

# CURRICULUM VITAE

## PERSONAL INFORMATION

Name, Family

Name D

Contact Information

**Mikeladze, David**

[davit\\_mikeladze@iliauni.edu.ge](mailto:davit_mikeladze@iliauni.edu.ge), [dgmikeladze@gmail.com](mailto:dgmikeladze@gmail.com),

## EDUCATION & PROFESSIONAL TRAINING

- Dates (from – to)
- Name and type of organization
  - Faculty/Training/Course
  - Type of qualification awarded
- Dates (from – to)
- Name and type of organization
  - Faculty/Training/Course
  - Type of qualification awarded
- Dates (from – to)
- Name and type of organization
  - Faculty/Training/Course
  - Type of qualification awarded

**Jan. 1974 – Jan. 1986**

**Institute of Physiology Georgian Academy of Sciences**

Laboratory of Neurochemistry

Doctor of Science in Biology (Biochemistry)

**Jan. 1971-Dec. 1974**

**Moscow State University**

Faculty of Biology

Candidate of Science in Biology (Biochemistry)

**Sept. 1965 – Sept. 1970**

**Tbilisi State University**

Faculty of Biology

M Sc in Biology (Biochemistry)

## EMPLOYMENT

- Dates (from – to)
  - Employer
- Rank/Position held
- Dates (from – to)
  - Employer
- Rank/Position held
- Dates (from – to)
  - Employer
- Rank/Position held
- Dates (from – to)
  - Employer
- Rank/Position held

Oct. 2008 - present

**Ilia Chavchavadze State University**

Professor, Institute of Chemical Biology, Director

Nov 1983 - present

**Beritashvili Center of Experimental Biomedicine**

Head of Department of Biochemistry

Jan. 2005 – Oct. 2008

**Iv. Javakhishvili Tbilisi State University**

Professor, Dean (2005-2006)

Jan. 1975 – Sept. 1983

**Beritashvili Institute of Physiology Georgian Academy of Sciences**

Scientific Researcher (1975-1978)

Leading Scientist (1978-1983)

**AWARDS AND MEMBERSHIP OF PROFESSIONAL SOCIETIES**

Academician of Georgian National Academy of Sciences; Professor of International Soros Science Education Program of NSF (1995-2000); Member of National Committee of the Soviet Biochemists (1987-1991), Member of Presidium of a society of neurochemists of the USSR (1987-1991). Member of Presidium of Georgian Biochemical Society (1987-present), Members of International Brain Research Organization (IBRO)(1998-present), Members of Federation of European Neuroscience Societies (FENS)(1998-present), Deputy Editor of Journal Biological Physics and Chemistry (2002-present), Editorial Board Member of Neurochemical Journal

**MAIN RESEARCH INTERESTS**

Biochemistry, Neurochemistry  
Neuron and glial cells metabolism and regulation.  
Molecular mechanism of neurodegeneration and neuroinflammation.  
Pharmacology and biotransformation of biologically active compounds.

*And immune*

**TEACHING EXPERIENCE**

Basic Biochemistry,  
Cell Regulation and Molecular Mechanisms of Pathologies,  
Molecular Pharmacology; Metabolism Regulation  
Molecular Endocrinology

