



CURRICULUM VITAE

SADUNISHVILI TINATIN – PhD, D.Sci, Academician of the Georgian National Academy of Sciences

Date of birth – December 22, 1952.

Citizenship at birth – Georgia. Present place and country of residence – Tbilisi, Georgia

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ACADEMIC QUALIFICATIONS:

1970-1975 Tbilisi State University. Faculty of Biology, Biochemistry.

1985-1987 Tbilisi Chavchavadze Institute of Foreign Languages, Higher Courses of Simultaneous Interpreter.

1991-1994 Doctorate at the Institute of Plant Biochemistry, Academy of Sciences of Georgia.

1996 Hebrew University of Jerusalem, State of Israel.

International Course on Food Technology and Biotechnology (Subjects: Plant Biotechnology, Food Microbiology, Grain Storage, and Quality Assurance).

POST DOCTORAL RESEARCH

Bach Institute of Biochemistry, Moscow. – 1982, 1984

Etvos Lorand University, Budapest, Hungary. - 1987

Institute of Enzymology, Szegedi Biological Centre of the Hungarian Academy of Sciences, Hungary-1988.

Wainstephan Institute of Food Technology – 1999

Technical University of Munich, 2000

University of Murcia, Murcia, Spain, 2000, 2012, 2014

Inagrosa, Industrias-Agrochemicals, Madrid, Spain, 1996

INRA Toulouse, France 2003

Meisei University, Tokyo, Japan - 2005.

Diversa, San Diego, CA – 2006

LBNL, Berkeley, CA – 2006, 2012, 2014

SCIENTIFIC TITLE AND DEGREE

1980 PhD.

1987 Scientific title – Senior Scientist.

1995 Doctor of Biological Sciences (DSci).

2009 Corresponding Member of the Georgian National Academy of Sciences.

2015 Academician of the Georgian National Academy of Sciences.

PROFESSIONAL EXPERIENCE:

- 1975-2010 Durmishidze Institute of Biochemistry and Biotechnology (DIBB): Research Scientist, Senior Research Scientist, Principal Scientist, Chief Scientist.
2005 Head of Laboratory of Durmishidze Institute of Biochemistry and Biotechnology since 2011 of Agricultural University of Georgia.
1994-2004 Professor, Georgian Technical University, Department of Biotechnology, Tbilisi.
2013 Professor, Agricultural University of Georgia.

MAIN FIELDS OF ACTIVITY:

Plant adaptation mechanisms. Ammonia primary assimilation. Physical-chemical properties, kinetics and regulations of Energy and nitrogen metabolism enzymes: malate dehydrogenase, glutamate dehydrogenase, glutamine synthetase, glutamate synthase. Oxidation enzymes: peroxidases and phenoloxidases.

Study of microbial diversity for novel biotechnology applications. Stable enzymes hydrolases. Biofuel; Phytoremediation. Bioremediation; Uptake and transformation of organic pollutants. *Xanthomonas*, *Pseudomonas*, *Erwinia* and *Clavibacter* phytopathogenic bacteria and their specific bacteriophages; Plant-pathogen-bacteriophage interactions; Elaboration of environmentally friendly control methods against plant bacterial diseases based on specific bacterial viruses.

MEMBERSHIP:

Member of the Editorial Board of *Annals of Agrarian Science* (since 2015)

Member of the Editorial Board of *Bulletin of the Georgian National Academy of Sciences* (Since 2015).

Member of Editorial Board of *Microbiology and Biotechnology* (ISSN 1987-8249)(Since 2009).

Member of Editorial Board of Journal of Azerbaijan National Academy of Sciences "*Plant & Fungal Research*" (2019).

Member of Georgian Biochemical Society (since 1975).

Member of Federation European Biochemical Society (FEBS) (1978);

Member of European Federation of Biotechnology (EFB) (2004);

Member and co-Founder of the Georgian Association of General and Applied Microbiology(2018)

<http://www.gagam.ge>

Member of Plant Science Organization (EPSO) (2004)

Member of The Association for Environmental Health and Sciences (AEHS) (2005-2006).

Member of AASSA-WISE Executive Committee http://aassa.asia/about/special_committee.php

Member of Specialized Council for Scientific Degree - Doctor of Biological Sciences at DIBB (1981-2007).

Member of Specialized Council for Scientific Degree - Doctor of Biological Sciences at Shotadze Tbilisi Medical Academy (2008-2009).

Member of the Doctorate Council of Agricultural University of Georgia (since 2013).

Honorary Professor of Shandong University of Technology (China), 2018.

INTERNATIONAL GRANTS:

- Coordination of Plant Oxidative Enzymes as a Key Factor in Degradation of Organic Xenobiotics. INTAS-Georgia, 97-0716. Project manager.
- Prevention of food spoilage by suppression of phenoloxidase, peroxidase and growth of pathogenic microflora by use of natural inhibitors of plant origin. INTAS-FOOD, 2000-0727
- Elaboration of Methods of Bioremediation of Contaminated Soils on Former Military Locations and Proving Grounds in Georgia. ISTC, #G-369. Elaboration of a new strategy of phytoremediation and long-term protection of the environment polluted by hydrocarbons. ISTC #G-718. Project manager.
- Microbial diversity for novel biotechnology applications. STCU #P-196. Partner Project. Financed by DOE. Partner LBNL, USA. Project manager.
- Bacteriophage, an effective biological tool against plant diseases caused by pathogenic bacteria. ISTC #G-1129. Project manager.
- Novel approach for the improvement of ecological guarantee of oil pipelines. STCU 3802.
- Establishment of a Biotechnological Network of Regional Microbial Culture Collections in the Caucasus. CRDF_SCCRP, SCI-010002-SC-05.
- Creation of a novel complex phytoremediation technology for rehabilitation of soils and waters polluted with explosives. ISTC G-1408.
- Biopreparation against tomato bacterial spot. STCU- GNSF #5001. Project manager.
- Haricot bacteriosis in Georgia: isolation and study of causative pathogens *Xanthomonas phaseoli* and *Pseudomonas phaseolicola* and specific bacteriophages for their biological control #GNSF # 1-8/35. Project manager.
- New technology of complex phytoremediation of soils on basis of biosurfactants and biodiesel plants. STCU # 4784.
- Development of a novel, cost-effective bioprocess for production of fuel ethanol from herbaceous lignocellulosic wastes. ISTC. G-1624. 2009-20011. Project manager.
- Evaluation of certain microbial strains and certain plant components for potential commercial application. Funding by PIONEER. CRDF- GEB2-30016-TB-10 (GAP). 2010-2013.
- PIONEER. CRDF- GEB1-30029-TB-12. Bacterial and Micro Fungal Strains Capable of Degrading Certain Herbicides.
- PIONEER. CRDF- GEB1-30037-TB-13. Bacterial and Micro Fungal Strains Capable of Degrading Certain Herbicides.
- Targeted Discovery of Lignocellulose-Deconstructing Enzymes from Extremophilic Fungi. LBNL-0223-GE / STCU P-433. 2010-2012. Project manager.
- Isolation and characterization of probiotics that selectively grow on milk oligosaccharides. LBNL-0225-GE / STCU P-509. 2011-2013.
- Extremophilic mycelial fungi stable enzymes for the creation of biotechnology of production of fuel-bioethanol from agricultural and industrial lignocellulosic wastes. ISTC. G-2117. Project manager.
- Potato Ring Rot in Georgia and Diversity of Causative Pathogen *Clavibacter*. Regional Cooperative Research Grant project #60958, funded by the U.S. Defense Threat Reduction Agency through CRDF Global/GRDF". 2014-2017. Project manager.

