

CURRICULUM VITAE

PERSONAL INFORMATION

Name, Family Name

Date of birth

Contact Information

Mikeladze, David

08 July 1947

davit_mikeladze@iliauni.edu.ge, dgmikeladze@gmail.com,

EDUCATION & PROFESSIONAL TRAINING

- 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)

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

Jan. 1971-Dec. 1974

Moscow State University

Faculty of Biology

Candidate of Science in Biology (Biochemistry)

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

Sept. 1965 – Sept. 1970

Tbilisi State University

Faculty of Biology

M Sc in Biology (Biochemistry)

EMPLOYMENT

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

Oct. 2008 - present

Ilia Chavchavadze State University

Professor, Institute of Chemical Biology, Director

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

Nov 1983 - present

Beritashvili Center of Experimental Biomedicine

Head of Department of Biochemistry

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

Jan. 2005 – Oct. 2008

Iv. Javakhishvili Tbilisi State University

Professor, Dean (2005-2006)

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

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. Pathologies and cell regulation, Neural cell apoptosis and receptor systems regulation. Molecular mechanism of neurodegeneration and neuroinflammation.
Analysis of pharmaceutiques and biologically active compounds.

TEACHING EXPERIENCE

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

Most relevant publications (2009-2019)

1. Goguadze 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.
2. Alipourfard I, Datukishvili N, Bakhtiyari S, Haghani K, Di Renzo L, de Miranda RC, **Mikeladze D**. MIG1 Glucose Repression in Metabolic Processes of *Saccharomyces cerevisiae*: Genetics to Metabolic Engineering. **Avicenna J Med Biotechnol.** 2019 ;11(3):215-220.
3. 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
4. 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
5. Alipourfard I, Datukishvili N, **Mikeladze D**. TNF- α Downregulation Modifies Insulin Receptor Substrate 1 (IRS-1) in Metabolic Signaling of Diabetic Insulin-Resistant Hepatocytes **Mediators of Inflammation** Volume 2019, Article ID 3560819, 6 pages <https://doi.org/10.1155/2019/3560819>
6. K Bitskinashvili, 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, 11 pages <https://doi.org/10.1155/2019/5657640>
7. 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.
8. 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
9. 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
10. Alipourfard I, Bakhtiyari S, Datukishvili N, Haghani K, Di Renzo L, De Miranda RC, Cioccoloni G, Basiratyan Yazdi P, Mikeladze D. *Saccharomyces cerevisiae*, key role of MIG1 gene in metabolic switching: putative fermentation/oxidation. **J Biol Regul Homeost Agents.** 2018 May-Jun;32(3):649-654.
11. 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
12. G. Tevzadze, N. Oniani, E. Zhuravliova, N. Darchia, M. Eliazishvili, 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
13. 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.
14. 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
15. 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
16. 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
 17. 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
 18. 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.
 19. 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
 20. 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
 21. 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
 22. 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.
 23. Shanshiashvili LV, Dabrundashvili N, Natsvlshvili N, Kvaratskhelia E, Zhuravliova E, Barbakadze T, Koriauli S, Maisuradze E, Topuria T, **Mikeladze DG**. mGluR1 interacts with cystic fibrosis transmembrane conductance regulator and modulates the secretion of IL-10 in cystic fibrosis peripheral lymphocytes. *Molecular Immunology* 51, no 3-4 (2012):310-315
 24. Zhuravliova E, Barbakadze T, Jojua N, Zaalishvili E, Shanshiashvili L, Natsvlshvili N, Kalandadze I, Narmania N, Chogovadze I, **Mikeladze D**. Synaptic and Non-Synaptic Mitochondria in Hippocampus of Adult Rats Differ in Their Sensitivity to Hypothyroidism. *Cellular and Molecular Neurobiology* 32:1311–1321, 2012
 25. Shanshiashvili LV, Kalandadze IV, Ramsden JJ, **Mikeladze DG**. Adhesive Properties and Inflammatory Potential of Citrullinated Myelin Basic Protein Peptide 45-89. *Neurochemical Research*. 37, no 9 (2012):1959-1966.
 26. Bátor J, Varga J, Berta G, Barbakadze T, **Mikeladze D**, Ramsden J, Szeberényi J. Sodium nitroprusside, a nitric oxide donor, fails to bypass the block of neuronal differentiation in PC12 cells imposed by a dominant negative Ras protein. *Cell Molecular Biology Letters*. 2012, (3):323-32.
 27. Shanshiashvili L. N. Narmania T. Barbakadze E. Zhuravliova N. Natsvlshvili J. Ramsden, D. G. **Mikeladze D**. S-Nitrosylation Decreases the Adsorption of H-Ras in Lipid Bilayer and Changes Intrinsic Catalytic Activity. *Cell Biochemistry and Biophysics*. 59:191–199, 2011
 28. Dabrundashvili N, Kvaratskhelia E., Gagua M, Maisuradze E, Chkhikvishvili I, Zhuravliova **Mikeladze D**. Nobiletin transiently increases the production of nitric oxide and changes the activity of succinate dehydrogenase in human blood lymphocytes *Journal of Food Biochemistry*. 35, 2, 638-649, 2011
 29. Zhuravliova E. Barbakadze T., Zaalishvili E, Koshoridze N., Chipashvili M., **Mikeladze D**. Social isolation stress in rats inhibits oxidative metabolism, decreases the content of mitochondrial K-Ras and activates mitochondrial hexokinase. *Experimental Brain Research*. 205 (2009) 377–383
 30. Kvaratskhelia E., Maisuradze E., Dabrundashvili NG, Natsvlshvili N, Zhuravliova E., **Mikeladze DG**. N-Methyl-D-Aspartate and s-Ligands Change the Production of Interleukins 8 and 10 in Lymphocytes through Modulation of the NMDA Glutamate Receptor. *Neuroimmunomodulation* 2009;16:201-207
 31. Zhuravliova E., T. Barbakadze T., Narmania N, Sepashvili M, **Mikeladze D.G**. Hypoinsulinemia Alleviates the Grf1/Ras/Akt Anti-Apoptotic Pathway and Induces

Alterations of Mitochondrial Ras Trafficking in Neuronal Cells. *Neurochemical Research* 2009, 34:1076–1082