

Irma Gvilia, Ph.D.; D.Sci.

CURRICULUM VITAE

CONTACT INFORMATION:

irma.gvilia@iliauni.edu.ge

E-mails: igvilia@ucla.edu
Irma.Gvilia@va.gov

EDUCATION:

In 1991, awarded the degree of Biologist, Teacher of Biology and Chemistry - equivalent to an integrated bachelor's degree and master's degree in biology from a regionally accredited college or university in the United States. Diploma with Honors is issued by Tbilisi State University in Tbilisi, Georgia.

In 1995, awarded the degree of Candidate of Science in Biology - equivalent to a Doctor of Philosophy degree in biology from a regionally accredited college or university in the United States. Diploma of a Candidate of Science is issued by I. Beritashvili Institute of Physiology of the Georgian Academy of Sciences in Tbilisi, Georgia.

In 2006, awarded the degree of Doctor of Sciences* in Biology - equivalent to completion of post-doctoral research in biology from a regionally accredited college or university in the United States. Diploma of Doctor of Sciences is issued by the Institute of Molecular Biology and Biological Physics in Tbilisi, Georgia.

POSITIONS HELD:

04/2020 - present *Health Science Specialist/ Contracts and Grants Manager* at the *Veterans Affairs (VA) Greater Los Angeles Healthcare System, Medical Research*. Full-time, Series 0601, GS Grade 12. Current duties include: Providing leadership in the development of competitive research proposals in response to Research Funding Announcements (RFAs) for four VHA Services (Biomedical Laboratory Research and Development /BLRD, Clinical Science Research and Development /CSR, Cooperative Studies Program/CSP, and Rehabilitation Research and Development /RRD); Learning the research interests and strengths of the VA and UCLA (University of California Los Angeles) Principal Investigators (PIs) to identify the RFAs that align with their expertise and interest and identify potential collaboration areas for them; Overseeing important communications with program officers by all Services of the VHA Office of Research and Development/ ORD, etc.

06/2016 - present *Principal Investigator, Research Biologist* at the Department of Medical Research, VAGLAHS (*full-time/ 40 hours per week*). *Tasks performed* - identification of new areas of research for the laboratory, including the development and writing of research proposals/ grant applications; designing experiments within the framework of ongoing projects; experimental work and data analysis/statistics; preparing the publications and presentations; supervising research work of graduate students from UCLA, UCSD and CSUN.

- 05/2016 - 04/2020** *Biologist (VA Medical Research, full-time/ 40 hours per week: Series: 0401, GS Grade: 11).* Implementing experiments within the framework of ongoing research in the Department; ensuring the timely task completion at each phase of the projects; identifying issues (if any) during pilot studies and ensuring careful attention to the details of experimental set up in further experimental work; analyzing and interpreting data obtained. Writing manuscripts/publishing scientific papers in high impact peer-reviewed professional journals. Presenting research findings at national and international professional meetings (in a format of oral presentations and/or posters), organizing symposiums & workshops in the field. Identifying new research directions for the Lab, developing, and writing research proposals. Providing training/supervising research work of undergrad and graduate students from UCLA, UCSD, CSUN, and overseas; Providing reference materials to staff and project, carrying liaison duties between the Department and VAGLAHS admin to ensure timely preparation of the communications such as memos regarding renewals/continuation of research protocols, IACUC modifications, LSP/PSP renewals, chemical inventories, VMU animal care; Working on diverse research and quality improvement projects: planning, implementing, and facilitating submission and management of grants for the entire Medical Research Service, to support the VA's mission and strategic initiatives of discovering knowledge and creating innovations that advance health care for Veterans and the Nation, by ensuring that VA-based grants are generated and managed with organizational principles of integrity and compliance; Preparing competitive grant applications including budget requests and justifications, for independent and collaborative grant submissions to the VA and other agencies;
- 10/2015 - 05/2016** *Consultant, Research Neurobiologist at WebSciences International. Tasks performed* - designing new research directions for the laboratory as well as the experiments for ongoing projects; participation in data interpretation; liaison duties between VAGLAHS and WebSciences (all communications i.e., memos regarding renewals/continuation of research protocols, IACUC modifications, LSP/PSP renewals, chemical inventories, VMU animal care).
- 2008 – present** Professor of Neurophysiology at Ilia State University in Tbilisi, Georgia
- 12/2008 - 06/2016** *Research Neurobiologist at the Department of Medical Research, VAGLAHS WOC (without compensation). Tasks performed* - experimental work, data analysis and interpretation, preparing publications and presentations.
- 12/2008 - 10/2015** *Research Neurobiologist at Sepulveda Research Corporation (SRC, full-time/ 40 hours per week). Got the Principal Investigator status on January of 2012. Tasks performed* - designing and carrying out research work in the field sleep neurobiology with subsequent data analysis/interpretation and writing papers; overseeing laboratory operations with the Head of the Department.

