

# Georgi Gamkrelidze

## personal information

## Contact Details

Email address:

Full name: Georgi Gamkrelidze

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Gender: Male

Country: საქართველო (Georgia)

Citizenship: საქართველო  
(Georgia)

City: Tbilisi

## Languages

Language	Writing	Reading	Speaking
Russian	C2	C2	C2
English	C2	C2	C2
ქართული (Georgian)	C2	C2	C2

## Education

### Academic degree

Academic Degree: Doctoral/PhD, Ed.D or other equivalent

Year obtained: 08.02.1993

### Education

Academic Degree	Name of the Institution	Country	Major discipline	Start year	End year
Doctoral/PhD, Ed.D or other equivalent	Moscow State University	Russian Federation	Physiology	1989	1993
Master/MS, MA, MR, MBA, m.Ed or other equivalent	Tbilisi State University		Physiology	1983	1988

## Projects

### Ongoing projects

Project title	Position	Project head	Start Date	Donor
Myo-inositol and prevention of epileptogenesis: pharmacology, electrophysiology and molecular biology	Principle Investigator	Georgi Gmkrelidze	25.03.2022	Shota Rustaveli National Science Foundation of Georgia
Myo-inositol and posttraumatic epilepsy	Researcher	Eka Lepsveridze	09.03.2020	Shota Rustaveli National Science Foundation of Georgia

### Completed projects

Project title	Position	Project head	Start Date	End Date	Donor
The mechanisms of persistent activity in the eye velocity storage nucleus	Research scientist	Robert Baker	22.10.2004	10.09.2007	NIH of USA

Project title	Position	Project head	Start Date	End Date	Donor
The effect of beta-amyloid on long-term synaptic plasticity in the hippocampus	Assistant professor	Barbara Trommer	20.11.2001	10.09.2004	Evenston Northwestern Healthcare, USA
The mechanisms of persistent activity in the neural integrator	Researcher	David Tank	22.10.1998	20.11.2001	NIH of USA
Electrophysiological properties of vestibular neurons during embryonic development in chicks	Postdoc	Kenna Peusner	25.09.1993	25.09.1998	NIH of USA

## Scientific Fields (2018-2020)

### Main Field

Field: 1. Natural sciences

Sub-Field: 1.6 Biological sciences

Subject area: 1.6.14 Other biological topics

## Employment History

### Current place(s) of employment

Workplace	Name of the work department	Position	Main responsibilities	Start Date
Ilia State University	Institute of Chemical Biology	Full Professor	Scientific research, supervision students and lecture presentation	02.11.2007

### Work experience

Company/Institution	Name of the department	Position	Main responsibilities	Start Date	End Date
New York University Medical Center	Neuroscience Department	Research scientist	Scientific Research	22.10.2004	10.09.2007
Northwestern University	Neurology Department	Assistant professor	Scientific research, student supervision	20.11.2001	10.09.2004
Bell Labs	Biological Computation Research Department	Research Scientist	Scientific research	22.10.1998	20.11.2001
George Washington University	Cell Biology Department	Postdoc	Scientific research	01.10.1995	25.09.1998
Texas University Medical Branch	Department of Neuroscience	Postdoc	Scientific research	28.03.1993	20.09.1995

## Scientific Productivity

### Article / Monograph / Manual

Type	Authors	Publication title	Source title	Year
Article	Nino Oganezovi, Vincenzo Lagani, Marine Kikvidze, Giorgi Gamkrelidze, Lia Tsverava, Eka Lepsveridze, Kevin M Kelly, Revaz Solomonia	Long-term effects of myo-inositol on traumatic brain injury: Epigenomic and transcriptomic studies	IBRO neuroscience reports	2024
Article	Manana Kandashvili, Giorgi Gamkrelidze, Lia Tsverava, Tamar Lordkipanidze, Eka Lepsveridze, Vincenzo Lagani, Maia Burjanadze, Manana Dashniani, Merab Kokaia, Revaz Solomonia	Myo-Inositol Limits Kainic Acid-Induced Epileptogenesis in Rats	International Journal of Molecular Sciences	2022
Article	Lia Tsverava, Manana Kandashvili, Giorgi Margveliani, Tamar Lortkipanidze, Giorgi Gamkrelidze, Eka Lepsveridze, Merab Kokaia, Revaz Solomonia	Long-term effects on myo-inositol on behavioral seizures and biochemical changes evoked by kainic acid induced epileptogenesis	BioMed Research International	2019
Article	Georgi N. Gamkrelidze, Zaqaria I. Nanobashvili, Irina G. Bilanishvili, Tamar Lordkipanidze, Manana Kandashvili, Merab Kokaia, Revaz O. Solomonia	Concentration- and time-dependent effects of myo-inositol on evoked epileptic afterdischarge in the hippocampus in vivo	NeuroReport	2019

