

Igor A. Butovich, Ph.D.

Associate Professor,
Department of Ophthalmology and the Graduate School of Biomedical Sciences,
University of Texas Southwestern Medical Center,
Dallas, TX 75390-9057
E-mail: Igor.Butovich@utsouthwestern.edu

RESEARCH APPOINTMENTS:

Sept. 2011 –

Department of Ophthalmology, University of Texas Southwestern Medical Center, Dallas TX
Position: Associate Professor

2004 – 2011

Department of Ophthalmology, University of Texas Southwestern Medical Center, Dallas TX
Position: Assistant Professor

2003 – 2004

Department of Medical Biochemistry and Biophysics (MBB), Division of Physiological Chemistry II, Karolinska Institute, Stockholm, Sweden
Position: Visiting Professor

2001 – 2003

Department of Pharmaceutical Sciences, Medical University of South Carolina, Charleston, SC
Position: Assistant Professor

1998 – 2001

Center of Molecular Toxicology and Carcinogenesis, Pennsylvania State University, University Park, PA
Position: Senior Research Associate (Faculty)

1990 – 2002

Laboratory of Chemical Enzymology, Institute of Bio-Organic Chemistry, National Academy of Sciences, Kiev, Ukraine
Position: Head of Laboratory

1985 – 1990

Department of Fine Organic Synthesis, Institute of Bio-Organic Chemistry, National Academy of Science, Kiev, USSR
Positions: Scientist, Senior Scientist

EDUCATION:

Ph.D., Institute of Physical Chemistry, National Academy of Sciences, Kiev, Ukraine
(chemistry/enzymology, 1985)

BS, M.Sc. National University, Kiev, Ukraine (Summa Cum Laude, GPA equivalent 3.86; biochemistry/biology, 1980, 1981)

HONORS AND AWARDS:

2010

Fellow of Royal Society of Medicine (London, United Kingdom)

2010

Listed in Who's Who in America (Marquis Who's Who, New Providence, NJ)

2010

Top 5% of cited authors for journals in Biology and Biochemistry (Thomson Reuters)

2003 – 2005

Visiting Professor (STINT Fellow), Karolinska Institute, Stockholm, Sweden

1997

Scientific Title of Senior Research Fellow in Bioorganic Chemistry (National Academy of Sciences and Cabinet of Ministers of Ukraine).

1992

Bijvoet Center for Biomolecular Research Guest Scientist, Utrecht University, Utrecht, the Netherlands.

1991 – 1992

The British Council/The Leverhulme Trust Post-Doctoral Fellow, Great Britain.

1980 – 1997

National awards and fellowships, USSR and Ukraine (a complete list is available upon request).

PROFESSIONAL AFFILIATIONS:

Royal Society of Medicine (RSM, United Kingdom, 2010)

Association for Research in Vision and Ophthalmology (ARVO, USA, 2005)

Tear Film and Ocular Surface Society (TFOS, USA, 2005)

Association of Colleges of Pharmacy (ACCP, USA, 2003)

American Chemical Society (ACS, USA, 1999)

New York Academy of Sciences (USA, 1995)

International Society for the Study of Fatty Acids and Lipids (ISSFAL, USA, 1993)

Ukrainian Biochemical Society (UBS, Ukraine, 1981)

PROFESSIONAL STANDING:

Editorial Board Member: *Open Enzyme Inhibition Journal* (2008), *Journal of Steroids and Hormonal Science* (2010)

Reviewer: *Acta Ophthalmologica*; *Archives of Ophthalmology*; *Chemistry and Physics of Lipids*; *Cornea*; *Experimental Eye Research*; *Investigative Ophthalmology and Visual Science*; *Journal of Chromatography*; *Journal of Lipid Research*; *Langmuir*; *Lipids*; *Medical Science Monitor*; *Optometry and Vision Science*; *Ocular Surface*; *Plant Physiology and Biochemistry*; *Prostaglandins and Other Lipid Mediators*.

