

**Alexander Suvorov, PhD**

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**Professional Experience**

2013-present Assistant Professor in Environmental Health Sciences

*Department of Environmental Health Science, School of Public Health and Health Sciences, University of Massachusetts, Amherst*

- Teaching PUBHLTH 494: Public Health Capstone Course (2013 fall) and PUBHLTH 666: Environmental and Occupational Toxicology (2014 spring, 2015 spring);
- Research of molecular mechanisms of tissues reprogramming by developmental exposures to environmental endocrine disruptors.
- Member of the SPHHS Research Committee.
- Environmental Health & Lab Safety coordinator for the Department of Public Health.

2010-2013 Senior Postdoctoral Research Associate in Molecular Toxicology

*Department of Biology, Boston University, Boston, USA.*

*Supervisor: Dr. David J. Waxman*

- Analysis of epigenetic regulation of sex-specific genes in mouse liver by growth hormone;
- Analysis of reprogramming of histone methylation profile in mice reproductive tissues by *in utero* exposure to xenoestrogen bisphenol A;
- Genomic screening of molecular pathways altered in mice reproductive tissues by *in utero* exposure to xenoestrogen bisphenol A;
- Genomic analysis of gene expression profile changes in mouse uterus throughout estrus cycle;
- Supervision of graduate students: development of instruction materials, assignment formulation, research methods teaching, consulting, evaluation of progress;
- Popularization of science in the framework of Biology Inquiry & Outreach with Boston University Graduate Students Program for High School Students;
- Presentation of research results at local and international meetings, preparation of grant applications, reports and papers for peer review journals.

2007-2010 Postdoctoral Fellow in Environmental Toxicology

*Département Obstétrique Gynécologie, Université de Sherbrooke, Sherbrooke, Canada*

*Supervisor: Dr. Larissa Takser*

- Genomic screening of molecular pathways affected in liver of rat offspring by low-dose perinatal exposure to 2,2',4,4'-Tetrabromodiphenyl ether (BDE-47);
- Analysis of neuro-developmental and endocrine effects of perinatal exposure to BDE-47 in rats: anchoring behavioral endpoints in altered molecular pathways;
- *In vitro* analysis of BDE-47 interaction with thyroid receptor;
- Developmental toxicity of cyanobacterial toxins (microcystin-LR, cylindrospermopsin, anatoxin A) in rats exposed to recommended guideline doses for drinking water;
- Historical review of literature data on PCB (polychlorinated biphenyls) and PBDE (polybrominated diphenyl ethers) toxicity to highlight generic shortages in experimental design that slow down data accumulation for risk assessment;
- Supervision of graduate students: development of instruction materials, assignment formulation, research methods teaching, consulting, evaluation of progress;
- Popularization of science: preparation of materials for newspapers and magazines;
- Presentation of research results at local and international meetings, preparation of grant applications, reports and papers for peer review journals.

2003-2006      Habilitation  
*Institute of Animal Ecology and Evolution of the Russian Academy of Sciences, Moscow.*  
*Advisers: Dr. Anatoly A. Schileyko, and Dr. Bella R. Striganova*

- Study of macro-phylogenetic trends in evolution of complex adaptations in pulmonate mollusks;
- Organized and conducted field research, laboratory experiments, managed invertebrate collection;
- Supervision of graduate students: development of instruction materials, assignment formulation, research methods teaching, consulting, evaluation of progress;
- Popularization of science: participation in educational documentaries;
- Presentation of research results at local and international meetings, preparation of reports and papers for peer review journals.

1995-2003      Assistant/Associate Professor  
*Department of Biology, Ryazan University, Russia*

- Teaching graduate and undergraduate courses: Introductory Biology, Molecular Biology, Genetics, Physiology and Anatomy, and Environmental Science;
- Study of morphology, ecology, fauna, taxonomy, evolution and conservation of pulmonate mollusks;
- Development of curriculum for pre-service teachers training;
- Development of lecture courses, laboratory assignments, evaluation strategy;
- Supervision of graduate and undergraduate teaching and research projects;
- Research grants acquisition, laboratory management;
- Lead Field Studies Council of the Biology Faculty;
- Member of the Departmental Curriculum Review Committee;
- Member of Scientific Council of the Biology Faculty.