Type	Authors	Publication title	Source title	Year
Article	Weaver C., Yadav A., Gamkrelidze G., Baker R	Sensitivity analysis of a precerebellar neuron model predicts a morphologic mechanism for plasticity of neural function	BMC Neuroscience	2010
Article	Weaver C., Gamkrelidze G., Baker R., Wearne S	Sensitivity analysis enable comparison of how realistic morphology and other intrinsic properties influence neural firing	BMC Neuroscience	2007
Article	Yun S.H., Gamkrelidze G., Stine B., Sullivan P., Pasternak J., LaDu M.J. Trommer B.	Amyloid-beta 1-42 reduces excitability in mouse dentate gyrus	Neuroscience Letters	2006
Article	Ye G., Gamkrelidze, G., Pasternak J, Trommer B.L.	AMPA and NMDA receptor-mediated currents in developing dentate gyrus granule cells	Brain Res. Dev. Brain Res.	2005
Article	Trommer B, Shah C., Gamkrelidze G., Yun S., Pasternak E., Stine B., Manelli A., Pasternak J., LaDu M.J	ApoE Isoform-specific Effects on LTP: blockade by oligomeric amyloid	Neurobiol Disease	2005
Article	Drobyshevsky A, Song S.K., Gamkrelidze G., Wyrwicz A.M., Meng F., Derrick F., Li L., Ji X., Trommer B., Back S., Tan S.	Diffusion Anisotropy Increases Prior to the Onset of Myelination in Fetal Rabbit Brain	J. Neuroscience	2005
Chapter in book	Gamkrelidze G., Sung Yun., Trommer B	Amyloid-beta as a biologically active peptide in CNS	Synaptic Plasticity and Transsynaptic Signaling	2005
Article	Trommer B, Shah C., Yun S., Gamkrelidze G., Pasternak E., Stine B., Manelli A., Pasternak J., LaDu M.J.	ApoE Isoform affects LTP in Human Targeted Replacement Mice	NeuroReport	2004
Article	Yu, B., Gamkrelidze, G., Laurienti, P., Blankenship J.	Serotonin directly increases a calcium current in swim motoneurons of <i>Aplysia brasiliana</i>	American Zoologist	2001
Article	Aksay, E., Gamkrelidze, G., Seung H.S., Baker, R., Tank, D.W.	In Vivo intracellular recording and perturbation of persistent activity in a neural integrator	Nature Neuroscience	2001
Article	Gamkrelidze, G., Giaume C., Peusner K	Firing Properties and Dendrotoxin-sensitive sustained potassium current in vestibular nuclei neurons of the hatchling chick	Exp. Brain Res.	2000
Article	Gamkrelidze, G., Giaume C., Peusner K.	Differential expression of low-threshold potassium current contributes to the distinct firing patterns in embryonic central vestibular neurons	J. Neuroscience	1998
Article	Peusner K.D., Gamkrelidze G. and Giaume C.	Potassium currents and excitability in second order auditory and vestibular neurons	J. Neurosci. Research	1998
Article	Gamkrelidze, G., Laurienti, P.J., and Blankenship, J.E.	Identification and characterization of cerebral neurons that induce swimming and modulate swim-related pedal-ganglion neurons in <i>Aplysia brasiliana</i>	J. Neurophysiol.	1995
Article	Panchin, Y.V., Gamkrelidze G., Popova L. B., Deliagina T.G., Orlovsky, G.N. and Arshavsky Y.I.	Neuronal basis of hunting and feeding behavior in the pteropod mollusc <i>Clione limacina</i>	Nether. J. Zool.	1994
Article	Arshavsky, Y.I., Deliagina, T.G., Gamkrelidze, G., Orlovsky, G.N., Panchin, Y.V., Popova, L.B. and Shupliakov, O.V.	Pharmacologically induced elements of the hunting and feeding behaviour in the pteropod mollusc <i>Clione limacina</i> . I. Effects of GABA	J. Neurophysiol.	1993
Article	Arshavsky, Y.I., Deliagina, T.G., Gamkrelidze, G., Orlovsky, G.N., Panchin, Y.V. and Popova, L.B.	Pharmacologically induced elements of the hunting behaviour in the pteropod mollusc <i>Clione limacina</i> . II. Effects of physostigmine	J. Neurophysiol.	1993
Article	Arshavsky, Y.I., Deliagina, T.G., Gamkrelidze, G., Orlovsky, G.N., Panchin, Y.V. and Popova, L.B.	Neurophysiological mechanism of space orientation in pteropod mollusc <i>Clione limacina</i> during hunting behavior	Proc. Acad. Sci. Russia	1993
Article	Arshavsky, Y.I., Gamkrelidze, G., Orlovsky, G.N., Panchin, Y.V. and Popova, L.B.	Role of gamma-aminobutyric acid on organization of feeding behaviour of pteropod mollusc <i>Clione limacina</i>	Proc. Acad. Sci. USSR	1991
Article	Arshavsky, Y.I., Gamkrelidze, G., Orlovsky, G.N., Panchin, Y.V. and Popova, L.B.	Role of acetylcholine and gamma-aminobutyric acid in organization of feeding behaviour in pteropod mollusc <i>Clione limacina</i>	Biol. Membranes	1991
Article	Arshavsky, Y.I., Gamkrelidze, G., Orlovsky, G.N., Panchin, Y.V. and Popova, L.B.	Role of acetylcholine in organization of feeding behaviour of pteropod mollusc <i>Clione limacina</i>	Proc. Acad. Sci. USSR	1991
Article	Arshavsky, Y.I., Gamkrelidze, G., Orlovsky, G.N., Panchin, Y.V. and Popova, L.B.	Gamma-aminobutyric acid induces feeding behaviour in the marine mollusc, <i>Clione limacina</i> .	NeuroReport	1991

