

**Curriculum Vitae,
TETYANA [TANYA] DUKA**

Adjunct Research Assistant Professor, Department of Anthropology
George Washington University, Washington, DC, USA

RESEARCH INTERESTS

Neuroscience, Comparative Neurobiology, Parkinson's disease and Neurodegeneration
Neuroproteomics/Synaptomics, Brain Energy Metabolism

EDUCATION

2003 Ph.D. Biochemistry, National Taras Shevchenko University, Kiev, Ukraine
1995 M.Sc. Biophysics and Biochemistry, Department of Biochemistry, Dnepropetrovsk National University, Ukraine

POSTDOCTORAL TRAINING

2003-2005 Laboratory of Molecular Neurochemistry, Department of Biochemistry and Molecular & Cell Biology, Georgetown University Washington, DC, USA
2009-2013 Laboratory for Evolutionary Neuroanatomy, Department of Anthropology, George Washington University, Washington, DC, USA

EMPLOYMENT

Summer 1998 Visiting Ph.D. Scholar, Fakultät für Psychologie, AE Biopsychologie, Ruhr- University Bochum, Bochum, Germany
1999-2001 Research Scientist at the Central Research Laboratory, State Medical Academy, Dnepropetrovsk, Ukraine
2001-2003 Visiting Researcher at the Laboratory of Clinical Research, Singapore General Hospital
2005-2008 Visiting Researcher at the Department of Biochemistry and Molecular & Cell Biology, Georgetown University, Washington, DC, USA
2013-2014 Staff Research Scientist at the Laboratory for Evolutionary Neuroanatomy, George Washington University, Washington, USA
03-214- present Adjunct Research Assistant Professor, Department of Anthropology George Washington University, Washington, USA

AFFILIATION

2009 -Present Research Associate, Center for the Advanced Study of Hominid Paleobiology, George Washington University, Washington, USA

HONORS / AWARDS

- 2014 invited speaker, the AAPA conference in Calgary, Alberta Canada
- 2013 invited speaker, the JB Johnston Club for Evolutionary Neuroscience annual meeting, San Diego, California, USA
- 2006 Georgetown University Postdoctoral Research Achievement Reward: 'Spotlight on a GU postdoc' by GUPDA [Georgetown University Postdoctoral Association]
- 2002 invited speaker, World Chinese Symposium on Neuroscience, Sichuan University, Chengdu, Sichuan Province, China
- 1999 The Federation of the Societies of Biochemistry and Molecular Biology training grant award to attend Practical Course "Electron Microscopy and Stereology in Molecular Cell Biology", Oslo, Norway
- 1999 Federation of European Neurosciences travel scholarship winner to attend the FENS Winter School "Nervous System Reaction to Neuronal Loss", Kitzbuehel, Austria
- 1999 Joint Meeting of the International Society for Neurochemistry and the European Society for Neurochemistry travel scholarship winner, Berlin, Germany
- 1998 Travel Award from the Swiss National Foundation for Scientific Research [7IP051224] to attend Summer School "Ecological Brain Research in Russia", Moscow, Russia
- 1997 Annual Meeting of European Behavioural and Neural Genetics Society travel scholarship winner, Orléans, France
- 1996 The Federation of the Societies of Biochemistry and Molecular Biology training grant award to attend Practical Course "Advanced Methods: DNA sequencing and Microinjection", Prague, Czech Republic