KNOWLEDGE OF LANGUAGES:

Georgian native, Russian, English fluently.

PUBLICATIONS:

Monographs:

Kvesitadze, G., Khatisashvili, G., Sadunishvili T., Evstigneeva Z. *Metabolism of Anthropogenic Toxicants in Higher Plants*. Nauka, 2005, 200 pages, Moscow. ISBN 5-02-033440-5. (In Russian).

Kvesitadze, G., Khatisashvili, G., Sadunishvili, T., Ramsden, J.J. *Biochemical Mechanisms of Detoxification in Higher Plants. Basis of Phytoremediation*. 262p. Springer, 2006.

Papunidze I., Khatisashvili G., Sadunishvili T. *Plant for a Healthy Environment*. Batumi, 2005. 229p.

Book Chapters:

1. Kvesitadze E., T. Sadunishvili, G.Kvesitadze. Ecological Potential of Plants. Chapter 11, in: *Advanced Bioactive Compounds Countering the Effects of Radiological, Chemical and Biological Agents. Strategies to Counter Biological Damage*. Ed: Grant N. Pierce, Volodymyr I. Mizin, Alexander Omelchenko. **Springer**, 2012, p.133-143.
<http://link.springer.com/book/10.1007/978-94-007-6513-9/page/2>
2. Kvesitadze Giorgi, Gia Khatisashvili, Tinatin Sadunishvili. Metabolism of ¹⁴C-containing contaminants in plants and microorganisms: in: Dharmendra Kumar Gupta Clemens Walther *Editors: Radionuclide Contamination and Remediation Through Plants*, 978-3-319-07664-5, 320979, pp 254-270. **Springer** 2014.
3. Sadunishvili T., Kvesitadze E., Kvesitadze G. *Xanthomonas vesicatoria* specific virus and its potential to prevent tomato bacterial spot disease. Chapter in: *Nanotechnology to Aid Chemical and Biological Defence*. T.A. Camesano Ed., **Springer**, The Netherlands, **2015**. 333-372.
4. Kvesitadze E., Urushadze T., Sadunishvili T., Kvesitadze G. Industrial Engineering. In: *EBTNA Text Book. Current Biotechnology and Applications*. 2015, 105-140.
5. Kvesitadze Giorgi, Khatisashvili Gia, Sadunishvili Tinatin, Kvesitadze Edisher. Plants for Remediation: Uptake, Translocation and Transformation of Organic Pollutants. in: M.Ozturk et al., Eds: *Plants, Pollutants and remediation*. **Springer, Dordrecht, Heidelberg, New York, London**. 2015, 241-308.

Papers

1. Sadunishvili, T.A., Nutsubidze, N.N. Kinetic properties of malate dehydrogenase of lemon. *Proceedings of the Georgian Academy of Sciences, Biological Series*. 1979, 5, 4, 327-333. (In Russian).

2. Sadunishvili, T.A., Nutsubidze, N.N. Glutamate dehydrogenase of lemon leaves. *Bulletin of the Georgian Academy of Sciences*. 1980, 97, 1, 177-180. (In Russian).
3. Sadunishvili, T.A., Nutsubidze, N.N. Subcellular localization of malate and glutamate dehydrogenases in lemon leaves. *Bulletin of the Georgian Academy of Sciences*. 1980, 100, 3, 693-696. (In Russian).
4. Sadunishvili, T.A. Effect extremal pH and urea on malate and glutamate dehydrogenases of lemon. *Bulletin of the Georgian Academy of Sciences*. 1981, 101, 1, 149-152. (In Russian).
5. Sadunishvili, T.A., Nutsubidze, N.N. The influence of ammonia on glutamine synthetase and glutamate dehydrogenase in vivo and their intracellular localization in kidney bean leaves. *Biokhimiya*. 1985, 50, 3, 820-825. (In Russian)
6. Sadunishvili, T.A., Nutsubidze, N.N. Multiple molecular forms of glutamate dehydrogenase in kidney bean. *Prikl. Biokhim. Mikrobiol.*, 1986, 22, 337-340.
7. Sadunishvili T.A., Gvarliani N.Z., Nutsubidze N.N. Primary assimilation of ammonia in kidney bean leaves. *Biochemistry* (Moscow). 1989, 3, 397-401.
8. Sadunishvili, T., Gvarliani, M. Nutsubidze, N., Kvesitadze, G. Enzymatic mechanism of ammonia excess detoxication in kidney bean. *Fresenius Environmental Bulletin*. 1993, 2, 534-539.
9. Kvesitadze, G.I., Kokonashvili, G.N., Sadunishvili, T.A. Enzymes of nitrogen and energy metabolism from the liver of spiny dogfish and in the preparation Katrex. *Applied Biochemistry and Microbiology*. 1993, 29, 1, 102-106.
10. Sadunishvili, T. Multiple molecular forms, subcellular localization and physiological function of glutamine synthetase, glutamate synthase and glutamate dehydrogenase in kidney bean. *Breakthrough*, 1995, 15-5.
11. Садунишвили Т.А. Влияние света, нитрата и аммония на ферредоксин и НАДН-зависимые глутаматсинтазы фасоли. *Прикладная Биохимия и Микробиология* 1996, 32, 2, 251-253. (ISSN 0522-9310).
12. Sadunishvili, T., Gvarliani N., Nutsubidze, N., Kvesitadze, G. Effect of methionine sulfoximine on nitrogen metabolism and externally supplied ammonium assimilation in Kidney bean. *Ecotoxicol. Environ. Safety*. 1996, 34, 70-75.
13. Sadunishvili T. Effects of light, nitrate and ammonium on bean ferredoxin- and NADH-dependent glutamate synthases. *Applied Biochemistry and Microbiology*. 1996, 32, 2, 231-233.
14. Садунишвили Т.А. Орган-специфическое распределение и внутриклеточная локализация ферредоксин и НАД-специфичных глутаматсинтаз в листьях фасоли.

Физиология и Биохимия Культурных Растений. 1997, 29, 2, 133-138. (ISSN 0522-9310).