PH.D. THESIS ADVISOR:

Kazachkov M (Ph.D, 2001)
Babenko V.M. (Ph.D, 1996)
Mogilevich (Maxey) T.V. (Ph.D, 1994)

RESEARCH SUPPORT:

NIH Award Number R01EY019480 from the National Eye Institute (2010-2015). Role: PI
NIH Award Number R01EY 019480-01A1S1 from the National Eye Institute (2010). Role: PI
NIH Award Number 5R01EY018395 from the National Eye Institute (2007-2010). Role: Co-Inv
NIH Award Number 5P30AR041940-14 (2005-2006). Role: Module PI

Research contracts from:

University of Western Sydney (Sydney, Australia, 2008-2009)
ISTA Pharmaceuticals (Irvine, CA, 2008-2009)
Alcon (Fort Worth, TX, 2011-present)

IMPORTANT CONFERENCE PRESENTATIONS:

Over the period of 25 years, more than 100 presentations at various national and international conferences, including those listed below:

2009 – Annual ARVO meeting (Fort Lauderdale, FL, invited speaker and a session co-chair)

2008 – Annual ARVO meeting (Fort Lauderdale, FL, invited speaker and a session moderator)

2005 – Annual 7th Winter Eicosanoid Conference (Baltimore, MD, invited speaker)

1994 – Bi-Annual 9th International Conference on Prostaglandins and Related Compounds (Florence, Italy, invited speaker)

1993 – 3rd International Conference on Lipid Mediators in Health and Disease (Jerusalem, Israel, invited speaker and a session co-chair)

SELECTED INVITED SEMINARS:

- 2010 – Vision Sciences Seminars Series, Department of Ophthalmology (UTSouthwestern)
- 2009 – Department of Ophthalmology (UTSouthwestern)
- 2007 – University of Sydney (Sydney, Australia)
- 2004 – Karolinska Institute (Stockholm, Sweden)
- 2004 – Uppsala University (Uppsala, Sweden)
- 2003 – Louisiana State University (New Orleans, LA)

LIST OF PEER-REVIEWED PUBLICATIONS (89 total):

1. **Butovich I.A.**, Borowiak A.M., Eule J.C. Comparative HPLC-MSⁿ analysis of canine and human meibomian lipidomes: many similarities, a few differences. Scientific Reports. (2011); 1, doi:10.1038/srep00024
2. **Butovich I.A.**
Lipidomics of human Meibomian gland secretions: Chemistry, biophysics, and physiological role of Meibomian lipids. Prog Lipid Res. (2011);50(3):278-301
3. Green-Church K.B., **Butovich I.**, Willcox M., Borchman D., Paulsen F., Barabino S., Glasgow B.J. The international workshop on meibomian gland dysfunction: report of the subcommittee on tear film lipids and lipid-protein interactions in health and disease. Invest Ophthalmol Vis Sci. (2011);52(4):1979-1993
4. McMahon A., **Butovich I.A.**, Kedzierski W. Epidermal expression of an Elovl4 transgene rescues neonatal lethality of homozygous Stargardt disease-3 mice. J Lipid Res. (2011);52(6):1128-1138
5. Green-Church K.B., **Butovich I.**, Willcox M., Borchman D., Paulsen F., Barabino S., Glasgow B.J. The international workshop on meibomian gland dysfunction: report of the subcommittee on tear film lipids and lipid-protein interactions in health and disease. Invest Ophthalmol Vis Sci. (2011);52(4):1979-1993
6. **Butovich I.A.**
On the presence of (O-acyl)-omega-hydroxy fatty acids and of their esters in human meibomian gland secretions. Invest Ophthalmol Vis Sci. (2011);52(1):639-641
7. **Butovich I.A.**
On the presence and role of polar lipids in meibum. Invest Ophthalmol Vis Sci. (2010);51(12):6908-6910
8. Wojtowicz J.C., **Butovich I.**, Uchiyama E., Aronowicz J., Agee S, McCulley J.P. Pilot, prospective, randomized, double-masked, placebo-controlled clinical trial of an omega-3 supplement for dry eye. Cornea (2011);30(3):308-314