1991-1994      Post-graduate Student  
*Institute of Animal Ecology and Evolution of the Russian Academy of Sciences, Moscow*  
*Supervisor: Dr. Anatoly A. Schileyko*

- Study of morphology, ecology, and evolution of pulmonate mollusks;
- Supervision of undergraduate students.

### **Education**

2010-2013      Senior Postdoctoral Research Associate, Boston University (Boston, USA)  
 2007-2010      Postdoctoral Fellow, Université de Sherbrooke (Sherbrooke, Canada)  
 2003-2006      Doctor of Science in Biology, Ecology and Evolution Institute of the Russian Academy of Sciences (Moscow, Russia)  
 1991-1994      Ph.D. in Biology, Ecology and Evolution Institute of the Russian Academy of Sciences (Moscow, Russia)  
 1985-1990      Bachelor & M.Sc. in Biology, Moscow State Pedagogical University (Moscow, Russia)

### **Related Teaching Experience**

- Member of retreat/recruiting committee for the Molecular and Cellular Biology Annual Retreat, 2015
- Judge at poster session of Molecular and Cellular Biology Annual Retreat, 2015
- Judge at poster session of Molecular and Cellular Biology Annual Retreat, 2014
- Consultant at the course Writing in Biology, instructor Steven Brewer, fall 2014
- Member of Selection Committee of the Annual Regional Youth Research Conference, “Human and Environment”, 2002, 2003, 2005.
- Judge in ecology and zoology sections at the annual scientific competition of the Youth Science Fair of the Ryazan region, 1998-2005.
- Organizer and leader of the Ryazan Zoological Workshop, 1996-2002.
- Research Advisor in Youth Center for Environmental Studies, 1992-2001.
- Research Tutor in yearly Summer Youth Ecological Camp, 1994-2000.
- Invited lecturer, Ryazan Institute of Advanced Studies (Certification courses for biology teachers): Environmental Toxicology, 1995-2003, Ecology, 1999-2005, Methodology of field studies, 2003.

- Invited lecturer for distance-learning courses, Moscow State University of Culture and Arts: Introduction to Scientific Method for Humanists, 1995, 1999, 2003.
- Invited lecturer, St.-Petersburg University of Management and Economics: Intro to Environmental Health and Safety, 2002, Introduction to Scientific Method for Humanists, 2005.

### Community Service and Consulting

- Prepare risk assessment of 9 occupational reproductive toxins for Institute for Research in Occupational Health and Safety (IRSST), Québec, Canada, 2010-2011.
- Review/edit the book “Identifying Land Snails and Slugs in Canada, Introduced Species and Native Genera”, Canadian Food Inspection Agency, 2010.
- Led interdisciplinary group for the development and application of technology for detoxification of the Ryazan Tannery wastewater (awarded silver Utkin medal for scientific innovation and technology transfer), 2001-2006.
- Assessment of conservation status for 11 species of terrestrial Pulmonata (Mollusca) for International Union for Conservation of Nature (IUCN) Red Data Book, 2008-2009.
- Biodiversity inventory of the Ritza Lake National Park, Abkhazia, 2001.
- Led a project Red Data Book of Ryazan region, author of the chapter “Molluscs”, 1997-2001.
- Biodiversity inventory of the Altajsky State Nature Biosphere Reserve, 2000.
- Review of conservation status of molluscs on the territory of 15 countries (former USSR) in a framework of IUCN project “Action Plan for the Conservation of Land and Freshwater Molluscs”, 1998.