15. Sadunishvili T., Gvarliani N., Nutsbidze N. The pathway of ammonium primary assimilation in kidney bean. *Journal of Agriculture and Forestry*. 1997, 21, 551-556.
16. Садунишвили Т. Метаболические пути ассимиляция аммония в корнях фасоли. *Физиология и Биохимия Культурных Растений*. (ISSN 0522-9310). . 2000, 32, 1, 35-40
17. Buadze, O., Sadunishvili, T., Kvesitadze, G. The effect of 1,2-benzanthracene and 3,4-benzpyrene on the ultrastructure of maize cells. *International Biodeterioration and Biodegradation*. 1998, 41, 119-125.
18. Sadunishvili T., Betsiashvili M., Kuprava N., Nutsbidze N., Kvesitadze G. Preparation of valuable food protein and amino acid mixtures from soybean. *Biotechnology 2000. The World Congress on Biotechnology*. 3-8 September 2000. Book of Abstracts. V.3. p.226-228.
19. Zaalishvili G., Ebelashvili M., Varazashvili T., Pruidze M., Sadunishvili T. Influence of nitrobenzene different concentrations on maize root tip cells ultrastructure. *Biotechnology 2000. The World Congress on Biotechnology*. 3-8 September 2000. Book of Abstracts. V.3. p.412-414.
20. Kuprava, N., Betsiashvili, M., Sadunishvili, T., Nutsbidze, N. Ammonia assimilation in soya seedlings of different varieties. *Bulletin of the Georgian Academy of Sciences*, 2000, vol. 162, No 3, 549-551.
21. Zaalishvili, G., Lomidze, E., Buadze, O., Sadunishvili, T. Tkhelidze, P., Kvesitadze, G. Electron microscopic investigation of benzidine effect on maize root tip cells ultrastructure, DNA synthesis and calcium homeostasis. *International Biodeterioration and Biodegradation*. 2000, 46, 2, 133-140.
22. Kvesitadze G., Gordeziani M., Khatishashvili G., Sadunishvili T., Ramsden J.J. Review: Some aspects of the enzymatic basis of phytoremediation. *Journal of Biological Physics and Chemistry*, 2001, 1, 2, 49-57.
23. Zaalishvili, G., Sadunishvili, T., Scalla, R. Laurent, F. and Kvesitadze, G. Electron Microscopic Investigation of Nitrobenzene Distribution and Effect on Plant Root Tip Cells Ultrastructure. *Ecotoxicol. Environ. Safety*, 2002, 52, 3, 190-197.
24. Sadunishvili T., Omiadze N., Kvesitadze G. and Rodriguez – Lopez J-N. Thermostability and storage of horseradish and tea plant peroxidases. In: *Plant peroxidases. Biochemistry and Physiology*. Eds: Acosta M; Rodriguez-Lopez J-N. and Pedreno M.A. University of Murcia and University of a Coruna. 2002, p. 289-291.
25. Betsiashvili M., Sadunishvili T., Gigolashvili G., Nutsbidze N., Kvesitadze G. Valuable food protein preparation from soybean. *Advances in Food Sciences*, 2002, 24, 1, 20-23.
26. Betsiashvili, M., Kuprava, N., Sadunishvili, T., Nutsbidze, N. Study of the Georgian Soybean Varieties for Preparation of Valuable Food Protein. *Bulletin of the Georgian Academy of Sciences*, 2002, vol. 165, No 2, 358-360.

27. Betsiashvili, M., Kuprava, N., Sadunishvili, T., Nutsubidze, N. Study of the Soybean Protein Amino Acid Composition and Preparation of High Nutritional Value Food Protein Product, *Bulletin of the Georgian Academy of Sciences*, 2003, vol. 167, No 1, 130-133.
28. Omiadze N., Parlar H., Leupold G., Mchedlishvili N., Gulua L. Akhvlediani K., Abutidze M., Sadunishvili T., Rodriguez-Lopez J.N., Kvesitadze G. Inhibition of apple phenoloxidase and peroxidase by phenolics of tea leaves. *Advances in Food Sciences*. 2004, 26, 1, 26-31. (ISSN 1431-7737. www.psp-parlar.de).
29. Betsiashvili M., Sadunishvili T., Kuprava N., Amashukeli N., Tsulukidze N., Nutsubidze N. Effect of different concentrations of alkanes on maize, ryegrass and kidney bean seedlings. *Proc. Georgian Acad. Sci., Biol Ser.B*. 2004, 2, N 1-2, 1-5.
30. Mchedlishvili N., Zamtaradze R., Sadunishvili T., Omiadze N., Gulua L. Effect of different inhibitors on phenoloxidase activity from green husk of walnut (*Juglans regia L.*). *Proc. Georgian Acad. Sci., Biol Ser.B*. 2004, 2, N 1-2, 16-19.
31. Gogniashvili M., Kolot M., Sadunishvili T. Localization and mechanism of action of the ColA plasmid DNA region determining its stable inheritance *Proc. Georgian Acad. Sci., Biol Ser.B*. 2004, 2, N 3-4, 8-13.
32. Alyabyev A., Gordon L., Loseva N., Rachimova G., Tribunskih V., Estrina R., Sadunishvili T., Gulua L., Mchedlishvili N., Rodriguez-Lopez J.N.: A natural inhibitor isolated from tea leaves and its effect on energy processes in model plants. *Thermochimica Acta* 2004, 422, 109-113.
33. Betsiashvili M., Sadunishvili T., Amashukeli N., Tsulukidze N., Shapovalova N., Dzamukashvili N., Nutsubidze N. Effect of aromatic hydrocarbons on main metabolic and energetic enzymes in maize, ryegrass and kidney bean seedlings. *Bulletin of the Georgian Academy of Sciences*, 2004, vol. 170, No 1, 172-174.
34. Gigolashvili G., Amashukeli N., Sadunishvili T., Betsiashvili M., Tsulukidze. Establishment of Cereal Cultures Interspecific Differences by the Method of Isoelectrofocusing. *Bulletin of the Georgian Academy of Sciences*, 2004, vol. 170, No 2, 367-369.
35. Lomsianidze I., Sadunishvili T., Dzamukashvili N., Nutsubidze N. Effect of systematic introduction of ammonium nitrate on properties of Ajameti podzolic soil. *Proc. Georgian Acad. Sci., Biol Ser.B*. 2005, 3, N 1, 11-16.
36. Lomsianidze I., Amashukeli N., Sadunishvili T. The effect of ammonium nitrate doses on amino acid content of proteins in maize grains. *Bulletin of the Georgian Academy of Sciences*. 2005, 171, N 1, 145-147.
37. Betsiashvili M., Sadunishvili T., Nutsubidze N., Kuprava N. The effect of different concentrations of hydrocarbons on main metabolic and energetic processes of plants. In: *Annual Research Report of the Frontier Research Center for the Global Environment Science*. Tokyo, Japan. 2005, Vol.7, p.441-444.

38. Lomsianidze I., Amashukeli N., Sadunishvili T. Effect of the introduction of different doses of ammonium nitrate in podzolic soil on maize var. Ajametis tetri seed protein content. *Proc. Georgian Acad. Sci., Biol Ser.B.* 2005, 3, N 2, 16-20.
39. Mchedlishvili N., Omiadze N., Gulua L., Abutidze M., Sadunishvili T., Zamtaradze R., Kvesitadze G., & Bendeliani E. Thermostability of plant phenoloxidase and Peroxidase Determining the Technology of their Use in Food Industry. *Appl. Biochem. Microbiol* 2005, 41, 2, 165-170.
40. Mitaishvili T., Scalla R., Ugrekhelidze D., Tsereteli B., Sadunishvili T., Kvesitadze G. Transformation of aromatic compounds in plants grown under aseptic conditions. *Zeitschrift fur Naturforschung* 60c. 97-102, 2005.
41. Best E.P.H., Kvesitadze G., Khatisashvili G., Sadunishvili T. Plant processes important for the transformation and degradation of explosives contaminants. *Zeitschrift fur Naturforschung* 60c, 340-348, 2005.
42. Hidaka, H. Sadunishvili T., Ramsden J., Aplakov V., Kvesitadze G. Environmental contamination and phytoremediation technologies. *Annals of Agrarian Science*, 3, 4, 9-21, 2006.
43. Kuprava, N., Betsiashvili, M., Dzamukashvili N., Sadunishvili, T., Nutsbidze, N. Influence of Rhizobium and free-living nitrogen fixing bacteria on nitrogen assimilation enzymes of soybean plant. *Bulletin of the Georgian Academy of Sciences*, 2006, vol. 173, No 2, 348-351.
44. Sadunishvili T., Kuprava N., Aplakov V., Betsiashvili M., Zaalishvili G., Mithaishvili T., Kvesitadze G. Effect of nitrobenzene on ammonia assimilation enzymes and cell ultrastructure in maize and soybean. *Proc. Georgian Acad. Sci., Biol Ser.B.* 2006, 4, N 2, 16-22.
45. Navaro Peran E., Cabezas-Herrera J., Hiner A.N.P., Sadunishvili T. Garcia-Canovas F., Rodrigues-Lopez J.N. Kinetics of the inhibition of bovine liver dihydrofolate reductase by tea catechins: origin of slow-binding inhibition and ph studies. *Biochemistry*, 44 (20), 7512 - 7525, 2005.
46. Ghudumidze N., Chkonia I. Shapovalova N., Sadunishvili T., Meipariani A. Study of bacteriophages against tomato with some bacterial etiologies. *Proc. Georgian Acad. Sci., Biol. Ser. B*, Vol. 4, No. 4, 2006, 21-24.
47. Chrikishvili D., Sadunishvili T., Zaalishvili G. Benzoic acid conjugation and the final fate of conjugates in higher plants. *Ecotoxicol. Environ. Saf*, 2006, 64, 3, 390-399.
48. Ghudumidze N., Alavidze Z., Chkonia I. Eliashvili P., Giorgobiani N., Shapovalova N., Meipariani A., Sadunishvili T. Effective controlling of bacterial spot in tomato with bacteriophage. *Proc. Georgian Acad. Sci., Biol. Ser. B*, Vol. 5, No. 1, 2007, 8-11.

