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Education

Year of completion	*Institution*	*Degree*
2001	University of Minnesota	Biophysics, postdoctoral associate
1998	University of Minnesota	Biochemistry and biophysics, Ph.D.
1993	Vilnius University	Biochemistry, 5-year diploma (BS/MS)
1992 Summer	University of Oslo	School of Environmental Protection

Professional experience

Period	*Institution*	*Position*
2005-present	Institute of Biotechnology	Head of Laboratory
2001-2005	3-Dimensional Pharmaceuticals (acquired by Johnson&Johnson); Johnson&Johnson, Pharmaceutical Research and Development	Scientist
1998-2001	University of Minnesota	Postdoctoral associate
1994-1998	University of Minnesota	Research Assistant
1993-1994	Institute of Biochemistry	Junior scientist

Teaching:

1. "Molecular Biophysics" course for Bachelor students, Faculty of Natural Sciences, Vilnius University, 2011- present.

2. "Biophysical Chemistry of Proteins" course for the Master students, Faculty of Natural Sciences, Vilnius University, 2005- present.
3. "Structure, Folding and Dynamics of Proteins and Their Complexes", FEBS course, Budapest, Hungary, 2009.
4. Life Sciences Summer Undergraduate Research Program, University of Minnesota, 1999 – 2000.
5. Biochemistry Laboratory course, University of Minnesota, 1997 – 1999.
6. *"Biophysical Chemistry of Proteins"*, textbook for the Master students, Vilnius University.

Awards, achievements:

1. Lithuanian National Science award 2012.
2. Life Science Baltics Startup Session, Lithuania, Vilnius. 2012 (second place).
3. The Best Poster award in the Conference "Biochemija ir biofizika Vilniaus universitete", Lithuania, Vilnius. 2012 (third place).
4. The Best Poster award in the Conference „XVII International Society of Biological Calorimetry (ISBC) Conference", Germany, Leipzig. 2012 (second place).
5. The Best Poster award in the Conference "ESBES+ISPPP+ISB", Italy. 2010.
6. ScanBalt Bridge Baltic Sea Region Award, Sweden. 2009.
7. Public advisor to the President of Lithuania for the issues of emigration and repatriation, 2007-2009.
8. Selected as Lithuanian representative young scientist in the book "Portraits of Science. Scientists of Tomorrow" by European Federation of Pharmaceutical Industries and Associations, 2008.
9. Award "Direction-Home" given to Lithuanian scientist selected by an independent Swedish-Lithuanian scientific council, by "Telia Sonera" Inc., Sweden, 2007.
10. Robert Jenness Award by University of Minnesota Department of Biochemistry, Molecular Biology, and Biophysics for the best postdoctoral associate in 2000.
11. National high school Olympic competition in chemistry, third place, 1988.

Scientific Publications:

1. CapkauskaitE, E., ZubrienE, A., Smirnov, A., Torresan, J., Kisonaite, M., Kazokaitė, J., Gylytė, J., Michailovienė, V., Jogaite, V., Manakova, E., Grazulis, S., Tumkevicius, S., Matulis, D. „Benzenesulfonamides with pyrimidine moiety as inhibitors of human carbonic anhydrases I, II, VI, VII, XII, and XIII". Biorg. Med. Chem. 21: 6937-6947.

2. Petrauskas, V., Gylyte, J., Toleikis, Z., Cimmperman, P., Matulis, D. 2013. Volume of Hsp90 ligand binding and the unfolding phase diagram as a function of pressure and temperature. Eur. Biophys. J. 42: 355-362.

3. Dudutiene, V. Zubriene, A., Smirnov, A., Gylyte, J., Timm, D., Manakova, E., Grazulis, S., Matulis, D. 2013. 4-Substituted-2,3,5,6-tetrafluorobenzenesulfonamides as inhibitors of carbonic anhydrases I, II, VII, XII, and XIII. Bioorg. Med. Chem. 21: 2093-2106.

4. Jogaite, V., Zubriene, A., Michailoviene, V., Gylyte, J., Morkunaite, V., Matulis, D. 2013. Characterization of Human Carbonic Anhydrase XII Stability and Inhibitor Binding. Bioorg. Med. Chem. 21: 1431-1436.

5. Pirrie, L., McCarthy, A. R., Major, L., Morkunaite, V., Zubriene, A., Matulis, D., Lain, S., Lebl, T., Westwood, N. J. 2012. Discovery and Validation of SIRT2 Inhibitors Based on Tenovin-6: Use of a H-NMR Method to Assess Deacetylase Activity. Molecules. 17: 12206-12224.

6. Sharp, S. Y., Roe, S. M., Kazlauskas, E., Cikotiene, I., Workman, P., Matulis, D., Prodromou, C. 2012. Co-Crystalization and In Vitro Biological Characterization of 5-Aryl-4-(5-Substituted-2-4- Dihydroxyphenyl)-1,2,3- Thiadiazole Hsp90 Inhibitors. Plos One. 7(5): e44642.

7. Giessrigl, B., Krieger, S., Rosner, M., Huttary, N., Saiko, Ph., Alami, M., Messaoudi, S., Peyrat, J. F., Maciuk, A., Gollinger, M., Kopf, S., Kazlauskas, E., Mazal, P., Szekeres, T., Hengstschlager, M., Matulis, D., Jager, W., Krupitza, G. 2012. Hsp90 stabilizes Cdc25A and counteracts heat shock-mediated Cdc25A degradation and cell-cycle Q1 attenuation in pancreatic carcinoma cells. Human Molecular Genetics. 21: 4615-4627.