### Journal Review (*ad hoc*)

Ecotoxicology and Environmental Safety  
 Journal of Applied Toxicology  
 Journal of Toxicology  
 Basic and Clinical Pharmacology and Toxicology  
 Cell Biology and Toxicology  
 Investigational New Drugs  
 Neurotoxicology and Teratology  
 Toxicology

### Professional Affiliation

- Society of Toxicology of Canada
- American Association for the Advancement of Science
- Member of expert database of European Food Safety Authority (EFSA)
- Massachusetts Society of Professors
- National Education Association
- Massachusetts Teachers Association
- University of Massachusetts Center for Clinical and Translational Science
- University of Massachusetts Institute of Computational Biology, Bioinformatics and Biostatistics

### Publications

- \_\_\_\_ Panchenko M., Mpanga R., **Suvorov A.**, Perinatal Exposure to Polybrominated Diphenyl Ethers Permanently Reprograms mTOR Activity in Rodent Tissues. In process.
- \_\_\_\_ **Suvorov A.**, Waxman D.J., Early Programming of Uterine Tissue by Bisphenol A: Critical Evaluation of Evidence from Animal Exposure Studies. In process.
- \_\_\_\_ Heindel et al. Parma Consensus Statement on Metabolic Disruptors. In process.
- \_\_\_\_ Kim B., Colon E., Chawla S., Vandenberg L.N., **Suvorov A.** Endocrine Disruptors Alter Social Behaviors and Indirectly Influence Social Hierarchies *via* Changes in Body Weight. *PLOS ONE*. Submitted.
- 2015** Catanese M.C., **Suvorov A.**, Vandenberg L.N. 2015. Beyond a means of exposure: a new view of the mother in toxicology research. *Toxicology Research*, DOI: 10.1039/C4TX00119B.