49. Betsiashvili M., Sadunishvili T., Kuprava N., Dzamukashvili N. Study of changes in activities of key plant metabolic and oxidative enzymes in tomato plant leaves and fruits at different stages of bacterial infection. Proceedings of the International Workshop: "*Plant & Microbial Enzymes: isolation, characterization and biotechnology applications*", 2007, Tbilisi, pp. 48-51.
50. Sadunishvili T., Torok T., Kutateladze L., Gagelidze N., Pataria D., Kvesitadze E. Collection of extremophilic microorganisms from the area of Caucasus source for stable enzymes. Proceedings of the International Workshop: *Plant and microbial enzymes: isolation, characterization and biotechnology applications*. 2007, Tbilisi, p.79-84.
51. Gudumidze N., Amashukeli N., Shapovalova N., Tsulukidze N., Sadunishvili T., Giorgobiani N. Peroxidase and Phenoloxidase activities and multiple molecular forms in leaves of tomato artificially infected by *Xanthomonas vesicatoria* and treated by phage. Proceedings of the International Workshop: "*Plant & Microbial Enzymes: isolation, characterization and biotechnology applications*". 2007, Tbilisi, pp. 100-102.
52. Amashukeli N., Sadunishvili T., Gaganidze D., Eliashvili T., Pantsulaia T. Comparative analysis of peroxidase isozyme spectra of control and infected by phytopathogenic bacteria tomato and cabbage by means of gel-electrophoresis. Proceedings of the International Workshop: "*Plant & Microbial Enzymes: isolation, characterization and biotechnology applications*". 2007, Tbilisi, p. 98-99.
53. Ghudumidze N., Shapovalova N., Giorkhelidze D., Zaalishvili G., Sadunishvili T. The morphological properties of phages specific for *Xanthomonas vesicatoria* tomato bacterial strains. *Proc. Georgian Acad. Sci., Biol. Ser. B*, Vol. 5, No. 2, 2007, 26-30.
54. Betsiashvili M., Kuprava N., Sadunishvili T. Selection criteria for plants application in phytoremediation technologies. 4th International Bioremediation Conference, Crete September 3-6, 2008. Conference Proceedings, ID022, 21-24 pages.
55. T.Sadunishvili. T.Mitaishvili, G.Kvesitadze: Uptake and degradation of aromatic compounds by higher plants //Proceedings of the International Conference on Contamination Soil (ConSoil 2008), Milano, Italy, pp.89-93.
56. Kvesitadze E., Kirtadze E., Sadunishvili T. Genetically modified food. *Annals of Agrarian Science*, 7, 1, 2009, 100-109.
57. Sadunishvili T, Kvesitadze E., Betsiashvili M., Kuprava N., Zaalishvili G., Kvesitadze G. Influence of Hydrocarbons on Plant Cell Ultrastructure and Main Metabolic Enzymes. *World Academy of Science, Engineering and Technology*, ISSN 2070-3724. Vol.57, 2009, p.271-276.
58. Kvesitadze E., Sadunishvili T., Kvesitadze G. Mechanisms of Organic Contaminants Uptake and Degradation in Plants. *World Academy of Science, Engineering and Technology*, ISSN 2070-3724. Vol.55, 2009, p.458-468.

59. Khatisashvili G, Gordeziani M., Adamia G., Kvesitadze E., Sadunishvili T., Kvesitadze G. Higher Plants Ability to Assimilate Explosives. *World Academy of Science, Engineering and Technology*, ISSN 2070-3724. Vol.57, 2009, p.265-270.
60. Sadunishvili T., E.Kvesitadze, M.Betsiashvili, N.Kuprava, N.Amashukeli, G.Zaalishvili. Plant basic metabolism enzymes and cell ultrastructure under contamination stress. *The Ukrainian Biochemical Journal*, 2009, Vol. 81, #4, p.310-13.
61. Gaganidze D., Sadunishvili T., Kvesitadze E. Detection of Selectable Marker Genes for Estimation of Safety of Gene Modified Food. *Annals of Agrarian Science*. 2010, Vol.8, No 3, p.32-37.
62. Kvesitadze G., Sadunishvili T., Dudaury T., Metreveli B., Partskhaladze G., Ugrekheldze V. Fermentation of cellulose and hemicellulose carbohydrates to ethanol and hydrogen by anaerobic saccharolytic bacteria. 4th International Conference “Trends in Agricultural Engineering 2010”, 7-10 September, 2010, Prague, Czech Republic. Conference Proceedings, p. 373-377.
63. Ghudumidze N., Chokheli L, Sadunishvili T. Some biological and Physical-Chemical properties of *X.vesicatoria* specific phage. *Annals of Agrarian Science*. 2011, Vol.9, No 2, p.62-66.
64. G. Kvesitadze, T. Sadunishvili, T. Dudaury, N. Zakariashvili, G. Partskhaladze, V. Ugrekheldze, G. Tsiklauri, B. Metreveli, M. Jobava. Two-stage anaerobic process for bio-hydrogen and bio-methane combined production from biodegradable solid wastes. *Energy*, 2012, vol.37, #1, p.97-102. <http://dx.doi.org/10.1016/j.energy.2011.08.039>.
65. Sadunishvili T., Giorgobiani N., Amashukeli N., Betsiashvili M., Kuprava N., Zaalishvili G. Strategy of Biological Control of Phytopathogenic Bacteria in Georgia. *Annals of Agrarian Science*, vol. 10, no.2, 2012. p.62-66.
66. Sadunishvili T., Gaganidze D., Giorgobiani N., Sturua N., Gamkrelidze M., Kharadze Sh. Bacterial diseases of haricot and certain biological peculiarities of their causative agents. International Scientific Practical Conference “*Innovative Technologies and environment protection*”. Kutaisi, Conference Proceedings 2012. p. 190-192.
67. Giorgobiani N., Sadunishvili T., Betsiashvili M., Kharadze Sh., Amashukeli N., Kuprava N. The damage to haricot culture caused by bacterioses. International Scientific Practical Conference “*Innovative Technologies and environment protection*”. Collection of Works. Kutaisi, 2012. p. 123-125.
68. Sadunishvili T., Amashukeli N., J.N. Rodriguez-Lopez, S.Chezarra, Gaganidze D., Mchedlishvili N., Omiadze N., Kvesitadze G. Oxidative enzymes and peroxidase isoforms in tomato affected by bacterial spot and bacterial canker. Conference Book. 2nd International Scientific Conference dedicated to the 70th Anniversary of the National Academy of Sciences of Armenia. 2013, p.124-128.