TEACHING EXPERIENCE

2008 – 2020

Ilia State University in Tbilisi, Georgia

In the Doctoral Program, designed and taught condensed courses within 2 or 3 - week periods per semester):

- Neurobiology of Functional Systems (6 credits, 32 contact hours)
- Neurobiology of Sleep: Recent Findings (6 credits, 32 contact hours)
- Professional Development and Integration into Neuroscience (6 credits, 32 contact hours)

In the Master's Program, designed and taught condensed courses within 2 or 3 - week periods per semester):

- The Limbic System: Anatomy and Functions (6 credits, 35 contact hours)
- Neurobiology of Sleep and Wakefulness (12 credits, 62 contact hours)
- Human Sleep, Aging and Sleep (6 credits, 32 contact hours)

Bachelor's Program, designed and taught

- Human Organism and Health (6 credits, 30 contact hours)

RECENT PROFESSIONAL TRAININGS:

2012 Dept. of Psychiatry, Harvard Medical School, VA Boston (PI, Radhika Basheer).

2015 Dept. of Psychiatry and Behavioral Sciences, Stanford University (PI, Luis De Lecea).

PROFESSIONAL ACTIVITIES:

Symposiums/Lectures Held at Professional meetings:

2013 Symposium on "*Critical Periods in Sleep Development*" at International Sleep Training Summer School "Kazbegi 2013"
July of 2013, Tbilisi, Georgia
The Role: The Chair and a Speaker as well as the organizer of the Summer School.

Website: www.kazbegisleeptraining.weebly.com

2013 Symposium on "*Sleep and Brain Maturation: Development of Sleep-Regulatory Mechanisms and Interactions between Sleep and Brain Maturation*" at "SLEEP 2013," the 27th Annual Meeting of the Associated Professional Sleep Societies, LLC,
June of 2013, Baltimore, MD
The Role: The Chair and a Speaker.

2013 Symposium on "*Sleep and Childhood Brain Development: Unraveling the Link*" at Arrowhead Sleep Training Workshop,
September of 2013, CA, USA
The Role: The Chair and a Speaker.

- 2014 Lecture on “*Hypothalamic Regulation of Sleep: Recent Findings*” at International Sleep Training Summer School: “Advancing the Understanding of Basics of Sleep Science and Sleep Medicine”, June of 2014, Chakvi, Georgia
The Role: Invited Speaker
- 2014 Minisymposium on Sleep at the University of Helsinki. September of 2014, Biomedicum Helsinki 1
The Role: Invited Speaker
- 2014 Symposium on “*Sleep and Brain Maturation: Development of Sleep-Regulatory Mechanisms and Interactions between Sleep and Brain Maturation*” at ESRS 2014, the 22d Congress of the European Sleep Research Society, September of 2013, Tallinn, Estonia
The Role: The Chair and a Speaker
- 2014 Symposium on “*Sleep Loss: A Biochemical dialogue within brain* “ at ASRS 2014, the 8th Congress of the Asian Sleep Research Society, September of 2014, Kovalam, Kerala, India
The Role: Invited Speaker
- 2015 Symposium on "Sleep regulating neurons: new insights across phylogeny" at “SLEEP 2015,” the 29th Annual Meeting of the Associated Professional Sleep Societies, LLC, June of 2015, Seattle, Washington
The Role: Invited Speaker
- 2016 Symposium on " Consequences of sleep loss in brain: from birth to aging" at the ESRS 2016, the 23d Congress of the European Sleep Research Society, September of 2016, Bologna, Italy. The Role: Invited Speaker

Supervised

- 2013 A 2-months research project of a graduate student from the University of Milan
2013 - 2015 MS thesis, California State University Northridge
2014 A 6-months post-doctoral research within the framework of Fulbright, a program of the United States Department of State Bureau of Educational and Cultural Affairs
- 06/2016 - 06/2017 A 12-months research project of an UCSD graduate student
08/2017- 2020 A 3-years research project of an UCLA graduate student
09/2023 – present Two high school volunteer students at the VA Sepulveda.