**Participation in scientific events**

Scientific event name	Title of the presentation	Event venue	Year
5th International Symposium "Brain & Neuroplasticity"	Antiepileptogenic Action of Myo-inositol: Molecular, Electrophysiological and Behavioral Study	Tbilisi, Georgia	2023
International symposium "Advances in Neuroscience"	Antiepileptogenic Effects of Myo-inositol	Chakvi, Georgia	2022
Meeting of Society for Neuroscience of USA	Sensitivity of firing dynamics to intrinsic dendritic properties in a model of neurons necessary for eye velocity neural integration	Atlanta, USA	2006
Meeting of Society for Neuroscience of USA	Distinct modes of spike generation recorded from Area II neurons in goldfish hindbrain slices	Atlanta, USA	2006
Meeting of Society for Neuroscience of USA	Ancestral electrophysiological properties of thalamic neurons in vertebrates	Atlanta, USA	2006
Meeting of Society for Neuroscience of USA	Electrophysiological and morphological characterization of velocity storage neural integrator neurons in the goldfish hindbrain	Washington, D.C., USA	2005
Meeting of Society for Neuroscience of USA	White matter development in the perinatal rabbit brain by MRI and electrophysiology	San Diego, USA	2004
Meeting of Society for Neuroscience of USA	Oligomeric amyloid decreases the excitability of dentate gyrus granule cells in hippocampal slices from apoe4-TR mice	San Diego, USA	2004
Meeting of Society for Neuroscience of USA	synaptic plasticity in apoe transgenic mice	New Orleans, USA	2003
Meeting of Society for Neuroscience of USA	Differential effects of oligomeric amyloid on synaptic plasticity in human apoe targeted replacement mice	New Orleans, USA	2003
Meeting of Society for Neuroscience of USA	A velocity – to – position neural integrator is active during optokinetic tracking in larval zebrafish <i>Danio rerio</i>	San Diego, USA	2001
Meeting of Society for Neuroscience of USA	Membrane potential changes underlying persistent firing in neurons that store a memory of eye position	New Orleans, USA	2000
Meeting of Society for Neuroscience of USA	Persistent activity of hindbrain neurons during eye fixation in larval zebrafish <i>Danio rerio</i> .	New Orleans, USA	2000
Meeting of Society for Neuroscience of USA	In Vivo intracellular recording of EPSP rate during persistent activity in neurons maintaining a memory of eye position	Miami, USA	1999
Meeting of Society for Neuroscience of USA	Firing properties and potassium currents in postnatal chick central vestibular neurons	Los Angeles, USA	1998
Meeting of Society for Neuroscience of USA	Role of potassium currents in excitability of developing chick vestibular sensory neurons	New Orleans, USA	1997
Meeting of Society for Neuroscience of USA	Voltage-dependent outward currents in vestibular sensory neurons from chick embryo brain slices.	Washington, D.C., USA	1996
Meeting of Society for Neuroscience of USA	Serotonin enhances calcium current in isolated somata of <i>Aplysia</i> parapodial motor neurons.	San Diego, USA	1995
Meeting of Society for Neuroscience of USA	Ionic currents in dissociated <i>Aplysia brasiliana</i> parapodial muscle fibers	San Diego, USA	1995
Symposium on Molluscan Neurobiology	Characterization of "command neurons" for swimming in cerebral ganglion of <i>Aplysia brasiliana</i>	Amsterdam, The Netherlands	1994
Symposium on Molluscan Neurobiology	The pteropod mollusk <i>Clione limacina</i> as a new object for neuroethological studies	Amsterdam, The Netherlands	1994
Meeting of Society for Neuroscience of USA	Sensory inputs modulate the activity of swim related neurons in <i>Aplysia brasiliana</i>	Miami, USA	1994
Meeting of Society for Neuroscience of USA	Candidate command neurons for <i>Aplysia</i> are tentatively identified in cerebral ganglion.	Washington, D.C., USA	1993
Regional Meeting of the International Society for Invertebrate Neurobiology	The role of GABA-ergic mechanisms in organization of feeding behaviour in pteropod mollusc <i>Clione limacina</i>	Minsk, Belarus	1991

**Productivity index**

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Google scholar	1106.00	13.00