69. Omiadze N., Sadunishvili T., J.N. Rodriguez-Lopez, et al., Study of effect of products of catechin oxidation on the activity of apple phenoloxidase and peroxidase. Conference Book. 2nd International Scientific Conference dedicated to the 70th Anniversary of the National Academy of Sciences of Armenia. 2013.
70. Gaganidze D, Sadunishvili T., Amashukeli N., Sturua N., Gamkrelidze M. Establishing Taxonomy of Pathogenic Bacteria, Causative Agents of Haricot Bacterioses Spread in Different Regions of Georgia by 16S rDNA Fragments. «*Bulletin of the Georgian National Academy of Sciences*, 2013, V.7, 2, p. 130-135.
71. Gaganidze D., Gujabidze I., Sadunishvili T., Gigolashvili G. Elaboration of nuclear polyhedrosis virus detection method in eggs of mulberry silkworm. *The Journal of Ecology*. 2014, 108, 336-34.
72. Biochemical Processes at the Stage of Withering during black Tea Production. N.Omiadze, N.Mchedlishvili, J.N.Rodriguez-Lopez, M. Abutidze, T.Sadunishvili, N.Pruidze. *Appl. Biochem. Microbiol.*, 2014, Vol. 50, No 4, pp.394-397. (DOI)10.1134/S0003683814040103.
73. Mchedlishvili N. I., Omiadze N. T., Abutidze M. O., Rodrigez_Lopez J. N., T. A. Sadunishvili J. N. , Gurielidze M. A., Kvesitadze G.I. Investigation of phenolic content, antioxidant and antimicrobial activities of natural food red colorant from *Phytolacca americana* l. Fruits. *Annals of Agrarian Science*, 2014, Vol. 12, No. 3, pp. 71–75.
74. Abutidze M.O., Omiadze N.T., Mchedlishvili N. I., Rodrigez-Lopez J-N., Sadunishvili T.A., Kvesitadze G.I. New antiviral herbal remedies for herpes simplex and herpes zoster. *Annals of Agrarian Science*, 2014, Vol. 12, No. 3, pp. 15–17.
75. Sadunishvili T., Sturua N., Gamkrelidze M., Amashukeli N. Biological and Physico-Chemical Properties of *X. phaseoli* Specific Phages. *Annals of Agrarian Science*, 2014. vol. 12, no. 3. p. 44-48.
76. Sadunishvili T. Plants Potential for their Application in Phytoremediation with the aim of Production of Healthy Food. *Annals of Agrarian Science*, 2014. vol. 12, no.3, p.39-43.
77. Bokulich N., Amiranashvili L., Chitchyan K., Ghazanchyan N., Gagelidze N., Sadunishvili T. et al., Microbial biogeography of the transnational fermented milk Matsoni. *Food Microbiology*, 2015, 50, 12-19.
78. Kutateladze L. Y., Zakariashvili N.G., Jobava M.D., Burduli T.A., Sadunishvili T.A. Microscopic fungi spread in different types of soils in Western Georgia. *Annals of Agrarian Science*, Volume 14, Issue 3, September 2016, Pages 227-232.
79. Gagelidze N., Amiranashvili L., Varsimashvili Kh., Tinikashvili L., Tolordava L, Sadunishvili T. Selection of effective biosurfactant producers among *Bacillus* strains isolated from soils of Georgia. *Annals of Agrarian Science*. 14, 2, 2016, 72–75.

80. Gaganidze D. L., M. A. Aznarashvili, T. A. Sadunishvili, E.e O. Abashidze, M. A. Gurelidze, E. S. Gvritishvili. Fire blight in Georgia. *Annals of Agrarian Science* (2018), vol.16, No 10, p.12-16. <https://doi.org/10.1016/j.aasci.2018.02.001>
81. Gagelidze, N. A., L. L. Amiranashvili, T. A. Sadunishvili, Giorgi I. Kvesitadze, T. F. Urushadze, T. O. Kvrivishvili. Bacterial composition of different types of soils of Georgia. *Annals of Agrarian Science* (2018), vol.16, No 10, p.17-21. <https://doi.org/10.1016/j.aasci.2017.08.006>
82. Amashukeli N., Gaganidze D., Sturua N., Khradze Sh., Sadunishvili T. Influence of Lignohumate on tomato seeds germination and growth under inoculation with bacterial spot causative pathogen *Xanthomonas vesicatoria* . *Plant & Fungal Research* (2018) 1(1): 28-32.
83. R. Khvedelidze, N. Tsiklauri, L. Kutateladze, T. Sadunishvili, et al. Enzymatic Hydrolysis of Lignocellulosic Agricultural Wastes to Fermentable glucose. *Agri Res & Tech: Open Access J.* 2018; 17(5): 556042. DOI: 10.19080/ARTOAJ.2018.17.556042.

Patent:

N.Ghudumidze, T.Sadunishvili, E. Kvesitadze. Treatment-prophylaxis means against tomato bacterial spot. P4860. 2008.

Conference Proceedings:

1. Sadunishvili, T.A., Nutsubidze, N.N. Two molecular forms of glutamate dehydrogenase of kidney bean. Proceedings of the Joint Symposium of the USSR and France. *Structure and Function of Proteins and Nucleic Acids*. Tskaltubo.1982, p.121.
2. Sadunishvili, T.A., Nutsubidze, N.N. Subcellular localization and induction of synthesis of glutamine synthetase in kidney bean leaves. *Proceedings of the 16th FEBS Conference*. Moscow, 1984, p.238.
3. Sadunishvili T.A., Gvarliani N.Z., Nutsubidze N.N. Some aspects of ammonia assimilation in kidney bean. *III Magyar novenyelettani kongresszus. Magyar tudomanyos academia. Szegedi biologiai kozpont*. 1988, p. 30.
4. Nutsubidze, N., Vakhania, N., Sadunishvili, T., Giunashvili, N. Regulation of nitrogen assimilation and fixation enzymes action in kidney bean. In: *Abstracts of 14th International Congress of Biochemistry*. 1988, Prague, Czechoslovakia.
5. Sadunishvili, T., Nutsubidze, N. Different pathways of ammonia assimilation in leaves and roots of kidney bean. In: *Nitrogen Fixation: Fundamentals and Applications* (Eds. I.A.Tikhonovich, N.A.provorov, V.I.Romanov, W.Newton). Kluwer Academic Publishers. Dordrecht (Bosston) London. 1995, p.594.
6. Kvesitadze, G., Sadunishvili, T. Effect and mechanism of action of amino acid preparations of Inagrosa on ammonia assimilation and cell protein synthesizing apparatus in legumes. Proceedings of the Conference on Plant proteins from European crops. Food and Non-Food Applications. Nantes, France. 1996. p. 23-26.
7. Sadunishvili,T., Betsiashvili, M., Kuprava, N., Nutsubidze, N., Kvesitadze,G. Preparation of valuable food protein and amino acid mixtures from soybean. *Biotechnology 2000. The World Congress on Biotechnology*. 3-8 September 2000. ICC-Berlin. Book of Abstracts. V.3. p.226-228.

