learning and Memory, Park City, UT
- 2002 Neurofest, Annual Meeting of Central New York Neuroscience Programs, Geneva, NY
- 2004 12th ISBRA Congress, Mannheim, Germany (symposium speaker)
- 2005 Department of Neurobiologie des Processus Adaptatifs, Universite Paris VI Pierre et Marie Curie (invited lecture)
- 2006 Resilience in Children, New York Academy of Sciences Meeting, Arlington, VA
- 2006 Department of Anatomy, University of Otago, Dunedin, New Zealand, November
- 2007 American Physical Therapy Association Meeting, Pediatric Section, Boston, MA, February 14

ORGANIZED SYMPOSIA

- 1999 Winter Conference on Brain Research, Snowmass Village, Colorado: "From Jogging to High Wire crobatics: Brain Adaptation in Response to Exercise and Motor Skill Learning" (panel)
- 2000 Research Society on Alcoholism, 23rd Annual Meeting, Denver, Colorado: "Neuroplasticity after Developmental Exposure to Alcohol" (symposium)
- 2006 International Society for Biomedical Research on Alcoholism, World Congress, September 2006: "Fetal Alcohol and Intervention: To Live and To Die For?" (symposium - organizer and speaker)
- 2006 International Society for Biomedical Research on Alcoholism, World Congress, September 2006: "Contribution of Different Synaptic Types in

Cerebellum and Motor Cortex to Plasticity after Neonatal Alcohol Exposure and Intervention” (symposium - invited speaker)

PUBLICATIONS

1. Uranova NA, Vikhрева OV, Zimina IS, Rakhmanova VI, **Klintsova Alu**, Black J, Greenough WT, Orlovskaja DD (2007) Abnormal patterns of cortical synaptic connectivity in schizophrenia. *Vestn Ross Akad Med Nauk*. 3:8-14 (in Russian).
2. **A.Y.Klintsova**; L.H. Calizo; J.L. Helfer; W.K. Dong; C.R. Goodlett; W.T. Greenough. (2007) Persistent impairment of hippocampal neurogenesis in young adult rats following early postnatal alcohol exposure. *Alcoholism: Clinical and Experimental Research*, 31(12): xxx.
3. Savage LM, Roland J, **Klintsova A.** (2007) Selective septohippocampal - but not forebrain amygdalar - cholinergic dysfunction in diencephalic amnesia. *Brain Research*, 1139:210-219.
4. 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.
5. 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.
6. **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
7. 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.
8. 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.

9. 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.
10. 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.
11. 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.
12. **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.
13. 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.
14. 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.
15. 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, 1105-1165.
16. **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.
17. **A.Y.Klintsova**, W.T.Greenough. (1999) Synaptic plasticity in cortical systems. *Current Opinions in Neurobiology*, v.9, p.203-208.
18. T.A. Jones, N. Hawrylak, **A.Y. Klintsova**, W.T. Greenough. (1998) Brain Damage, Behavior, Rehabilitation, Recovery, and Brain Plasticity. *Mental Retardation and Developmental Disabilities Research Reviews*, 4, 231-237.

19. A.Y. Klintsova, 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.
20. N.S. Waters, A.Y. Klintsova, T.C. Foster. (1997) Insensitivity of the hippocampus to environmental stimulation during postnatal development. *J. Neuroscience*, 17(20), p. 7967-7973
21. A.Y. Klintsova, 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.
22. I.J. Weiler, S.A. Irwin, A.Y. Klintsova, 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.
23. T.A. Jones, A.Y. Klintsova, 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.
24. Klintsova 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
25. Klintsova 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.
26. Philpot B.D., Klintsova A.Y., Brunjes P.C. (1995) Oligodendrocyte/Myelin-Immunoreactivity in the developing olfactory system. *Neuroscience*, v.67, 4, pp.1009-1019.
27. Uranova, N.A., Orlovskaya, D.D., Apel, K., Klintsova, 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.

28. Burbaeva, G.S., Androsova, L.V., **Klintsova, A.Yu.** (1988) The influence of Psychotropic Drugs on the Brain Tubulin. *J. of Neuropath. & Psychiat.*, v.88, 5 (in Russ.).
29. **Klintsova, 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.
30. Uranova, N.A., **Klintsova, 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.
31. **Klintsova, 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.
32. **Klintsova, 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.).
33. **Klintsova, 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.).
34. Uranova, N.A., and **Klintsova, A.Yu.** (1986) Ultrastructure of the synapses of Helix pomatia ganglions. *Arch. anat., histol. and embryol.*, v.5 (in Russ.)

SUBMITTED ARTICLES AND ARTICLES IN PREPARATION

Calizo LH, Dong WK, Greenough WT, Goodlett CR, **Klintsova AY**. Ethanol Exposure During the Third Trimester Equivalent Alters Cortical Cytogenesis in the Adult Rat (submitted).

Kodish I, , Otte S, Black J, **Klintsova AY**, Greenough WT, Uranova NA. Postmortem Golgi evidence for morphological reductions in pyramidal neuron connectivity in prefrontal and occipital cortices of patients with schizophrenia. (in preparation)

Klintsova AY. Plasticity of astrocyte processes accompanies synaptic changes in the cerebellar cortex of rats exposed to binge-like postnatal alcohol. *Glia* (in preparation)

Klintsova AY, Briones T, Napper RMA, Goodlett CR, Greenough WT. Effect of exercise and complex motor learning on plasticity of neurons in motor cortex after neonatal binge-like exposure to ethanol (in preparation).

BOOK CHAPTERS:

W. T. Greenough, J. E. Black, **A. Y. Klintsova**, 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.

Published Abstracts:

More than 50 published, complete list is available upon request.