- 2012 Stanley K.A., **Suvorov A.**, Connerney J., Waxman D.J. Gene Expression Regulation in Mouse Uterus in Proestrus and Estrus. *Biology of Reproduction*, 89(1):13..
- 2011 **Suvorov A.**, Takser L. 2011. Delayed Frontal Lobes Transcriptome Response to Perinatal Exposure to BDE-47 in Rats. *Journal of Applied Toxicology*, 31(5):477-483.
- 2010 **Suvorov A.**, Bissonnette C., Takser L., Langlois M.-F. 2010. Does 2,2',4,4'-tetrabromodiphenyl Ether Interact Directly with Thyroid Hormone Receptors? *Journal of Applied Toxicology*, 31(2):179-84.
- 2010 **Suvorov A.**, Takser L. 2010. Global Gene Expression Analysis in the Livers of Rat Offspring Perinatally Exposed to Low Doses of 2,2',4,4'-tetrabromodiphenyl ether. *Environmental Health Perspectives*, 118(1):97-102.
- 2010 Abdelouahab N., Huel G., **Suvorov A.**, Foliguet B., Thiebaugeorges O., Debotte G., Sahuquillo J., Charles M.-A., Takser L. 2010. Monoamine oxidase activity in human placenta in relation to blood manganese, lead, cadmium, and hair mercury at delivery. *Neurotoxicology and Teratology*, 32(2):256-61.
- 2009 **Suvorov A.**, Battista M.-C., Takser L. 2009. Perinatal Exposure to Low-Dose 2,2',4,4'-Tetrabromodiphenyl Ether affects Growth in Rat Offspring: what is the role of IGF-1? *Toxicology*, 260:126-131.
- 2009 Abdelouahab N., **Suvorov A.**, Pasquier J-Ch., Praud, J-P., Langlois M-F., Takser L. 2009. Thyroid disruption by low dose of flame retardant BDE-47 in prenatally exposed lambs. *Neonatology*, 24;96(2):120-124.
- 2008 **Suvorov A.**, Takser L. 2008. Facing the Challenge of Data Transfer from Animal Models to Humans: the Case of Persistent Organohalogenes. *Environ Health*. 7(1):58.
- 2008 **Suvorov A.**, Girard S, Lachapelle S., Abdelouahab N., Sebire G., Takser L. 2008. Low-Dose BDE-47 and Hyperactivity in Rat Offspring. *Neonatology*, 95(3):203-209.
- 2006 **Suvorov A.N.** 2006. *Pentadentula balandini* gen. et sp. nov. (Pulmonata Enidae) from W Transcaucasia. *Ruthenica*, 16(1-2): 93-96.
- 2003 **Suvorov A.N.** 2003. A new species and genus of carnivorous slugs (Pulmonata Trigonochlamydidae) from West Transcaucasia. *Ruthenica*, 13(2): 149-152.
- 2003 **Suvorov A.N.** 2003. The Role of Positive Feedback in Formation of Macroevolutionary Trends by the Example of Adaptation of Terrestrial Pulmonates (Mollusca, Gastropoda) to Moist Litter. *Entomological Review*, Vol 83, Suppl. 2.
- 2003 **Suvorov A.N.** 2003. Prospects of Development of Synthetic Theory of Macroevolution. *Bulletin of Ryazan State University of Education*, 1(9): 130-140.
- 2002 **Suvorov A.N.** 2002. A new subgenus and three new species of the genus *Acrotoma* O. Boettger, 1881 (Pulmonata Clausiliidae) from western Transcaucasia. *Ruthenica*, 12(2): 161-166.
- 2002 **Suvorov A.N.** 2002. Prospects of studies of Morphological Variability of land Pulmonate Snails. *Biology Bulletin of Russian Academy of Sciences*, Vol 29, No 5.
- 2001 Zhiltsov S.S., **Suvorov A.N.** 2001. Micromorphology of the distal portion of sexual apparatus of *Aegopis verticillus* (Gastropoda, Pulmonata, Zonitidae) and phylogenetic relations of the genus *Aegopis*. *Ruthenica*, 11(2): 187-196.
- 2001 Taniushkin A.I., **Suvorov A.N.** 2001. Micromorphology and functions of male sexual ducts in the subfamily Trichiinae (Pulmonata Hygromiidae). *Ruthenica*, 11(1): 15-24.
- 2001 **Suvorov A.N.** 2001. Fauna of terrestrial Pulmonata of the surroundings of Teletskoe Lake (Altay Natural Reserve). Proceedings of the conference "Human Impact on the Nature of Protected Territories", Ryazan: 249-253.
- 2001 **Suvorov A.N.** 2001. Principle of complementarity and modern theoretical biology. Proceedings of Zoological Society of Ryazan State University of Education. Ryazan, 84-91.
- 2001 **Suvorov A.N.** 2001. Mollusca. In: Red Data Book of Ryazan Region, 185-193. Uzorochie, Ryazan.
- 2000 Zhiltsov S.S., Taniushkin A.I., **Suvorov A.N.** 2000. Terrestrial molluscs of Ryazan region. Institute of Advanced Training, Ryazan.
- 2000 **Suvorov A.N.** 2000. Functional morphology of pneumostomal area in terrestrial Pulmonata (Gastropoda). *Ruthenica*, 10(2): 89-104.
- 1999 Taniushkin A.I., Zhiltsov S.S., **Suvorov A.N.** 1999. A case of occurrence of two darts in upper stylophore in *Xeropicta krynickii* (Pulmonata Hygromiidae). *Ruthenica*, 9(2): 163 – 164.