8. Labanauskas, L., Dudutiene, V., Urbelis, G., Sarlauskas, J., Sudzius, J., Matulis, D., Striela, R., Zilinskas, A. 2012. Synthesis of substituted 2λ 4 δ 2-[1,2,3]thiadiazolo[3,4-c]benzimid-azoles and 2λ 4 δ 2-[1,2,3,5]thiatriazolo[3,4-c]benzimidazoles. Arkivoc. 8: 17-26.

9. Kazlauskas, E., Petrikaite, V., Michailoviene, V., Revuckiene, J., Matuliene, J., Grinius, L., Matulis, D. 2012. Thermodynamics of Aryl-dihydroxyphenyl-thiadiazole Binding to Human Hsp90. Plos One. 7(5): e36899.

10. Toleikis, Z., Cimmperman, P., Petrauskas, V., Matulis, D. 2012. Serum albumin ligand binding volumes using high pressure denaturation. Journal of Chemical Thermodynamics. 52: 24-29.

11. Capkauskaitė, E., Zubriene , A., Baranauskiene, L., Tamulaitienė G., Manakova L., Kairys V., Grazulis S., Tumkevicius S., Matulis, D. 2012. Design of [(2-pyrimidinylthio)acetyl]benzenesulfonamides as inhibitors of human carbonic anhydrases. Eur. J. Med. Chem. 51: 259-270.

12. Norvaisas, P., Petrauskas, V., and Matulis, D. 2012. Thermodynamics of Cationic and Anionic Surfactant Interaction. J. Phys. Chem. B. 116: 2138-2144.

13. Baranauskiene, L., Matulis, D. 2012. Intrinsic thermodynamics of ethoxzolamide inhibitor binding to human carbonic anhydrase XIII. BMC Biophysics. 5:12 2046-1682

14. Toleikis, Z., Cimmperman, P., Petrauskas, V. and Matulis, D. 2011. Determination of the volume changes induced by ligand binding to heat shock protein 90 using high-pressure denaturation. Analytical Biochemistry. 413: 171-178.

15. Zubriene A., Kazlauskas E., Baranauskiene L., Petrauskas V., Matulis D. 2011. Isothermal Titration Calorimetry and Thermal Shift Assay in Drug Design. European Pharmaceutical Review. 16 (3): 56-59.

16. Cimmperman, P and Matulis, D. 2011. Protein Thermal Denaturation Measurements via a Fluorescent Dye. Invited review to the book: RSC Biomolecular Sciences No. 22. Biophysical Approaches Determining Ligand Binding to Biomolecular Targets: Detection, Measurement and Modelling. Edited by A. Podjarny, A. Dejaegere, and B. Kieffer. Royal Society of Chemistry. Chapter 8.

17. Petrikaite V., Matulis D. Thermodynamics of Natural and Synthetic Inhibitor Binding to Human Hsp90. In: "Application of Thermodynamics to Biological and Materials Science". Ed. Mizutani Tadashi, 2011, 77-92.

18. Petrikaite V., Matulis D. 2011. Natural and synthetic inhibitors binding to human Hsp90 and their clinical application. Medicina (Kaunas). 47 (8): 413:420.

19. Petrikaite, V. and Matulis, D. 2010. Thermodynamics of Natural and Synthetic Inhibitor Binding to Human Hsp90. Thermodynamics. 77- 92.

20. Zubriene, A., Gutkowska, M., Matulienė, J., Chaleckis, R., Michailovienė, V., Voroncova, A., Venclovas, C., Zylicz, A., Zylicz, M., and Matulis, D. 2010. Thermodynamics of radicicol binding to human Hsp90 alpha and beta isoforms. Biophys. Chem. 152: 153-163.

21. Rink, C., Sasse, F., Zubriene, A., Matulis, D. and Maier, M. E. 2010. Probing the Influence of an Allylic Methyl Group in Zearalenone Analogues on Binding to Hsp90. Chemistry. A European Journal. 16(48): 14469-78.

22. Capkauskaite, E., Baranauskiene, L., Golovenko, D., Manakova, L., Grazulis, S., Tumkevicius, S., and Matulis, D. 2010. Indapamide-like benzenesulfonamides as inhibitors of carbonic anhydrases I, II, VII, and XIII. Bioorg. Med. Chem. 18: 7357-64.

23. Sudzius, J., Baranauskiene, L., Golovenko, D., Matuliene, J., Michailoviene, V., Torresan, J., Jachno, J., Sukackaite, R., Manakova, L., Grazulis, S., Tumkevicius, S., and Matulis, D. 2010. 4-[N-(Substituted 4-pyrimidinyl)amino]benzenesulfonamides as inhibitors of carbonic anhydrase isozymes I, II, VII, and XIII. Bioorg. Med. Chem. 18: 7413-21.

24. Baranauskiene, L., Hilvo, M., Matuliene, J., Golovenko, D., Manakova, E., Dudutiene, V., Michailoviene, V., Torresan, J., Jachno, J., Parkkila, S., Maresca, A., Supuran, C. T., Grazulis, S., and Matulis, D. 2010. Inhibition and binding studies of carbonic anhydrase isozymes I, II and IX with benzimidazo[1,2-c][1,2,3]thiadiazole-7-sulfonamides, J. Enz. Inhib. Med. Chem., 25(6): 863-70.

25. Zurawska, A., Urbanski, J., Matuliene, J., Baraniak, J., Klejman, M. P., Filipek, S., Matulis, D. and Bieganowski, P. 2010. Mutations that increase both Hsp90 ATPase activity in vitro and Hsp90 drug resistance in vivo. BBA – Molec. Cell Res. 1803(5): 575-583.

26. Labanauskas, L., Dudutiene, V., Matulis, D., Urbelis, G. 2009. Synthesis of a new heterocyclic system: 3 phenylbenzimidazo[1,2-c]-[1,2,3]selenadiazole. Chem. Heterocycl. Comp. No. 9: 1153-1154.