## Most relevant publications (2014-2024)

1. Chikviladze M, Mamulashvili N, Sepashvili M, Narmania N, Ramsden J, Shanshiashvili L, **Mikeladze D**. Citrullinated isomer of myelin basic protein can induce inflammatory responses in astrocytes. *IBRO Neuroscience Reports*. 2024 Dec 19.
2. Tevzadze, G., Kiknadze N., Zhuravliova E., Barbakadze, T, Shanshiashvili, L., Narmania N., Mikeladze, D. Reducing the amount of Clostridium difficile in the gut microbiome reduces the behavioral projection of cognitive activity in rats *World Academy of Sciences Journal* 5: 30, 2023
3. Barbakadze T, Kvergelidze E, Bátor J, Szeberényi J, **Mikeladze D**. 3, 5, 3'-Triiodo-L-thyronine regulates actin cytoskeleton dynamic in the differentiated PC-12 cells during hypoxia through an  $\alpha\beta 3$  integrin. *Cell Journal* (Yakhteh). 2023 Apr;25(4):247.
4. Tevzadze, G., Zhuravliova, E., Okriashvili, N., ...Barbakadze, T., **Mikeladze, D**. Different Arrangement of Dopamine Receptors/NMDA Receptors Heterocomplexes in the Brain Regions of a Healthy Male, Female and Audiogenic Seizure-Prone Male Rats. *American Journal of Biochemistry and Biotechnology*, 2022, 18(2), pp. 195–204
5. Kvergelidze, E., Barbakadze, T., **Mikeladze, D**. Thyroid Hormone T3 Regulates NOX2 Activity and BDNF Secretion in Differentiated PC-12 Cells during Hypoxia via  $\alpha\beta 3$  Integrin. *Bulletin of the Georgian National Academy of Sciences*, 2022, 16(2), pp. 115–121
6. Tevzadze G, Barbakadze T, Kvergelidze E, Zhuravliova E, Shanshiashvili L, **Mikeladze D**. Gut neurotoxin p-cresol induces brain-derived neurotrophic factor secretion and increases the expression of neurofilament subunits in PC-12 cells. *AIMS Neuroscience*, 9 (1): 12–23, 2021
7. Tevzadze G., Zhuravliova E., Barbakadze T., , Shanshiashvili L., Dzeladze D., Nanobashvili Z., Lordkipanidze T and **Mikeladze D**. Gut neurotoxin p-cresol induces differential expression of GLUN2B and GLUN2A subunits of the NMDA receptor in the hippocampus and nucleus accumbens in healthy and audiogenic seizure-prone rats. *AIMS Neuroscience* Volume 7, Issue 1, 30–42. 2020
8. Gogvadze N, Zhuravliova E, Morin D, **Mikeladze D**, Maurice T. Sigma-1 Receptor Agonists Induce Oxidative Stress in Mitochondria and Enhance Complex I Activity in Physiological Condition but Protect Against Pathological Oxidative Stress. *Neurotoxicity Res.* 2019; 35(1), 1-18 doi:10.1007/s12640-017-9838-2.
9. Tsitsilashvili E Sepashvili M., Chikviladze M Shanshiashvili I., **Mikeladze D** , Myelin basic protein charge isomers change macrophage polarization. *Journal of Inflammation Research* 2019;12 25–33
10. G. Tevzadze, E. Zhuravliova, M. Meparishvili, T. Lortkipanidze, L. Shanshiashvili, Z. Kikvidze, and D. **Mikeladze** Effects of a Gut Microbiome Toxin, p-Cresol, on the Contents of the NMDA2B Receptor Subunit in the Nucl. Accumbens of Rats *Neurophysiology*, Vol. 51, No. 2, 2019, 72-76
11. Bitskinashvili K., Gabriadze, T Kutateladze, B Vishnepolsky, D **Mikelladze N** Datukishvili Influence of Heat Processing on DNA Degradation and PCR-Based Detection of Wild-Type and Transgenic Maize *Journal of Food Quality* Volume 2019, Article ID 5657640,
12. Goloshvili G, Barbakadze T, **Mikeladze D**. Sodium nitroprusside induces H-Ras depalmitoylation and alters the cellular response to hypoxia in differentiated and undifferentiated PC12 cells. *Cell Biochem Function*. 2019 Aug 19. doi: 10.1002/cbf.3431.
13. Sharikadze N, Hammad N, Bouchez CL, Averet N, Rigoulet M, Zhuravliova E, **Mikeladze DG**, Devin A. Inhibition of mitochondrial cytochrome c oxidase by metabolized Nobiletin in yeast. *J Biol Regul Homeost Agents*. 2019, 33(4):1097-1103
14. G. Tevzadze, Z. Nanobashvili, E. Zhuravliova, I. Bilanishvili, Shanshiashvili, Z. Kikvidze, D. **Mikeladze** Effects of a Gut Microbiome Toxin, p-Cresol, on the Susceptibility to Seizures in Rats *Neurophysiology*, Vol. 50, No. 6, November,