- 1999** Suvorov A.N., Lanzov V.I. 1999. Fauna and structure of associations of terrestrial molluscs of the Valley of Zolka Juzhnaya River. Proceedings of KBNC Russian Academy of Sciences, 3: 57 - 59.
- 1999** Suvorov A.N. 1999. Some mechanisms of adaptation to the wet microhabitats in higher Geophila (Mollusca, Pulmonata). Journal of general biology, 60(2): 177 – 188.
- 1999** Suvorov A.N. 1999. Functional Interrelations between Aperture Structures and Soft Organs in Lower Geophila. 2. Achatinina. Russian Journal of Zoology, 78(5): 528 – 538.
- 1999** Suvorov A.N. 1999. Functional Interrelations between Aperture Structures and Soft Organs in Lower Geophila. 1. Pupillina, Oleacinina. Russian Journal of Zoology, Vol 3, No 1.
- 1999** Suvorov A.N. 1999. The Conflict between Operative and Conservative Subsystems of Organism in the Evolution of Terrestrial Snails (Stylommatophora, Pulmonata). Russian Journal of Zoology, Vol 3, No 3, 1999.
- 1999** Suvorov A.N. 1999. On the nature of the Visceral Hump in Pulmonates (Gastropoda, Pulmonata). Russian Journal of Zoology, Vol 3, No 3.
- 1998** Suvorov A.N. 1998. Snails of one sixth of the world's dry land (the former USSR). Tentacle, 8: 5 – 7.
- 1996** Suvorov A.N. 1996. On the origin of pallial gonoduct in Pulmonata. Ruthenica, 6(1): 79.
- 1995** Suvorov A.N. 1995. *Arion lusitanicus* – new agricultural pest. Release Bulletin of Ryazan Center of Scientific-and-Technical information, N147-97, Series P.68.37.29.
- 1993** Suvorov A.N. 1993. Functional morphology of aperture in Pupillina suborder (Gastropoda Pulmonata). Ruthenica, 3(2): 141-152.
- 1991** Suvorov A.N., Schileyko A.A. 1991. Functional morphology of aperture armature in subfamily Lauriinae (Gastropoda, Orculidae) and questions of taxonomy of the group. Ruthenica, 1(1-2): 67-80.
- 1990** Suvorov A.N. 1990. Morpho-functional analyzes of closing apparatus of two clausiliidae species (Gastropoda Pulmonata). Russian Journal of Zoology, 70(7): 21-32.

#### Recent Invited Presentations

- 2014** Developmental Exposure to PBDE and Metabolism Reprogramming via mTOR Pathway. *International Workshop in Genomics and Epigenomics. Institute of General Genetics, Moscow, Russia.*
- 2014** Snails, PBDE and mTOR. *Total Science Tuesday, UMass.*
- 2014** Endocrine disruption by PBDE: Do we find what we look for? *Hormones for Breakfast, UMass.*
- 2014** Epigenetic Programming of Tissues by Hormones and Hormone-Like Substances. *Molecular and Cellular Biology Colloquium, UMass.*
- 2013** Neuro-Behavioral Effects of Environmental Endocrine Disruptors across Levels of Life Organization. *Biology Talent Advanced Program (BioTAP), UMass*
- 2013** Epigenetic programming of tissues by hormones and hormone-like substances. *Woods Hole Oceanographic Institution, USA*
- 2012** Developmental Toxicity of Endocrine Disruptors: a Genomic and Epigenetic Approach. *Department of Public Health University of Massachusetts, Amherst, USA.*
- 2010** Anchoring Neurodevelopmental Effects of Low Dose Exposure to PBDE in Altered Molecular Pathways. *Biology Department, University of Massachusetts, Amherst, USA.*
- 2009** Low Dose Developmental Toxicity of 2,2',4,4'-Tetrabromodiphenyl Ether: from Health Effects to Underlying Molecular Mechanisms. *Department of Pharmacology & Therapeutics, McGill University, Montreal, Canada.*
- 2009** Global gene expression analysis in liver of rat offspring exposed perinatally to low dose of BDE-47. *3e journée Axe Mère-Enfant, Université de Sherbrooke, Canada*
- 2008** Data transfer from animal models to human studies in developmental toxicology: what is the challenge? Case of persistent organohalogenes. *International Symposium on Neurobehavioral Methods and Effects in Environmental and Occupational Health, San Jose, Costa Rica.*

#### Recent Conference Presentations

- 2015** ENDO, San-Diego, USA (*1 poster*).