INVITED TALKS AT OTHER INSTITUTIONS

1. April 11, 2014 – The AAPA conference in Calgary, Alberta Canada: *Phylogenetic variation in subcellular distribution and isoenzyme composition of energy metabolism enzyme, lactate dehydrogenase, in primate brain evolution*
2. November 8, 2013 – The JB Johnston Club for Evolutionary Neuroscience annual meeting, San Diego, CA: *The interplay between synaptic reorganization, mitochondrial density, and expression of neuronal glucose transporter, GLUT3, in chimpanzee neocortical development*
3. April 15, 2009 – NIH Clinical Neurosciences, National Institute of Neurological Disorder and Stroke: *Alpha-synuclein contributes to GSK-3 β catalyzed tau phosphorylation in Parkinson's Disease models*
4. April 4, 2008 – Dept. of Pharmacology and Experimental Therapeutics, University of Maryland School of Medicine, Baltimore, MD : *Induction of the hyperphosphorylated form of Tau in the h- α -Syn overexpressor Tg mice upon Sub-chronic MPTP exposure*
5. February, 27 2008 – Dept. of Psychiatry, University of Pennsylvania Medical School, Philadelphia, PA: *Alpha-Synuclein Induces Hyperphosphorylation of Tau in the MPTP Model of Parkinsonism*
6. August 4, 2002 – World Chinese Symposium on Neuroscience, Sichuan University, Chengdu, China: *CNS neuronal growth inhibitory molecules and brain tumor*

OTHER ORAL PRESENTATIONS in reverse-chronological order:

1. March 29, 2012 – 17th Annual Research Day Symposium, GWU School of Medicine, Washington, DC: *Synaptosomal Lactate Dehydrogenase isoenzyme composition is shifted toward aerobic forms in primate brain evolution*
2. June 3, 2010 – NSF HOMINID Project Meeting, Wayne State University, Detroit, MI: *Phylogenetic alterations of LDH subcellular distribution in the primate cerebral cortex*
3. January 11, 2007 – Journal Club, Lombardi Comprehensive Cancer Center, Georgetown University, Washington, DC: *The dysregulation of Notch signaling is implicated in human cancer*
4. October 23, 2004 – Biochemistry Journal Club, Dept. of Biochemistry, Georgetown University, Washington, DC: *MPTP/MPP+ induce hyperphosphorylation of Tau in an alpha-synuclein dependent manner: a common pathophysiology for certain forms of AD and PD*
5. March 16, 2002 – The Inaugural National Neuroscience Institute of Singapore - National University of Singapore Neuroscience Symposium "Exploring the Brain": *Distinct Members of F3/contactin Family Interact Specifically with Notch and APP*

SELECTED PEER-REVIEWED PUBLICATIONS (25 to date)

1. Duka T, Collins Z, Anderson S, Raghanti MA, Ely JJ, Hof PR, Wildman DE, Grossman LI, Sherwood CC. Synaptosomal Lactate Dehydrogenase isoenzyme composition is shifted toward aerobic forms in primate brain evolution. *Brain, Behavior and Evolution* (2014) 83:216-30
2. Bianchi S, Stimpson CC, Duka T, Larsen M, William J, Collins Z, Bauernfeind AL, Schapiro SJ, Baze WB, Hopkins WD, Wildman DE, Lipovich L, Kuzawa CW, Jacobs B, Hof PR, Sherwood CC. Synaptogenesis and development of pyramidal neuron dendritic morphology in the chimpanzee neocortex. *Proc Natl Acad Sci U S A.* (2013)110:10395-10401
3. Miller DJ, Duka T, Stimpson CD, Schapiro SJ, Baze WB, McArthur MJ, Fobbs AJ, Sousa AM, Sestan N, Wildman DE, Lipovich L, Kuzawa CW, Hof PR, Sherwood CC. Delayed cortical maturation during human development. *Proc Natl Acad Sci U S A.* (2012) 109:16480-16485
4. Sherwood CC, Duka T, Stimpson CD, Schenker NM, Garrison AR, Schapiro SJ, Baze WB, McArthur MJ, Erwin JM, Hof PR, Hopkins WD. Neocortical synaptophysin asymmetry and behavioral lateralization in chimpanzee (*Pan troglodytes*). *Eur J Neurosci.* (2010) 31:1456-1464
5. Duka T, Duka V, Joyce JN, Sidhu A. The effect of alpha-synuclein on GSK-3 beta – catalyzed Tau phosphorylation in Parkinson's disease models. *FASEB J.* (2009) 23:2820-2830
6. Duka T, Rusnak M, Drolet RE, Duka V, Wersinger C, Goudreau JL and Sidhu A. Alpha-synuclein induce hyperphosphorylation of Tau in the MPTP model of Parkinsonism. *FASEB J.* (2006) 20: 2302-2312