27. Ugele, M., Sasse, F., Knapp, S., Fedorov, O., Zubriene, A., Matulis, D., Maier, M.E. 2009. Propionate Analogues of Zearalenone Bind to Hsp90. Chembiochem. 4;10(13): 2203-12.

28. Baranauskiene, L., Petrikaite, V., Matuliene, J., Matulis, D. 2009. Titration Calorimetry Standards and the Precision of Isothermal Titration Calorimetry Data. Int. J. Mol. Sci. 10: 2752-2762.

29. Zubriene, A., Matuliene, J., Baranauskiene, L., Jachno, J., Torresan, J., Michailoviene, V., Cimmperman, P., Matulis, D. 2009. Measurement of Nanomolar Dissociation Constants by Titration Calorimetry and Thermal Shift Assay – Radicicol Binding to Hsp90 and Ethoxzolamide Binding to CAII. Int. J. Mol. Sci. 10: 2662-2680.

30. Cikotiene, I., Kazlauskas, E., Matuliene, J., Michailoviene, V., Torresan, J., Jachno, J., Matulis, D. 2009. 5-Aryl-4-(5-substituted-2,4- dihydroxyphenyl)-1,2,3-thiadiazoles as inhibitors of Hsp90 chaperone. Bioorg Med Chem Lett. 19: 1089-1092.

31. Hilvo, M., Baranauskiene, L., Salzano, A.M., Scaloni, A., Matulis, D., Innocenti, A., Scozzafava, A., Monti, S.M., Di Fiore, A., De Simone, G., Lindfors, M., Jänis, J., Valjakka, J., Pastoreková, S., Pastorek, J., Kulomaa, M.S., Nordlund, H.R., Supuran, C.T., Parkkila, S. 2008 Biochemical characterization of CA IX: one of the most active carbonic anhydrase isozymes. J Biol Chem. 283: 27799-27809.

32. Cimmperman, P., Baranauskiene, L., Jachimoviciute, S., Jachno, J., Torresan, J., Michailoviene, V., Matuliene, J., Sereikaite, J., Bumelis, V., Matulis, D. 2008. A Quantitative Model of Thermal Stabilization and Destabilization of Proteins by Ligands. Biophys. J. 95: 3222-3231.

33. Baranauskiene, L., Matulien, J., Matulis, D. 2008. Determination of the thermodynamics of carbonic anhydrase acid-unfolding by titration calorimetry. J. Biochem. Biophys. Meth. 70: 1043-1047.

34. Dudutiene, V., Baranauskiene, L., Matulis, D., 2007. Benzimidazo[1,2-c][1,2,3]thiadiazole-7-sulfonamides as inhibitors of carbonic anhydrase. Bioorg Med Chem Lett. 17, 3335-3338.

35. Matulis, D., Kranz, J., Salemme, F.R., and Todd, M.J. 2005. Thermodynamic stability of carbonic anhydrase: measurements of binding affinity and stoichiometry using ThermoFluor. Biochemistry. 44: 5258-66.

36. Matulis, D., Lovrien, R. 2005. Assays for Total Protein. Current Protocols in Protein Science: 3.4.1-3.4.4. Republished updated version.

37. Matulis, D. and Todd, M. 2004. Thermodynamics – structure correlations of sulfonamide inhibitor binding to carbonic anhydrase. Biocalorimetry 2, eds. Ladbury, J.E. and Doyle, M.L. Wiley. 107-132.

38. Matulis, D., Rouzina, I. and Bloomfield, V. 2002. Thermodynamics of cationic lipid binding to DNA and DNA condensation: Roles of electrostatics and hydrophobicity. J. Am. Chem. Soc. 124: 7331-7342.

39. Matulis, D. 2001. Thermodynamics of the hydrophobic effect. III. Condensation and aggregation of alkanes, alcohols, and alkylamines. Biophys. Chem. 93: 67-82.

40. Matulis, D., and Bloomfield, V. 2001. Thermodynamics of the hydrophobic effect. II. Calorimetric measurement of enthalpy, entropy, and heat capacity of aggregation of alkylamines and long aliphatic chains. Biophys. Chem. 93: 53-65.

41. Matulis, D., and Bloomfield, V. 2001. Thermodynamics of the hydrophobic effect. I. Coupling of aggregation and pKa shifts in solutions of aliphatic amines. Biophys. Chem. 93: 37-51.

42. Lovrien, R., Wu, C., and Matulis, D. 2000. Ligand - protein coprecipitative isolation by matrix stacking and entanglement. Sep. Sci. Technol. 35(11): 1795-1811.

43. Matulis, D., Rouzina, I., and Bloomfield, V. 2000. Thermodynamics of DNA binding and condensation: isothermal titration calorimetry and electrostatic mechanism. J. Mol. Biol. 296: 1053-1063.

44. Matulis, D., Baumann, C., Bloomfield, V., and Lovrien, R. 1999. 1-Anilino-8-naphthalene sulfonate as a protein conformational tightening agent. Biopol. 49: 451-458.

45. Matulis, D., Wu, C., Pham, T., Guy, C., and, Lovrien, R. 1999. Protection of enzymes by aromatic sulfonates from inactivation by acid and elevated temperatures. J. Molec. Catalysis B: Enzymatic. 7: 21-36.

46. Lovrien, R. and Matulis, D. 1998. Determination of total protein. Current Protocols in Pharmacology. John Wiley and Sons. Appendix.

47. Matulis, D., and Lovrien, R. 1998. 1-Anilino-8-naphthalene sulfonate anion-protein binding depends primarily on ion pair formation. Biophys. J. 74: 422-429.