Other professional activities

- 2000 - 2003 Editorial Board of International Journal “*Neurobiology of Sleep-Wakefulness Cycle*”;
2006 - External Reviewer, *Neuroscience*;
2008 - 2009 Member of the Governmental Committee of Reforms in Science and Education, Tbilisi, Georgian;
2008 - External Reviewer, *International Journal of Toxicology*;
2009 - 2012 Voting Member of VA GLAHS Subcommittee for Research Safety;
2009 - External Reviewer, *Brain Research Bulletin*;

- 2010 – 2011 Editor-in-Chief, J. Neurobiology of Sleep-Wakefulness Cycle, Online Intern. Journal;
 2011 - Reviewer, *Frontiers in Sleep and Chronobiology*
 2012 - External Reviewer, *Sleep Medicine Reviews*
 2012 - Reviewer, *Brain Sciences*
 2012 - Reviewer, *PLOS ONE*
 2012 – 2014 Member, American Sleep Research Society Educational Program Committee;
 2013 – Program Director and the Organizer of an International Sleep Training Summer School “Kazbegi 2013” / Georgia. The funding sources of the meeting were International Brain Research Organization (IBRO) and Ilia State University, Tbilisi, Georgia www.kazbegisleeptraining.weebly.com
 2013 - Voting Member of VA GLAHS Subcommittee - IACUC;
 2013 - 2015 Member, Graduate studies Committee (GSC), California State University, Northridge;
 2014 - Reviewer, *European Journal on Neuroscience*;

RESEARCH AND EDUCATIONAL GRANTS:

- 2007 - 2009 Collaborative Research Grant funded by Georgian National Science Foundation (GNSF/ST07/6-219). Role - Principal Investigator
- 2007 - 2010 Research Grant funded by Georgian National Science Foundation (GNSF/ST07/6-237). Role - co-PI
- 2010 - 2011 Collaborative Research Grant funded by Georgian National Science Foundation (GNSF/ST09/6-274). Role - Principal Investigator
- 2011-2014 SCOPES (Swiss National Science Foundation) Educational Grant: "Knowledge Based Partnership for Development of Sleep Medicine Research Platform and Promotion of Sleep Science in Georgia". Role - Scientific Manager of the Project
- 2013 IBRO (International Brain Research Organization) Conference Grant for organizing A Sleep Training Workshop via European Neuroscience Program. Role - Program Director and Organizer of the Workshop
- 2013-2016 Collaborative Research Grant funded by Georgian National Science Foundation (GNSF). Role - Principal Investigator
- 2016-2019 Collaborative Research Grant funded by Georgian National Science Foundation (GNSF). Role - Principal Investigator
- 2019-present Collaborative Research Grant funded by Georgian National Science Foundation (GNSF). Role - Principal Investigator

HONORS AND AWARDS:

- 1997 – 2000 Fellowship of the President of the Republic of Georgia;
 2000 Fellowship of German Academy Exchange Service sponsored by NATO/DAAD;
 2002 International Brain Research Organization (IBRO) Fellowship Against Brain Drain;
 2002 European Network of Sleep Training Laboratories Research Award/Grant;
 2006 Sleep Research Society (SRS) Young Investigator Award, USA;
 2007 C. Gillin Research Award, by Sleep Research Society Foundation (SRSF), USA;

2016 The American Physiological Society Award acknowledging the significance of my recent paper, naming it among the best recently published articles in physiological society (<http://apsselect.physiology.org/>).