SELECTED CONFERENCE PRESENTATION (35 to date)

1. Duka T, Collins Z, Anderson SM, Raghanti MA, Ely JJ, Hof PR, Wildman DE, Grossman LI, Sherwood CC. Intracellular distributions of Lactate Dehydrogenase isoenzymes in primate forebrain (2016) Abstract Viewer/Itinerary Planner. San Diego, CA: Society for Neuroscience
2. Duka T, Baker J , Collins Z, Anderson SM, Raghanti MA, Ely JJ, Hof PR, Wildman DE, Grossman LI, Sherwood CC. AMPA receptor GluR2 subunit expression level is upregulated in synapses of the cerebral cortex across primates. (2014) Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience
3. Duka T, Collins Z, Anderson SM, Raghanti MA, Ely JJ, Hof PR, Wildman DE, Grossman LI, Sherwood CC. Synaptosomal LDH isoenzyme pattern in primate brain evolution: a comparative study between neocortex and striatum. (2013) Abstract Viewer/Itinerary Planner. San Diego, CA: Society for Neuroscience
4. Duka T, Collins Z, Goldston J, Baker J, Grossman LI, Wildman DE, Baze WB, Hof PR, Sherwood CC. Postnatal developmental changes in excitatory and inhibitory postsynaptic proteins content and the ratio of excitatory-to-inhibitory synapses in chimpanzee cerebral cortex. (2012) Abstract Viewer/Itinerary Planner. New Orleans, LA: Society for Neuroscience
5. Duka T, Collins Z, Grossman L, Uddin M, Wildman DE, Goodman M, Schapiro SJ, McArthur MJ, Baze WB, Hof PR, Sherwood CC. The interplay between synaptic reorganization, mitochondrial density and expression of neuronal glucose transporter, GLUT3, in chimpanzee neocortical development. (2011) Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience
6. Duka T, Papper Z, Stimpson CD, Anderson S, Raghanti M, Wildman DE and Sherwood CC. Phylogenetic variation in the methylation of lactate dehydrogenase LDHA and LDHB promoters and isoenzyme expression patterns in the primate cerebral cortex. (2010) Abstract Viewer/Itinerary Planner. San Diego, CA: *Society for Neuroscience*
7. Duka T, Duka V, Oaks A, Haile JG and Sidhu A. Dysregulation of tau phosphorylation /dephosphorylation in the rotenone model of Parkinson's disease. (2009) Abstract Viewer/Itinerary Planner. Chicago, Ill: *Society for Neuroscience*
8. Duka T, Duka V, Joyce JN and Sidhu A. The role of alpha-synuclein on p-GSK-3 β -catalyzed tau hyper-phosphorylation in PD. (2008) Abstract Viewer/Itinerary Planner. Washington, DC: *Society for Neuroscience*
9. Duka T, Rusnak M, Duka V, Joyce JN and Sidhu A. Induction of the hyperphosphorylated form of Tau in the h- α -Syn overexpressor Tg mice upon Sub-chronic MPTP exposure. (2006) Abstract Viewer/Itinerary Planner. Atlanta, GA: *Society for Neuroscience*
10. Duka T, Drolet RE, Rusnak M, Goudreau JL, Sidhu A. MPTP/MPP+ induce hyperphosphorylation of *Tau* in an alpha-synuclein dependent manner: a common pathophysiology for certain forms of AD and PD. (2005) Abstract Viewer/Itinerary Planner. Washington, DC: *Society for Neuroscience*

MEMBERSHIP IN PROFESSIONAL SOCIETIES

1997-1999 The International Behavioural and Neural Genetics Society, student member
1996-1999 Federation of European Neuroscience Societies (FENS), student member
1996-1999 Federation of European Biochemistry Societies (FEBS), student member
2007-2008 The Neurotoxicity Society, member
2009-present The American Association of Physical Anthropologists, member
2001- present The Society for Neuroscience, member
2013- present The J. B. Johnston Club for Evolutionary Neuroscience, member
2012- present The American Society for Neurochemistry, member
2012- present The International Society for Neurochemistry, member