48. Wu, C., Lovrien, R. and Matulis, D. 1998. Lectin coprecipitative isolation from crudes by little rock orange ligand. Analyt. Biochem. 257: 33-39.

49. Rubikas, J. and Matulis, D. 1998. Nickel resistance in Escherichia coli V38 isolated from city sewage sludge. Ekologija. 9: 24-28.3.

50. Rubikas, J., and Matulis, D. 1998. Nickel ion efflux is the main mechanism of resistance in Escherichia coli V38. Ekologija. 9: 29-32.

51. Matulis, D., Lovrien, R. 1997. Selective Precipitation of Proteins. Current Protocols in Protein Science: 4.5.1-4.5.36.

52. Rubikas, J., Matulis, D., Leipus, A., and Urbaitienė, D. 1997. Nickel resistance in Escherichia Coli V38 is dependent on the concentration used for induction. FEMS Microbiol. Lett. 155: 193-198.

53. Matulis, D., Richardson, T. and Lovrien, R. 1996. Coprecipitation of proteins with matrix ligands: scaleable protein isolation. J. Molec. Recogn. 9: 433-443.

54. Matulis, D., Lovrien, R. 1995. Assays for Total Protein. Current Protocols in Protein Science: 3.4.1-3.4.4.

Patents:

1. European Patent No. 2054420. "Benzimidazo[1,2-C][1,2,3]Thiadiazol-7-Sulfonamides as Inhibitors of Carbonic Anhydrase and the Intermediates for Production Thereof". Application submited in 2007, patent registered on 2011 06 22
2. European Patent No. 2268626. "5-Aryl-4-(5-Substituted 2,4-Dihydroxyphenyl)- 1,2,3 Thiadiazoles as Inhibitors of Hsp90 Chaperone and the Intermediates for Production Thereof". Application submited in 2008, patent registered on 2012 02 01

Patent Application:

1. Matulis D., Dudutiene V., Zubriene A.
   Fluorinated benzenesulfonamides as inhibitors of Carbonic Anhydrase. PCT/LT2012/000007. 2012-10-30

Other important academic activities:

1. Written about 15 articles on the subjects of scientific reform, the popularity of science in society, and the support for repatriating scientists.
2. Participated in several TV programs and radio shows on science popularity and administrative reforms.
3. Member of several work groups at the Ministry of Economy and the Ministry of Science and Education; discussions and preparation of legal documents in science administration.
4. Member of professional societies – American Chemical Society, Biophysical Society, an expert of the ScanBalt projects, mapping of Baltic biotechnology, discussions on international collaboration of biotechnologists. An expert to the EU FP7 "Health" program committee in Brussels.
5. Member of the ScanBalt task force for the implementation of the EU Baltic Sea strategy

Conference organization:

1. „COST TD0905", 2013 10 30-31, Vilnius, Lithuania.
2. Co-Chairman of CEEC-TAC2 2nd Central and Eastern European Conference on Thermal Analysis and Calorimetry, 2013 08 27-30, Vilnius, Lithuania.
3. Local Chair and Member of ScanBalt Scientific Advisory Board of the ScanBalt Forum and ScanBalt Biomaterials Days, 2008 09 24-26, Vilnius, Lithuania.

Invited talks at international conferences and organizations:

1. Matulis D. "Biophysical assays of inhibitor binding to selected CA isozymes". 2nd CA satellite meeting, Naples, Italy. 2013 10 23-25.
2. Matulis D. "Novel inhibitors of Carbonic Anhydrase IX, an Anticancer Target".Lithuanian Trade Mission to Boston (and Washington), Boston, USA. 2013 06 16-25.
3. Matulis D. "Intrinsic thermodynamics – structure correlations of anticancer drug lead binding to target proteins". "CEEC-TAC2", Vilnius, Lithuania. 2013 08 27-30.
4. Matulis D. Intrinsic thermodynamics - structure correlations of anticancer drug lead binding to target proteins. „20th Biennial Meeting of the International Society for Molecular Recognition", Vienna, Austria. 2013 06 26-29.