8. Zaalishvili G., Ebelashvili M., Varazashvili T., Pruidze M., Sadunishvili T. Influence of nitrobenzene different concentrations on maize root tip cells ultrastructure. *The World Congress on Biotechnology*. 3-8 September 2000. Book of Abstracts.
9. Sadunishvili T., Omiadze N., Kvesitadze G. and Rodriguez – Lopez J-N. Thermostability and storage of horseradish and tea plant peroxidases. VI International Plant Peroxidase Symposium, Murcia, 3-7 July, 2002. www.unige.ch/LABPV/Book_of_Abstracts.html
10. Navarro-Perán E., Cabezas-Herrera J., García-Cánovas F., Sadunishvili T., Rodríguez-López J.N. Effect of tea polyphenols on several plant and animal enzymatic systems. 1st International Conference on Polyphenols and Health. November 18-21, 2003, Conference Hall – Opera, Vichy France. www.evicevents.com/polyphenols/poster.html
11. Kvesitadze G., Mitaishvili T., Sadunishvili T. Absorption and transformation of benzene derivatives in plants. 8th International FZK/TNO Conference on Contaminated Soil. May 12-16, 2003. Gent, Belgium (PPP, SpS 10).
12. Ugrekhelidze, D., Sadunishvili, T., Kvesitadze, G. Absorption and transformation of gaseous alkanes by higher plants. 11th European Congress on Biotechnology Basel, Switzerland, August 26-29, 2003. Abstracts. p.129.
13. Alyabyev A.Ju., Gordon L.Kh., Loseva N.L., Andreyeva I.N., Tribunskich V.I. Sadunishvili T., Neptuno Rodriguez-Lopez. The influence of new inhibitor isolated from tea leaf on energetic processes of plant cells. *The abstract books of V Congress of Russian Plant Physiology Society*, Penza, Russia, 2003, p.21.
14. Kvesitadze G., Kutateladze L., Aleksidze T., Sadunishvili T., Kvesitadze E. Extremophilic microscopic fungi from the southern slopes of the Caucasus as a producers of stable enzymes. FEMS Congress of European Microbiologists. Slovenia, June 29-July 3, 2003. Abstract Book, Published by Elsevier, p.149.
15. Janelidze N., Koberidze T., Porckidze K., Tediashvili M., Akhvlediani K., Sadunishvili T., & Rodriguez- Lopez J.N.. Assessment of antibacterial efficacy of microbial inhibitors of plant origin. *Abstract for International Conference Food- MICRO*, Slovenia, 2004.
16. Kvesitadze G., Best E.P.H., Khatisashvili G., Sadunishvili T. Plant processes important for the transformation and degradation of explosives contaminants. OECD Workshop. Phytoremediation: Environmental and Molecular Biological Aspects. September 9-12, 2004. Matrahaza, Hungary. Book of Abstracts, p.55.
17. Sadunishvili T., Betsiashvili M., Zaalishvili G., Kvesitadze G. Structural-functional changes in plant cell as a result of aromatic hydrocarbons penetration. The 15th Annual AEHS Meeting and West Coast Conference on Soils, Sediments and Water. March 14-17, San-Diego, 2005. Abstracts.
18. Betsiashvili M., Sadunishvili T., Kvesitadze G. Plant response on aromatic hydrocarbons penetration. Third International Conference on Plants&Environmental Pollution. (ICPEP-3), 29 November-2 December, 2005, Lucknow (India). Book of Abstracts. P.97-98.
19. Sadunishvili T. Extremophilic microorganisms from the Southern slopes of the Caucasus Mountains. Pacific Rim Summit on Industrial Biotechnology and Bioenergy, Honolulu, HI, January 11-13, 2006.
20. Sadunishvili T., Giorgobiani N., Eliashvili P. Phytopathogenic bacteria collection and study of vegetable bacteriosis in Georgia. Proceedings of the Annual General Meeting of the European Culture Collections' Organization. p.203. Budapest, Hungary, June 7-10, 2006.
21. Sadunishvili T., Kvesitadze E., Torok T., Kvesitadze G. Stable carbohydrases isolated from thermophilic fungi strains. 6th European Symposium on Biochemical Engineering Science, Salzburg, Austria, 27-30 August, 2006. Book of Abstracts, p. 285,

22. Ghudumidze N., Shapovalova N., Amashukeli N., Sadunishvili T., Kropinski A. M. Biological control of tomato bacterial spot with bacteriophage in green-house conditions. *17th International Meeting on Phage Biology, Evergreen, 2007.*
23. Kvesitadze G., Torok T., Sadunishvili T., Aleksidze T. Fungal α -amylases and their use in industrial processes. 3rd Slovenian Congress - Food processing – Innovation – Nutrition – Healthy Consumers. Radenci, Slovenija, 23-26 September, 2007. Book of Abstracts, p.147.
24. Afrikian, E., Akhoundova, E., Goginyan, V.,¹ Ismaylov, N.,² Kvesitadze, G., Sadunishvili, T. and Torok, T. Establishment of a network of culture collection resources in the Caucasus region. ECCO 26, Goslar, October 11-12, 2007. Proceedings of the 26th Annual general Meeting of the European Culture Collections' Organization, Poster 18. page 73.
25. Ghudumidze N., Amashukeli N., Shapovalova N., Tsulukidze N., Sadunishvili T., Giorgobiani N. Peroxidase and phenoloxidase activities and multiple molecular forms in leaves of tomato artificially infected by *Xanthomonas vesicatoria* and treated by phage. Proceedings of the International Workshop: Plant and microbial enzymes: isolation, characterization and biotechnology applications. 2-5 July, 2007, Tbilisi, Georgia. p.100-102.
26. Betsiashvili M., Sadunishvili T., Kuprava N., Dzamukashvili N. Study of changes in activities of key plant metabolic and oxidative enzymes in tomato plant leaves and fruits at different stages of bacterial infection. Proceedings of the International Workshop: Plant and microbial enzymes: isolation, characterization and biotechnology applications. 2-5 July, 2007, Tbilisi, Georgia. p.48-51.
27. Sadunishvili, T. and Torok, T. , Kutateladze L., Gagelidze N., Pataraiia D., Kvesitadze E. Collection of extremophilic microorganisms from the area of Caucasus source for stable enzymes. Proceedings of the International Workshop: Plant and microbial enzymes: isolation, characterization and biotechnology applications. 2-5 July, 2007, Tbilisi, Georgia. p.79-84.
28. Elisashvili, V., Kutateladze-Sulamanidze, L., Kvesitadze, G., Sadunishvili, T., Shishido, K., Torok, T. High efficiency, lignocellulose-degrading enzymes for biofuel production. Pacific Rim Summit on Industrial Biotechnology and Bioenergy, Proceedings, pp. 38-39, September 10-12, 2008, Vancouver, Canada.
29. Kvesitadze G., Khatisashvili G., Sadunishvili T., Gagelidze N., Kharebashvili M., Ramsden J.J. On the strategy of ecological guarantee of oil pipelines. International Conference on Contamination Soil (ConSoil 2008), 03-06 June, 2008, Milano, Italy, Program, Poster B06.
30. Kvesitadze G., Ghudumidze N., Sadunishvili T., Shapovalova N. and Kropinski A.M.. Bacteriophage as a natural biocontrolling agent against tomato bacterial spot caused by *Xanthomonas vesicatoria*. 9th International Congress of Plant Pathology - ICPP 2008, Torino, Italy, August 24-29, 2008. *Journal of Plant Pathology*, Vol.90 (2, Supplement) August 2008. p. 270.
31. Sadunishvili T., Betsiashvili M., Kuprava N., Amashukeli N. and Dzamukashvili N.. Key metabolic and oxidative enzymes activities in affected by bacterial spot tomato. 9th International Congress of Plant Pathology - ICPP 2008, Torino, Italy, August 24-29, 2008. *Journal of Plant Pathology*, Vol.90 (2, Supplement) August 2008. P.239.
32. Kvesitadze G., Sadunishvili T., Shalashvili A. Soil and climate of Georgia determining extreme variety of food of the country. First European Food Congress. Food Production – Nutrition – Healthy Consumers. 4-9 November 2008, Ljubljana, Slovenia. Delegate Manual. O23.5.
33. Sadunishvili T., Ghudumidze N., Betsiashvili M., Kuprava N., Kvesitadze E. *Xanthomonas vesicatoria* specific phage for tomato bacterial spot control. International Conference & Exhibition Batumi – Spring – 2010. May 7-9, Batumi, Georgia. Programme & Abstracts, p.69.