COMMUNITY SERVICE/ VOLUNTEER WORK

10/2017 – present President & Director, Georgian Cultural and Educational Center of Southern California.
09/2017 Founder of Georgian Dance Academy in Los Angeles, CA.
2013 - 2015 Chair, English Learner Advisory Committee (ELAC), Nestle Elementary Charter School, CA.
2013 – 2017 Coordinating educational process at St. Nicholas Georgian Orthodox Church Elementary School in Los Angeles, and teaching Georgian kids, an underrepresented population, in their native language.
2012 - 2015 PTA active member, Nestle Elementary Charter School, CA.

BIBLIOGRAPHY:

A. Research Papers – Peer Reviewed:

1. **Gvilia I**, Oniani T, Kochladze M and Darchia N (2000) Sleep-wakefulness cycle of Guinea pig as a model of a biosensor. *Kybernetes* (London) 29(2):234-239.
2. Dabrundashvil N, **Gvilia I**, Darchia N, Gogichadze M, Maisuradze L, Lortkipaniudze N, Emukhvarim N, Baxutashvili B and Oniani T (2001) Modulating effects of Plaferon-LB on the structure of Sleep-Wakefulness Cycle. *Int. J on Immunorehabilitation*, 3, 3, 100-104.
3. **Gvilia I.**, Angara, C., McGinty, D and Szymusiak R. (2005) Different neuronal populations of the rat median preoptic nucleus express *c-fos* during sleep and in response to hypertonic saline. *Journal of Physiology*, 569(2): 587-599.
4. **Gvilia I.**, Turner, A., McGinty, D., Szymusiak R. (2006) Preoptic area neurons and the homeostatic regulation of rapid eye movement sleep. *The Journal of Neuroscience*, 26(11): 3037-3044.
5. **Gvilia I.**, Xu F., McGinty, D and Szymusiak R. (2006) Homeostatic regulation of sleep: a role for preoptic area neurons. *The Journal of Neuroscience*, 26(37): 9426-33.
6. Lortkipanidze N., Chidjavadze E., Oniani N., Darchia N and **Gvilia, I.** (2009) Sleep-Waking behavior following a lesion in the median preoptic nucleus. *Georgian Medical News*, 9(174), 10-3.
7. Maisuradze, L., Lortkipanidze, N., Eliozishvili, M., **Gvilia, I** and Darchia, N. Posttraumatic stress disorder and insomnia development in individuals displaced from Shida Kartli, Georgia. *Georgian Med News*. 2010, 3(180):64-9.
8. Hsieh KC, **Gvilia I**, Kumar S, Uschakov A, McGinty D, Alam MN and Szymusiak R. c-Fos expression in neurons projecting from the preoptic and lateral hypothalamic areas to the ventrolateral periaqueductal gray in relation to sleep states. *Neuroscience*, 2011, 188:55-67.
9. **Gvilia, I.**, Suntsova N., Angara B., McGinty D and Szymusiak R. Maturation of sleep homeostasis in developing rats: a role for preoptic area neurons. *American Journal of Physiology*, 2011, 300(4):R885-94.

10. Basishvili T, Eliozishvili M, Maisuradze L, Lortkipanidze N, Nachkebia N, Oniani T, **Gvilia I** and Darchia N. Insomnia in a Displaced Population is Related to War Associated Remembered *Stress Health*. **2012**, 28(3):186-92.
11. **Gvilia, I.**, Suntsova N., Kumar, S., McGinty D and Szymusiak R. Suppression of Preoptic Sleep-regulatory Neuronal Activity During Corticotropin Releasing Factor-induced Sleep Disturbance. *Am J Physiol Regul Integr Comp Physiol* 309: R1092–R1100, **2015**.
12. **Gvilia, I.**, Suntsova N., Kostin, A., Kalinchuk A., McGinty D., Basheer R and Szymusiak R. The Role of Adenosine in the Maturation of Sleep Homeostasis in Rats. *The Journal of Neurophysiology*, 117(1):327-335. DOI: 10.1152/jn.00675.2016, **2017**.