5. Matulis D. Drug Design: Intrinsic Energetics – Structure Correlations, ITC, TF, Activity, X-ray. „Biophysical Society 57th Annual Meeting", Philadelphia, USA. 2013 01 31-02 14.
6. Matulis D. Design, synthesis, binding, crystallography, and docking of [(2-pyrimidinylthio)acetyl] benzenesulfonamides as inhibitors of human carbonic anhydrases. „COST0804", Salerno, Italy. 2012 11 03-07.
7. Matulis D. Overview of Lithuanian Pharmaceutical Industry. „Life Sciences Baltics Conference". Vilnius, Lithuania. 2012 09 12-14.
8. Matulis D. Thermodynamics Of Inhibitor Binding To Recombinant Human Carbonic Anhydrases (CA) VI and XII. „Future in Chemistry and Biology for Epigenetics training school". Poitiers, France. 2012 07 09-12
9. Matulis, D. Structural biothermodynamics of inhibitor binding to human recombinant carbonic anhydrases and Hsp90. Presented at the "66th Calorimetry Conference". Honolulu, USA. 2011 06 14.
10. Matulis, D. Carbonic anhydrase inhibitors as anticancer agents. Molėtai, Lithuania. 2010 06 16.
11. Matulis, D. Structural biothermodynamics and the search for drug-like compounds. Plenary lecture given at the Institute of Theoretical Physics and Astronomy of Vilnius university, Molėtai Astronomical Observatory, Molėtai, Lithuania. 2010 07 31.
12. Matulis, D. Structural biothermodynamics and the search for drug-like compounds. Plenary lecture given at the Conference of Organic Synthesis, Kaunas University of Technology, Kaunas, Lithuania. 2009 04 22.
13. Matulis, D. Carbonic anhydrase and Hsp90 inhibitor binding measurements by TSA, ITC, and X-ray crystallography. Instruct meeting. Budapest, Hungary. 2009 03 30.
14. Matulis, D. Characterization of carbonic anhydrases and determination of inhibitor binding by thermal shift assay. Invited by Prof. Seppo Parkkila, Institute of Medical Technology / University of Tampere, Biokatu 6, 33520 Tampere, Finland. 2007 11 19.
15. Matulis, D. Characterization of carbonic anhydrases and determination of inhibitor binding by thermal shift assay. Invited by Prof. Claudiu Supuran, Universita Degli Studi Di Firenze, Dipartimento Di Chimica, Italy. 2007 11 23.
16. Matulis, D. Human Hsp90 stability and radicicol binding by thermal shift assay. Invited by Prof. Maciej Zylicz, International Institute of Molecular and Cell Biology in Warshaw, Poland. 2006 12 15.
17. Matulis, D., and Todd, M. Thermodynamics of sulfonamide inhibitor binding to carbonic anhydrase using titration calorimetry: an interesting effect of protein, ligand, and buffer protonation. Presented at the 2003 Current Trends in Microcalorimetry, Boston, USA. 2003 07.
18. Matulis, D., Rouzina, I., and Bloomfield, V. Thermodynamics of DNA binding and condensation: isothermal titration calorimetry and electrostatic mechanism. Presented at the Nucleic Acid Interest Group, University of Minnesota. 1999 11.
19. Matulis, D. Using isothermal titration calorimetry to evaluate the energetics of intermolecular interactions. Presented at the Nucleic Acid Interest Group, University of Minnesota. 1998 03.

Talks given at conferences and meetings:

1. Matulis D. „ExCo meeting“. 2013 06 03 – 04 . Rostock, Germany.
2. Matulis D. “The Pitfalls of Drug Lead IC 50 and Binding Measurements to Target Proteins”. „COST CM0804“. 2013 05 06-09, Izmir, Turkey.
3. Matulis, D., Budvytyte, R., Cerniauskaite, D. 11th ScanBalt Forum. 2012 11 20 – 23. Tampere, Finland.
4. Matulis, D., Budvytyte, R. „ExCo meeting“. 2012 08 28. Copenhagen, Denmark.
5. Matulis, D. Thiophene Sulfonamides as Carbonic Anhydrase Inhibitors by Titration Calorimetry and Thermal Shift Assay. COST TD 0905, Latvia, Riga. 2012 06 26-28.
6. Matulis, D. Anticancer activity of ICPD inhibitors of Hsp90 on human tumor cell lines and in murine tumor allografts. „COST0804“, Bucuresti, Romania. 2012 05 20-24.
7. Blank, W., Matulis, D., Frank, P. ScanBalt Health Region – Setting the Stage for Cross-Sectorial Innovation in Health and Life Sciences. What is in for the regions? Baltic Development Forum. 2011 10 25 – 27. Gdansk, Poland.
8. Matulis, D., Grinius, L., Revuckiene, J., Budvytyte, R., Cerniauskaite, D. „BSHR HealthPort“ project meeting. 10th ScanBalt Forum. 2011 09 21 – 24. Heringsdorf, Germany.
9. Matulis, D. Structural biothermodynamics of inhibitor binding to human recombinant carbonic anhydrases. “FEBS satellite CA meeting”. Montecatini, Italy. 2011 06 22-24.
10. Zubrienė, A., Kazlauskas E., Baranauskienė, L., Petrauskas, V., Matulis, D. Towards the intrinsic lead binding thermodynamics. COST TD 0905. Split, Croatia. 2011 04 28-05 01.
11. Matulis, D. Determination of the Volume Changes Induced by Ligand Binding to Hsp90 Using High Pressure Denaturation. Biophysical Society 55th Annual Meeting. Baltimore, USA. 2011 03 05-09.
12. Matulis, D. Structural biothermodynamics of inhibitor binding to human recombinant carbonic anhydrases and Hsp90. Johnson & Johnson. USA. 2011 03 10.
13. Toleikis, Z., Cimmperman, P., and Matulis, D. The Volumes of Ligand Binding to Hsp90 by High Pressure Denaturation. The 6th International Conference on High Pressure Bioscience and Biotechnology (HPBB2010). Munich, Germany. 2010 08 28-09 01.
14. Zubriene, A., Matulis, D. Thermodynamics of radicicol binding to human Hsp90 alpha and beta isoforms. ESBES+ISPPP+ISB. Bologna, Italy. 2010 09 05-08.
15. Zubriene, A., Maier, E.M., Sasse, F., Kazlauskas, E., Toleikis, Z., Chaleckis, R., Michaoloviene, V., Petrikaite, V., Grinius, L., Matuliene, J., Matulis, D. Radicicol, a natural compound and an efficient inhibitor of Hsp90, as a lead for anticancer drug design. COST CM0804, “Natural Products as Drug and Leads to Drugs”. Crete, Greece. 2010 10 12-15.
16. Zubriene, A., Baranauskiene, L., Kazlauskas, E., Toleikis, Z., Chaleckis, R., Michailoviene, V., Petrikaite, V., Capkauskaite, E., Dudutiene, V., Matuliene, J., Matulis, D. Drug Binding Energetics by Titration Calorimetry, Thermal and Pressure Shift Assay. COST Action TD09/05 Epigenetics - Bench to Bedside. Brno, Czechia. 2010 11 22-25.
17. Baranauskiene, L., Kazlauskas, E., Cikotiene, I., Matuliene, J., Zubiene, A., Jachno, J.,

Torresan, J., Michailoviene, V., Cimmperman, P., Grazulis, S., and Matulis D. Carbonic anhydrase and Hsp90 inhibitor binding measurements by thermal shift assay, titration calorimetry, and x-ray crystallography. INSTRUCT meeting. Budapest, Hungary. 2009 03 29-31.