- 2014** Perinatal Programming and Toxicity IV, Boston, USA (*1 poster*).  
**2014** Gordon research Conference: Environmental Endocrine Disruptors, Lucca, Italy (*1 poster*).  
**2013** ICB3 Annual meeting, Amhers, USA (*1 oral*).  
**2012** 44<sup>th</sup> Annual Symposium of The Society of Toxicology of Canada, Montreal, Canada (*1 poster*).  
**2012** Women's Reproductive Environmental Health Consortium, NIEHS, USA (*1 oral*).  
**2012** BPA Grantee Research Update and Coordination Meeting, NIEHS, USA (*1 poster*).  
**2011** 43<sup>rd</sup> Annual Symposium of The Society of Toxicology of Canada, Montreal, Canada (*1 oral*).  
**2011** 12<sup>th</sup> Annual Workshop on Brominated Flame Retardants, Boston, USA (*1 oral*).  
**2011** 93<sup>rd</sup> Annual Meeting of Endocrine Society, Boston, USA (*1 poster*).  
**2009** 11<sup>th</sup> Annual Workshop on Brominated Flame Retardants, Ottawa, Canada (*1 poster*).  
**2009** 3e journée Axe Mère-Enfant, Université de Sherbrooke, Canada (*1 invited*).  
**2008** 40<sup>th</sup> Annual Symposium of the Society of Toxicology of Canada, Montreal, Canada (*1 poster*).  
**2008** International Symposium on Neurobehavioral Methods and Effects in Environmental and Occupational Health, San Jose, Costa Rica (*1 invited, co-chair of mini-symposium*).  
**2008** 47<sup>th</sup> meeting of Canadian Society of Zoologists, Halifax, Canada (*1 oral*).  
**2008** 28<sup>th</sup> Annual Meeting of Society for Maternal-Fetal Medicine, Dallas, TX, USA (*1 poster*).  
**2007** The Sixth Princess Chulabhorn International Science Congress (PC-VI): The Interface of Chemistry and Biology in the "Omics" Era: Environment & Health and Drug Discovery, Bangkok, Thailand (*1 poster*).  
**2007** Congr s Armand-Frappier, Mont Orford, Canada (*1 oral, 2 posters*).  
**2007** XI International Congress of Toxicology, Montreal, Canada (*1 poster*).  
**2007** 46<sup>th</sup> meeting of Canadian Society of Zoologists, Montreal, Canada (*1 oral*).

#### Recent Meetings and Courses Attended

- 2013/15** Neuroscience & Behavior weekly seminar, *UMass, USA*  
**2013/15** Molecular & Cellular Biology weekly seminar, *UMass, USA*  
**2013/15** Organismic & Evolutionary Biology weekly seminar, *UMass, USA*  
**2010/12** Ecology, Behavior, and Evolution weekly seminar, *Boston University, USA*  
**2010/12** Systems and Integrative Biology weekly seminar, *Boston University, USA*  
**2011/12** Science Shaping our World (SHOW) seminar series, *Boston, USA*  
**2011** 3<sup>rd</sup> Annual Epigenetics World Congress, *Boston, USA*  
**2010** Applications in bioinformatics (BF527), *Boston University, USA*  
**2010** BPA Grantee Research Update and Coordination Meeting, *NIEHS, USA*  
**2010** 2<sup>nd</sup> Annual Epigenetics World Congress, *Boston, USA*  
**2009** The International Implications of the US National Research Council's Report on Toxicity Testing in the 21st Century: Challenges and Opportunities in Implementation, *Ottawa, Canada*  
**2009** *Rendez Vous* Prot omique: From Proteomics to Systems Biology, *Genome Quebec and McGill University Innovation Centre, Montreal, Canada*  
**2009** *Rendez-Vous* FlexArray2009 (quality control, visualization, and analysis of gene expression data with help of the FlexArray), *Genome Quebec and McGill University Innovation Centre, Montreal, Canada*  
**2008** Analyse de risques  cotoxicologiques (ENV 789), *Universit  de Sherbrooke, Canada*  
**2007** The Use of "Omics" in Human Health Risk Assessment, *Bangkok, Thailand*  
**2006** Hazardous Substances in Goods: Sources, Properties and EU Legislation, *BASF, Germany*

#### Recent Research Grants / Funding Received

- 2008-2010** L'Agence fran aise de s curit  sanitaire de l'environnement et du travail (Afsset)  
*Exposition p rinatale aux faibles doses de PBDE: cible surrenalienne et effets physiologiques (Co-PI)*  
**2003-2006** Russian Academy of Sciences  
*Research fellow: Evolution of Complex Adaptations of Terrestrial Pulmonata (PI)*