B. Book Chapters:

1. Darchia, N and **Gvilia, I.** Insomnia: Introduction. In: *Sleep - Physiology, Investigations and Medicine*, ed. by Michel Billiard, Kluwer Academic/Plenum Publishers, New York, **2003** Chapter 14 (pp. 187-90).
2. **Gvilia, I** Underlying Brain Mechanisms that Regulate Sleep-Wakefulness Cycles. In: *International Review of Neurobiology*, ed by Angela Clow and Lisa Thorn, Elsevier, **2010** Chapter 1 (pp. 1-21).
3. **Gvilia, I** and Szymusiak R. Regulation of nonREM Sleep: Interactions Among Sleep-Active Neurons in the preoptic hypothalamus. In: *Current Advances in Sleep Biology*, ed. by Markos G. Frank, Nova Medical, **2010** Chapter 2 (pp. 3-13).
4. Szymusiak R and **Gvilia I.** Neurophysiology and Neurochemistry of Hypersomnia. In: *Sleep Medicine Clinics: Hypersomnia*, ed by Alon Y. Avidan, **2012**.
5. **Gvilia, I** and Szymusiak R. Basic Neurobiology of Arousal and Sleep. In: *Sleep Medicine and Psychiatric Illness*, edited by John Herman and Max Hirshkowitz (**2019**)

D. Reviews:

1. Szymusiak R, **Gvilia I** and McGinty D (2007) Review: Hypothalamic control of sleep. *Sleep Medicine* 8:291-301.

E. Research Papers – Non-Peer Reviewed

1. Darchia N, Eliava M, **Gvilia I** and Oniani T (**1994**) The effects of adaptation to experimental set on the sleep behavior in Guinea pigs. *Moambe, J. of the Georgian Academy of Sciences* 150(3): 200-206.
2. Darchia N, **Gvilia I**, Eliava M and Oniani T (**1995**) The effects of selective deprivation of paradoxical sleep on the sleep-wakefulness cycle in rats. *Moambe, J. of the Georgian Academy of Sciences* 151(2):295-301.

3. Oniani T, **Gvilia I**, Darchia N, Eliava M and Kochladze M (1997) Total sleep deprivation effect on the sleep-wakefulness cycle in Guinea Pigs. Moambe, J. of the Georgian Academy of Sciences 156(3):456-458.
4. Oniani T, Darchia N, **Gvilia I** and Eliava M (1997) The peculiarities of the sleep-wakefulness cycle in Guinea Pigs. Moambe, J. of the Georgian Academy of Sciences 156(1):113-116.
5. Oniani T, Darchia N, **Gvilia I**, Eliava M, Kochladze M and Moliadze V (1998) The effect of selective deprivation of paradoxical sleep on the sleep-wakefulness cycle in Guinea pigs. Moambe, J. of the Georgian Academy of Sciences 158(3):495-498
6. **Gvilia I**, Darchia N and Oniani T (1999) Analysis of benzodiazepines' action on the sleep-wakefulness cycle in poor sleepers. Journal of Experimental and Clinical Medicine 2:133-136
7. **Gvilia I**, Kochladze M, Darchia N and Oniani T (1999) Analysis of the effects of relanium on the sleep-wakefulness cycle in Guinea pigs. Transactions of Young Scientists, Presidential Scholarship Grantees 1:7-11, Tbilisi, Georgia
8. Oniani T, Darchia N, **Gvilia I**, Lortkipaniudze N, Maisuradze L, Oniani L, Eliava M and Moliadze V (1999) The effect of food deprivation on the sleep-wakefulness cycle in rodents. Moambe, J. of the Georgian Academy of Sciences 160(2):311-315
9. Rukhadze I, Dabrundashvili N, **Gvilia I**, Darchia N, Gogichadze M, Emukhvari N, Basishvili T, Bakhutashvili B and Oniani T (2001) Effect of Plaferon-LB on Morphine-induced structural changes in Sleep-Wakefulness Cycle; Proceedings of the Georgian Academy of Sciences, Biological Seriesm 27(4-6): 447-453
10. Rukhadze I, Emukhvari N, Basishvili T, **Gvilia I**, Darchia N, Mchedlidze O and Gogichadze M (2003) What is an antagonistic profile of Naloxon against Tramadol effects? Proc. Georgian Acad. Sci., 29 (5-6): 719-725.