18. Baranauskienė, L., Sūdžius, J., Michailovienė, V., Matulienė, J., Tumkevičius, S., Matulis, D. Carbonic anhydrase ligand binding by thermal shift assay and titration calorimetry. The 8-th International Conference on the Carbonic Anhydrases. Florence, Italy. 2009 09 16-19.
19. Cimmperman, P., Zubriene, A., Baranauskiene, L., Kazlauskas, E., Matuliene, J., and Matulis, D. Determination of protein-ligand binding thermodynamics by thermal shift assay. European Biophysics Congress Genova. Genova, Italy .2009 07 11-15.
20. Petrikaitė, V., and Matulis, D. Thermal Shift Assay and Titration Calorimetry for Protein-Ligand Interactions. COST CM0804 Conference "Chemical Biology with Natural Products. Siena, Italy. 2009 12 3-5.
21. Kazlauskas, E., Cikotiene, I., Matuliene, J., Zubriene, A., Jachno, J., Torresan, J., Michailoviene, V., Matulis, D. Resorcinol class Hsp90 inhibitor binding thermodynamics and the effect on cancerous cells. The 4th International Conference on the Hsp90 Chaperone Machine. Bavaria, Germany. 2008 10 2-6.
22. Baranauskiene, L., Dudutiene, V., Matulis, D. Benzimidazo [1,2-c][1,2,3] thiadiazole sulfonamides as carboinic anhydrase inhibitors. 7th International Conference on Carbonic Anhydrases: CA Research in the Postgenomic Era. Whitney Laboratory of the University of Florida, St. Augustine, USA. 2006.
23. Matulis, D., and Todd, M. A. Thermodynamics of sulfonamide inhibitor binding to carbonic anhydrase using titration calorimetry: and interesting effect of protein, ligand, and buffer protonation. Presented at the 58th Calorimetry Conference, Honolulu, USA. 2003 08.
24. Matulis, D., and Bloomfield, V. Determination of hydrophobic interactions between long aliphatic hydrocarbons: aliphatic amine aggregtion and protonation pKa shift. Presented at the 15th Annual Gibbs Conference on Biothermodynamics, Carbondale, USA. 2001 09.
25. Matulis, D., and Bloomfield, V. Determination of hydrophobic interactions between long aliphatic hydrocarbons: aliphatic amine aggregtion and protonation pKa shift. Presented at the 56th Annual Calorimetry Conference, Colorado Springs, USA. 2001 08.
26. Matulis, D., Rouzina, I., and Bloomfield, V. Thermodynamics of cationic lipid binding to DNA by isothermal titration calorimetry. The roles of electrostatics and hydrophobicity. Presented at the 14th Annual Gibbs Conference on Biothermodynamics, Carbondale, USA. 2000 05.
27. Matulis, D., Rouzina, I., and Bloomfield, V. Thermodynamics of cationic lipid binding to DNA by isothermal titration calorimetry. The roles of electrostatics and hydrophobicity. Presented at 2000 Midwest Thermodynamics and Statistical Mechanics Conference, Minneapolis, USA. 2000 05.
28. Matulis, D., and Lovrien, R. Protection of enzymes by aromatic sulfonates from inactivation by acid. Presented at the First International Conference on Protein Stabilization, Leeds, Great Britain. 1998 07.

29. Matulis, D., and Lovrien, R. ANS anion - protein binding primarily depends on ion pair formation. Given at the 42nd Annual Meeting of the Biophysical Society, Kansas City, USA. 1998 02.

Poster Presentations at Meetings and Conferences:

1. Gylyte, J., Zubriene, A., Dudutiene, V., Smirnov, A., Timm, D., Manakova, E., Grazulis, S., Matulis, D. „Intrinsic thermodynamics-structure correlations of fluorinated benzensulfonamides as inhibitors of human carbonic anhydrases“. „The Twenty-seventh Annual Gibbs Conference on Biothermodynamics”, 2013 10 05-08, Carbondale, USA.
2. Petrauskas, V., Gylyte, J., Toleikis, Z., Cimmperman, P., Matulis, D. „Protein-ligand affinity correlation with the ligand binding volume“. „9th European Biophysics Congress“, 2013 07 13-18, Lisbon, Portugal.
3. Petrikaite, V., Matuliene, J., Tauraite, D., Villanueva, A., Berdasco, M., Huertas, A., Satein, E. F., Esteller, M., Matulis, D. „Anticancer activity of ICPD compounds in murine models and human cancer cells”. „COST TD0905“, 2013 04 29-30, Reykjavik, Iceland.
4. Kazlauskas, E., CikotienE, I., ZubrienE, A., Matuliene, J., Mikuciauskaite, J., Chaleckis, R., Sharp S., Workman P., Prodromou, Ch, Matulis, D. “ICPD Inhibitor Binding to Human Hsp90 alpha, beta, Full-Length, N-Terminal Domain, Lidless, and Active Site Mutant Isoforms”. „6th International Conference on the Hsp90 Chaperone Machine”, 2012 09 19-23, Les Diablerets, Šveicarija.
5. Norvaišas P., Petrauskas V., Matulis D. “Thermodynamics of cationic and anionic surfactant interaction”. “XVII International Society of Biological Calorimetry (ISBC) Conference“. Leipzig, Germany. 2012 06 03-06.
6. Čapkauskaitė E., Zubrienė A., Baranauskienė L., Manakova E., Tamulaitienė G., Kazokaitė J., Kairys V., Gražulis S., Tumkevičius S., Matulis D. „Design of [(2-pyrimidinylthio)acetyl]benzenesulfonamides as inhibitors of human carbonic anhydrases“. „The 9th International Conference on Carbonic Anhydrase (CA)“. Turkey, Antalya. 2012 04 11-15.
7. Capkauskaite, E., Zubriene, A., Baranauskiene, L., Tamulaitiene, G., Manakova, E., Grazulis, S., Tumkevicius, S., Matulis, D. Synthesis of pyrimidine derivatives as inhibitors of carbonic anhydrase. 23rd International Congress on Heterocyclic Chemistry (ICHC-23). Glasgow, Great Britain. 2011 07 31-08 04
8. Petrikaite, V., Kazlauskas, E., Matuliene, J., Matulis, D. Anticancer activity and Admet properties of resorcinol – bearing lead compounds. The 47th International Conference „Drug Discovery and Selection“. Lyon, France. 2011 07 06-08
9. Dudutiene, V, Zubriene, A., Kairys, V., Matulis, D. Probing of the carbonic anhydrase isozyme active center cavities with inhibitor functional groups. International Conference „Frontiers in Medicinal Chemistry“. Stocholm, Sweden. 2011 06 19-21.