34. Kvesitadze E., Khatishashvili G., Adamia G., Papunidze V., Gordeziani M., Sadunishvili T., Kvesitadze G. Novel biotechnological approach for the remediation of soil polluted with explosives. International Conference & Exhibition Batumi – Spring – 2010. May 7-9, Batumi, Georgia. Programe & Abstracts, p.53.
35. Ghudumidze N., T.Sadunishvili, N.Giorgobiani, E.Kvesitadze. Bacteriophage specific for *Xanthomonas vesicatoria* the causative of tomato bacterial spot in Georgia. VIRUSES OF MICROBES, Insitut Pasteur, Paris, France. June 21-25, 2010. Abstract Book. P.241.
36. Kvesitadze G., Partskhaladze G.,Sadunishvili T., Dudaury T.,Chachkhiani M., Berezhiani M., Zakariashvili N. Environmentally Friendly Biorefinery for Reprocessing Non-presorted Municipal Solid Wastes with Production of Energy and Organic-mineral Fertilizers Including Recovery of Metals and Plastics. 7th annual International New Exploratory Technologies Conference, October 19-21, 2010, Turku, Finland.
37. Sadunishvili T., N. Sturua, L.Chokheli. Bacteriophage based technology against plant bacterial diseases. 3rd Agladze Conference on Applied Chemistry. October 18-19, 2011, Tbilisi. Abstracts, p.70-71.
38. Sadunishvili T., D.Gaganidze, E.Kuprava. Bacteriophage as a tool against bacterial diseases of vegetables. International Scientific Conference – Environment and Human Being. October 28-30, 2011, Kobuleti, Georgia.
39. Sadunishvili T., D.Gaganidze, N.Giorgobiani, N.Amashukeli, G.Zaalishvili. Biological methods for protection of vegetables from bacterial diseases. Conference Biodiversity and Biotechnologies, Tbilisi, Georgia, December 5-6, 2011, p.47-50.
40. Gagelidze N., Amiranashvili N., Kirtadze E., Sadunishvili T, Kvesitadze E.. Microbial isolates from traditional dairy products of Georgia “Bacteriophages and Probiotics – Alternatives to Antibiotics”, July 1-2, 2012, Tbilisi.
41. Sadunishvili T., N. Giorgobiani, D. Sturua, N. Amashukeli, N. Kuprava, G.Kvesitadze. *Xanthomonas vesicatoria* bacteriophage for treatment of tomato bacterial spot. Viruses of Microbes, 16-20 July, 2012, Brussels, Belgium.
42. Sadunishvili T., D. Gaganidze, N.Kuprava. Bacteriophage as a tool against bacterial diseases of vegetables. Viruses of Microbes, 16-20 July, 2012, Brussels, Belgium.
43. Sadunishvili T., Giorgobiani N., Sturua N., Gamkrelidze M., Amashukeli N., Betsiashvili M., Kuprava N. Study of the efficacy of *Xanthomonas phaseoli* specific polyvalent phage against haricot brown spot in Georgia. International Scientific Conference . Biological Plant Protection, Problems and Contemporary Achievements. Agricultural University of Georgia, 24-25 September, 2012, Tbilisi, Georgia. Book of Abstracts.p.30).
44. Sadunishvili T., Giorgobiani N., Gaganidze D., Kharadze Sh. Bacterial diseases of haricot in Georgia. International Scientific Conference. Biological Plant Protection, Problems and Contemporary Achievements. Agricultural University of Georgia, 24-25 September, 2012, Tbilisi, Georgia. Book of Abstracts.p.31.
45. Sadunishvili T., Sturua N., Giorgobiani N., Amashukeli N., Mchedlishvili N., Omiadze N., Rodrigues-Lopez J.N., Kvesitadze G.. Bacteriophages specific to *Xanthomonas phaseoli* and *Pseudomonas phaseolicola* causing brown spot and angular leaf spot of haricot. EuroPhages 2012: Bacteriophage in Medicine, Food and Biotechnology, 24-26 September, 2012, Oxford, UK. p.46-47.
46. Kvesitadze G., Karpenko E., G. Khatishashvili, R. Vildanova, T. Sadunishvili, N. Gagelidze, G. Adamia, L. Amiranashvili, M. Pruidze, N. Kuprava. Using biosurfactants in phytoremediation of soil polluted with petroleum hydrocarbons. *Environmental Engineering and Management Journal: Environmental Microbiology and Biotechnology in the frame of the Knowledge-Based Bio and Green Economy*. Bologna, April 10-12, 2012. S40.

47. Sadunishvili T., G. Kvesitadze, N. Gagelidze, L. Amiranashvili, T. Burduli, L. Tolordava. Bacteria, producers of biosurfactants isolated from soils of Georgia . *Environmental Engineering and Management Journal: Environmental Microbiology and Biotechnology in the frame of the Knowledge Based Bio and Green Economy*. Bologna, April 10-12, 2012. S155.
48. Kvesitadze E., Sadunishvili T., Kvesitadze G. Ecological Potential of Plants. NATO Advanced Research Workshop “Advanced Bioactive Compounds Countering the Effects of Radiological, Chemical and Biological Agents”. Yalta, Crimea, Ukraine. May 16-19, 2012. p. 16-17.
49. Collado-Gonzalez M.M., Mchedlishvili N., Sadunishvili T., Lopez J.N.R., Montenegro M.F. A novel combined therapy to increase the sensitivity of breast cancer cells to tamoxifen. *FEBS Journal* 280, 307-308 (38th FEBS Congress, Saint Petersburg, Russia, July 6-11, 2013. *FEBS Journal, Special Issue. 38th FEBS Congress. Vol.280, Issue Supplement*).
50. Sadunishvili T., Khatisashvili G., Kutateladze L., Gagelidze N., Amiranashvili L., Kvesitadze E. Novel phytoremediation technology for cleaning of oil-polluted soils . International Conference: Environmental Changes & Conservation of Plant Diversity. 21-23 April, 2013, Baku, Azerbaijan. Conference Abstract Book. p.68.
51. Kvesitadze G, Sadunishvili T., Kvesitadze E.. Symbiotic action of plants and microorganisms as detoxicators of organic pollutants. *International Conference: Environmental Changes & Conservation of Plant Diversity*. 21-23 April, 2013, Baku, Azerbaijan. Conference Abstract Book. p.32.
52. Chazarra S., How C.W., Pruidze N., Omiadze N., Mchedlishvili N., Sadunishvili T., Kvesitadze G., Rodríguez-López J.N. Inulin, a natural plant polysaccharide, as a vehicle for delivery of colon cancer drugs. Int. conference EuroFoodChem XVII, 7-10 May, 2013, Istanbul, Turkey, p.606.
53. Abutidze M., Chazarra S., Rodríguez-López J.N., Omiadze N., Mchedlishvili N., Sadunishvili T., Pruidze N., Kvesitadze G. Tubers of topinambur (*Helianthus tuberosus* L.) introduced into Georgia as a raw material for functional food additives. Int. conference Euro FoodChem XVII, 7-10 May, 2013, Istanbul, Turkey, p.742.
54. Kvesitadze G., Omiadze N., Rodriguez-Lopez J.N., Mchedlishvili N., Abutidze M., Chazarra S., Sadunishvili T., Pruidze N. Inulin content in dry extracts of topinambur (*Helianthus tuberosus* L.) obtained by different drying methods. 6th International Symposium on RECENT ADVANCES IN FOOD ANALYSIS. November 5-8, 2013. Prague, Czech Republic. Book of Abstracts. D-10. p.213.
55. Omiadze N., G.Kvesitadze, J.N. Rodrigues-Lopez, M.Abutidze, S.Chazarra, N.Mchedlishvili, T.Sadunishvili, N.Tsertsvadze. Phenolic compounds content and antioxidant activity in the leaves of stevia (*Stevia rebaudiana*) introduced into Georgia. 6th International Symposium on RECENT ADVANCES IN FOOD ANALYSIS. November 5-8, 2013. Prague, Czech Republic. Book of Abstracts. D-9. p.213.
56. Mchedlishvili N., J.N.Rodrigues-Lopez, N.Omiadze, M.Abutidze, T.Sadunishvili, S.Chazarra, N.Pruidze, G.Kvesitadze. Stability of biologically active natural food red colorant from pokeberry (*Phytolacca americana* L) fruits. 6th International Symposium on RECENT ADVANCES IN FOOD ANALYSIS. November 5-8, 2013. Prague, Czech Republic. Book of Abstracts. D-11. p.214.
57. Sadunishvili T., N.Amashukeli, N. Rodrigues-Lopez, S.Chazarra, N.Mchedlishvili, N.Omiadze, G.Kvesitadze. Peroxidase activity and multiple molecular forms in bacterial spot and bacterial cancer diseased tomato. 6th International Symposium on RECENT ADVANCES IN FOOD ANALYSIS. November 5-8, 2013. Prague, Czech Republic. Book of Abstracts. N-1. p.381.