- 2018, 424-427
15. Bitskinashvili K, Gabriadze I, Kutateladze T Vishnepolsky B, Mikeladze D, Datukishvili N Effects of thermal-acid treatment on degradation and amplification of wheat and maize DNA *Journal of Food and Nutrition Research* .Vol. 57, 2018, No. 3, pp. 242–251
  16. G. Tevzadze, N. Oniani, E. Zhuravliova, N. Darchia, M. Eliozishvili, M. Gogichadze, N. Lortkipanidze, T. Oniani Jr., A. Kakabadze, Z. Kakabadze, L. Karalashvili, Z. Kikvidze, and D. **Mikeladze** Effects of a Gut Microbiome Toxin, p-Cresol, on the Indices of Social Behavior in Rats *Neurophysiology*, Vol. 50, No. 5, October, 2018 372-377
  17. Barbakadze T, Goloshvili G, Narmania N, Zhuravliova E, **Mikeladze D**. Subcellular Distribution of S-Nitrosylated H-Ras in Differentiated and Undifferentiated PC12 Cells during Hypoxia. *Cell J*. 2017 19(3):443-451.
  18. Stupar P, Chomicki W, Maillard C, Mikeladze D, Kalauzi A, Radotić K, Dietler G, Kasas S. Mitochondrial activity detected by cantilever-based sensor. *Mech. Sci.*, 8, 23-28, 2017
  19. Tevzadze G, Shanshiashvili L, **Mikeladze D**. Children with epilepsy and autistic spectrum disorders show similarly high levels of urinary p-cresol. *Journal of Biological Physics and Chemistry* 17 (2017) 77–80
  20. Shanshiashvili L, Tsitsilashvili E, Dabrundashvili N, Kalandadze I, **Mikeladze D**. Metabotropic glutamate receptor 5 may be involved in macrophage plasticity. *Biol Res*. 2017 Feb 14;50(1):4
  21. Sharikadze N, Jojua N, Sepashvili M, Zhuravliova E Mikeladze DG Mitochondrial Target of Nobiletin's Action. *Natural Prod Commun*. 2016, vol.11. N12. 1833-1838
  22. Koriauli S, Natsvlshvili N, Barbakadze T, **Mikeladze D**. Knockdown of interleukin-10 induces the redistribution of sigma1-receptor and increases the glutamate-dependent NADPH-oxidase activity in mouse brain neurons. *Biol. Res*. 2015 Oct 9;48(1):55.
  23. Natsvlshvili N., Goguadze N., Zhuravliova E., **Mikeladze D**. Sigma-1 receptor directly interacts with Rac1-GTPase in the brain mitochondria., *BMC Biochemistry*, 2015, 16:11
  24. Jojua N, Sharikadze N, Zhuravliova E, Zaalishvili E, **Mikeladze DG**. Nobiletin restores impaired hippocampal mitochondrial bioenergetics in hypothyroidism through activation of matrix substrate-level phosphorylation. *Nutrition Neuroscience*. 2015. 18, 5, 225-231
  25. Koriauli S, Barbakadze T, Natsvlshvili N, Dabrundashvili N, Kvaratskhelia E, **Mikeladze D** IL-10 Gene Knockout Reduces the Expression of mGlu Receptor 1a/b and Decreases the Glutamate-Dependent Production of Nitric Oxide. *Journal of Biomedical Science and Engineering*, 2014, 7, 1019-1029
  26. Barbakadze T, Natsvlshvili N, **Mikeladze D**. Thyroid hormones differentially regulate phosphorylation of ERK and Akt via integrin  $\alpha\beta 3$  receptor in undifferentiated and differentiated PC-12 cells. *Cell Biochemistry and Function*. 2014 Apr;32(3):282-6.