10. Petrauskas, V., Zubriene, A., Kazlauskas, E., Baranauskiene, L., Matulis, D. Intrinsic Binding Parameters as a Necessity to Correlate Energetics with Structure. 19th Biennial Meeting of the International Society for Molecular Recognition. Tavira, Portugal. 2011 06 16-19.
11. Jogaite, V., Zubriene, A., Gylyte, J., Michailoviene, V., Matulis, D. Inhibitors binding to Recombinant Human CAXII. „FEBS satellite CA meeting". Montecatini, Italy. 2011 06 22-24.
12. Matulis, D. Carbonic anhydrase inhibitors as anticancer agents. Molėtai, Lithuania. 2010 06 16.
13. Toleikis, Z., Cimmperman, P., and Matulis, D. Determination of The Volume Changes Induced by Ligand Binding to Hsp90 Using High Pressure Denaturation. The 6th International Conference on High Pressure Bioscience and Biotechnology (HPBB2010). Munich, Germany. 2010 08 28-09 01.
14. Petrauskas, V., Maksimaviciutė, E., Matulis, D. Thermodynamics of Ion Pair Formations in Proteins. ESBES+ISPPP+ISB. Bologna, Italy. 2010 09 05-08.
15. Zubriene, A., Kazlauskas, E., Chaleckis, R., Michailoviene, V., Matuliene, J., Matulis, D. Thermodynamics of radicicol binding to human Hsp90 alpha and beta isoforms. The 5th International Conference on The Hsp90 Chaperone Machine. Les Diablerets, Switzerland. 2010 09 29-10 03.
16. Petrikaite, V., Kazlauskas, E., Zubriene, A., Michailoviene, V., Matuliene, J., Matulis, D. Resorcinol - Bearing Hsp90 inhibitors as anticancer agents. COST Action TD09/05 Epigenetics - Bench to Bedside. Brno, Czechia. 2010 11 22-25
17. Kazlauskas, E., Cikotiene, I., Matuliene, J., Zubriene, A., Jachno, J., Torresan, J., Michailoviene, V., Petrikaite, V., Grinius, L., Matulis, D. Resorcinol class Hsp90 inhibitor binding thermodynamics and the effect on cancerous cells. The 4th International Conference on the Hsp90 Chaperone Machine. Bavaria, Germany. 2008 10 2-6.
18. S. Grazulis, L. Baranauskienė, E. Manakova, R. Sukackaitė, D. Golovenko, G. Tamulaitienė, D. Matulis. Novel thiadiazoles inhibitors of human carbonic anhydrases. 7th ScanBalt Forum & Biomaterial Days. Vilnius, Lithuania. 2008 09 24-26.
19. S. Gražulis, L. Baranauskienė, E. Manakova, R. Sukackaitė, D. Golovenko, G. Tamulaitienė, D. Matulis. Novel thiadiazoles inhibitors of human carbonic anhydrases. XXI Congress and General Assembly of the International Union of Crystallography. Osaka, Japan. 2008 08 23-31.
20. Cimmperman, P., Toleikis, Z., Matulis, D. A general model to describe protein thermal stabilization and destabilization by ligands. 2nd International Symposium on Biothermodynamics, Frankfurt am Main, Germany. 2008 02 21-22.
21. Matulis, D., and Todd, M. Thermodynamics of inhibitor binding to carbonic anhydrase by titration calorimetry and ThermoFluor®. Presented at the 16th Gibbs Conference on Biothermodynamics, Carbondale, USA. 2002 09.
22. Matulis, D., and Todd, M. Thermodynamics of inhibitor binding to carbonic anhydrase by titration calorimetry and ThermoFluor®. Presented at the 57th Annual Calorimetry Conference, New Brunswick, USA. 2002 08.

23. Matulis, D., Rouzina, I., and Bloomfield, V. Determination of hydrophobic interactions between long chain aliphatic hydrocarbons by titration calorimetry. Presented at the 46th Annual Meeting of the Biophysical Society, San Francisco, USA. 2002 02.

24. Matulis, D., Rouzina, I., and Bloomfield, V. Thermodynamics cationic lipid binding to DNA by titration calorimetry: the roles of electrostatics and hydrophobicity. Presented at the 45th Annual Meeting of the Biophysical Society, Boston, USA. 2001 02.