58. Sadunishvili T., Gaganidze D., Amashukeli N., Mchedlishvili N., Omiadze N., Abutidze M. Specific bacteriophage for safe tomato production. 6th International Symposium on RECENT ADVANCES IN FOOD ANALYSIS. November 5-8, 2013. Prague, Czech Republic. Book of Abstracts. N-4, p.382.
59. Sadinishvili T., Kvesitadze G., Gagelidze N., Amiranashvili L., Kutateladze L., Mchedlishvili N., Omiadze N. The potential of microbial culture collections from Southern slopes of Caucasus mountains to obtain bionanoparticles. The International research and practice Conference Nanotechnology and Nanomaterials - NANO 2013. Aug 29-Sept 1, 2013. Bukovel, Ukraine. Book of Abstracts. Leonid Yatsenko ed. p.385.
60. Amiranashvili L., N. Gagelidze, Kh. Varsimashvili, L. Tolordava, L. Tinikashvili, E. Kirtadze, T. Sadunishvili, G. Kvesitadze, T. Torok, D. Mills, N. A. Bokulich. Antimicrobial Activity of Lactic Acid Bacteria Isolated from Traditional Fermented Milk Products in Georgia. The International Scientific Conference on Probiotics and Prebiotics. 24 – 26 June, 2014, Budapest, Hungary, 63-64.
61. Sadunishvili T. Natural remediation technologies potential for production of safe food. International Conference on Food and Biotechnology (ICFB), September 11-12, 2014, AUG, Tbilisi, Georgia. p.7.
62. Chazarra S., Pruidze N., Tsertsvadze N., Sadunishvili T., Rodriguez-Lopez J.N. Enzymatic digestibility of cinnamate of inulin as a vehicle for the delivery of colonic drugs. International Conference on Food and Biotechnology (ICFB), September 11-12, 2014, AUG, Tbilisi, Georgia. p.27-28.
63. Abutidze M., Mchedlishvili N., Omiadze N., Rodriguez-Lopez J.N., Sadunishvili T., Chazarra S., Kvesitadze G. New antiviral herbal remedies during simplex and herpes zoster. International Conference on Food and Biotechnology (ICFB), September 11-12, 2014, AUG, Tbilisi, Georgia. p.28-30.
64. Sadunishvili T. Bacterial viruses for control of crops bacterioses. International Conference on Food and Biotechnology (ICFB), September 11-12, 2014, AUG, Tbilisi, Georgia. p.55-56.
65. Sadunishvili T., Kutateladze L., Urushadze T., Khvedelidze R., Zakariashvili N., Jobava M., Kvesitadze G. Cellulolytic and Xylanolytic Enzymes from Mycelial Fungi. World Academy of Science, Engineering and Technology. Conference Proceedings, Rome, Italy, Sep 18-19, 2017, 19 (9), Part XI, p.1231.
66. Kvesitadze G., Sadunishvili T., Kutateladze L., Zakariashvili N., Jobava M., Khvedelidze R., Urushadze T., Aleksidze T. Cellulases and hemicellulases from microscopic fungi. Abstract Book. International Research and Practice Conference: Nanotechnology and Nanomaterials (NANO-2017), 23-26 August 2017, Chernivtsi, Ukraine. Page 650.
67. Sadunishvili T., Gaganidze D., Burbutashvili T., Sturua N., Amashukeli N., Kharadze Sh. Isolation and lytic activities of bacteriophages to *Cms*. International Conference “Centennial Celebration of Bacteriophage Research”, June 26-29, 2017, Tbilisi, Georgia. Abstract Book, p.101.
68. Kvesitadze G., Kutateladze L., Sadunishvili T., Khvedelidze R., Urushadze T., Zakariashvili N., Tsiklauri N., Jobava M. Selection of Mycelial Fungi Producers of Stable forms of Cellulases, Xylanases and Laccase. Conference on Environmental Science and Technology CEST2017. Rodos, Greece. https://cest.gnest.org/sites/default/files/presentation_file_list/cest2017_01399_poster_paper.pdf
69. Kvesitadze G., Sadunishvili T., Kutateladze L., Khvedelidze R., Khokhashvili I., Urushadze T., Zakariashvili N., Tsiklauri N., Aleksidze T. Pretreatment and enzymatic hydrolysis of agricultural residues. Conference on Environmental Science and Technology CEST2017.

Rodos, Greece. https://cest.gnest.org/sites/default/files/presentation_file_list/cest2017_01341_poster_paper.pdf

70. Gaganidze D. , Aznarashvili M.^a, Sadunishvili T., Abashidze E. , Gurielidze M. ^a, Gvritishvili E. Fire blight disease of fruit trees in Georgia. International Conference “Microbes and Their Viruses: Ecology, Biodiversity and Applications” Tbilisi, Georgia, 2019.
71. Kvesitadze G., Kutateladze L., Sadunishvili T., Khvedelidze R., Urushadze T., Zakariashvili N., Tsiklauri N., Jobava M., Khokhashvili I. Selection of mycelial fungi producers of cellulases, xylanases and laccases. International Conference “Microbes and Their Viruses: Ecology, Biodiversity and Applications” Tbilisi, Georgia, 2019.
72. Sadunishvili T., Amashukeli N., Gaganidze D., Sturua N., Kharadze Sh., Burbutashvili T. Antibiotic resistance of *Clavibacter michiganensis* subsp. *sepedonicus* Georgian isolates. 15th International Conference on Environmental Science and Technology CEST2019.
73. Sadunishvili T., et al., Fire blight disease of fruit trees in Georgia. International Conference: “Microbes and their Viruses: Ecology, Diversity, Applications”, September 22-27, 2019, Tbilisi.

Participation in other International events:

Euro Comission Brokerage Event; July 21, 2012, Brussels;

EU_FP7 Project # 293514- BIOPARTNERS - Networking Sessions in - Murcia, Spain, Istanbul, Turkey, Prague, Czech Republic, etc.