25. Lovrien, R., Wu, C., and Matulis, D. Lectin and protease isolation from crude via coprecipitation matrix ligands. Presented at the American Chemical Society 219th National Meeting, San Francisco, USA. 2000 03.

26. Lovrien, R. and Matulis, D.. Isolation of proteins from crudes: Matrix entanglement ligand basis. Presented at the American Chemical Society 219th National Meeting, San Francisco, USA. 2000 03.

27. Matulis, D., Rouzina, I., and Bloomfield, V. Thermodynamics of DNA binding and condensation: isothermal titration calorimetry and electrostatic mechanism. Presented at the 44th Annual Meeting of the Biophysical Society, New Orleans, USA. 2000 02.

28. Lovrien, R., Wu, C., and Matulis, D. Forces, energetics, topology of outer directed hydrophobicity in organic ligand-protein matrices. Presented at the 44th Annual Meeting of the Biophysical Society, New Orleans, USA. 2000 02.

29. Matulis, D., Rouzina, I., and Bloomfield, V. Thermodynamics of DNA binding and condensation: isothermal titration calorimetry and electrostatic mechanism. Presented at the Nucleic Acid Interest Group meeting. 1999 10.

30. Matulis, D., Rouzina, I., and Bloomfield, V. Thermodynamics of DNA binding and condensation: isothermal titration calorimetry and electrostatic mechanism. Presented at the 13th Annual Gibbs Conference on Biothermodynamics, Carbondale, USA. 1999 10.

31. Matulis, D., and Lovrien, R. Prediction of free energies and enthalpies of anionic aliphatic ligand binding to proteins based on experimental database and the enthalpy additivity principle. Presented at the 43rd Annual Meeting of the Biophysical Society, Baltimore, USA. 1999 02.

32. Lovrien, R., and Matulis, D. Pushing agents, pulling agents in protein isolation. Presented at the 43rd Annual Meeting of the Biophysical Society, Baltimore, USA. 1999 02.

33. Matulis, D., and Lovrien, R. Thermodynamics of the organic and inorganic anion binding to the strongest site on bovine serum albumin. Presented at the 12th Annual Gibbs Conference on Biothermodynamics, Carbondale, USA. 1998 10.

34. Matulis, D., and Lovrien, R. Protection of enzymes by aromatic sulfonates from inactivation by acid. Presented at the First International Conference on Protein Stabilization, Leeds, Great Britain. 1998 06.

35. Matulis, D., and Lovrien, R. ANS anion - protein binding primarily depends on ion pair formation. Presented at the 11th Annual Gibbs Conference on Biothermodynamics, Carbondale, USA. 1997 10.

36. Matulis, D., and Lovrien, R. Alkane sulfates (SDS) bind to proteins by forming ion pairs with the positively charged amino acids. Presented at the 3rd International Conference on Lipid-Binding Proteins, Minneapolis, USA. 1997 05.

37. Matulis, D., Wu, C., and Lovrien, R. Designing pushing, pulling, hybrid push-pull agents for protein precipitation. Presented at the 41st Annual Meeting of the Biophysical Society, New Orleans, USA. 1997 02.
38. Lovrien, R., and Matulis, D. Biophysical perspectives on protein precipitation-coprecipitation. Presented at the 40th Annual Meeting of the Biophysical Society, Baltimore, USA. 1996 02.
39. Lovrien, R. and Matulis, D. Hard and soft sulfate and sulfonate anions in protein precipitation-biorecognition. Presented at the 39th Annual Meeting of the Biophysical Society, San Francisco, USA. 1995 02.
40. Matulis, D., Meškys, R., and Rubikas, J. Removal of nickel from industrial effluents: an innovative process using the bacterial membrane transport system for nickel. Presented at the Fourth International Symposium on Biological Processing of Fossil Fuels, Alghero, Italy. 1993 09.
41. Matulis, D., Meškys, R., and Rubikas, J. Nickel uptake and efflux by bacterial cells. Presented at the International Symposium on Biological Processing of Fossil Fuel in Moscow, Russia. 1991 09.

Academic research projects:

1. VP1-3.1-ŠMM-07-K-009 „Support to Research Activities of Scientists and Other Researcher (Global Grant)“. “Design of selective carbonic anhydrase, Hsp90, and Hsp70 inhibitors and investigation of their anticancer properties”. (405 454 €), 2012 09 02 – 2015 10 01.
2. Grant No. LIG-09/2012 from the Research Council of Lithuania. (171 021 €), 2012 05 02 – 2014 12 31.
3. “BPS Mini-Grant Networking Event”. (380 €), 2012.
4. Baltic Sea Region Programme 2007 – 2013. Baltic Sea Health Region – Business acceleration support and training bridging innovative SMEs and health care organisations to strengthen BSR health economy, BSHR HealthPort. (111 000 €), 2010 09 17 - 2013 12 16.
5. FP7-REGPOT-2009-1 MoBiLi "Strengthening and sustaining the European perspectives of Molecular Biotechnology in Lithuania". (1 600 000 €), 2009 12 – 2013 05.
6. Grant No. LIG-16/2010 from the Research Council of Lithuania. (294 800 €), 2010 09 – 2011 12.
7. Epigenetics: Bench to Bedside. COST. 2009 – 2013.
8. Chemical Biology with natural products. COST. 2009.
9. Anticancer drug design by structural biothermodynamics“ by EEA-Norway Grants (565 037 €), 2008 – 2010.
10. “Design of specific human carbonic anhydrase inhibitors”, by the Lithuanian Science and Studies Foundation, (362 000 €), 2005 – 2009.
11. “Drug design by structural thermodynamics”, European Union FP6 Marie Curie international reintegration grant, (80 000 €), 2004 – 2006.