9. **Butovich I.A.**, Arciniega J.C., Wojtowicz J.C.
Meibomian lipid films and the impact of temperature.
Invest Ophthalmol Vis Sci. (2010);51(11):5508-5518.
10. **Butovich I.A.**
Fatty acid composition of cholesteryl esters of human meibomian gland secretions.
Steroids (2010);75(10):726-733
11. **Butovich I.A.**
The Meibomian puzzle: combining pieces together
Progr Retin Eye Res. (2009);28(6):483-498
12. **Butovich I.A.**
Lipidomic Analysis of Human Meibum Using HPLC-MSⁿ
Methods Mol Biol. 2009;579:221-246
13. **Butovich I.A.**, Wojtowicz J., Molai M.
Human tear film and meibum. 1. Very long chain wax esters and (O-acyl)-omega-hydroxy fatty acids of meibum.
J Lipid Res. (2009);50(12):2471-2485
14. **Butovich I.A.**
Cholesteryl esters as a depot for very long chain fatty acids in human meibum.
J Lipid Res. (2009);50(3):501-513
15. Wojtowicz JC, **Butovich I.A.**, McCulley J.P.
Historical brief on composition of human meibum lipids.
Ocul Surf. (2009);7(3):145-153
16. Millar T.J., Mudgil P, **Butovich I.A.**, Palaniappan C.K.
Adsorption of human tear lipocalin to human Meibomian lipid films.
Invest Ophthalmol Vis Sci. (2009);50(1):140-151
17. Uchiyama E., Di Pascuale M.A., **Butovich I.A.**, McCulley J.P.
Impact on ocular surface evaporation of an artificial tear solution containing hydroxypropyl guar.
Eye Contact Lens. (2008);34(6):331-334
18. **Butovich I.A.**
On the lipid composition of human meibum and tears: Comparative analysis of nonpolar lipids.
Invest Ophthalmol Vis Sci. (2008);49(9):3779-3789
19. **Butovich I.A.**, Millar T.J., Ham B.M.
Understanding and analyzing meibomian lipids – a review.
Curr Eye Res. (2008);33(5):405-420
20. **Butovich I.A.**, Lukyanova S.M.
Inhibition of lipoxygenases and cyclooxygenases by linoleyl hydroxamic acid: comparative in vitro studies.
J Lipid Res. (2008);49(6):1284-1294

21. **Butovich I.A.**, Uchiyama E., McCulley J.P.
Lipids of human meibum: Mass-spectrometric analysis and structural elucidation.
J Lipid Res. (2007) 48(10):2220-2235
22. **Butovich I.A.**, Uchiyama E., Di Pascuale M., McCulley J.P.
Liquid Chromatography-Mass Spectrometric Analysis of Lipids Present in Human Meibomian Gland Secretions.
Lipids (2007) 42(8):765-776
23. Gipson I.K., Argueso P., Beuerman R., Bonini S., **Butovich I.**, Dana R., Dartt D., Gamache D., Ham B., Jumblatt M., Korb D., Kruse F., Ogawa Y., Paulsen F., Stern M., Sweeney D.F., Tiffany J., Ubels J., Willcox M.
Research in dry eye: Report of the Research Subcommittee of the International Dry Eye WorkShop (2007)
Ocul Surf. (2007);5(2):179-193
24. McMahon A., **Butovich I.A.**, Mata N.L., Klein M., Ritter R. 3rd, Richardson J., Birch D.G., Edwards A.O., Kedzierski W.
Retinal pathology and skin barrier defect in mice carrying a Stargardt disease-3 mutation in elongase of very long chain fatty acids-4.
Mol Vis. (2007);13:258-272
25. **Butovich I.A.**, Lukyanova S.M., Bachmann C.
Dihydroxydocosahexaenoic acids of the neuroprotectin D family: Synthesis, structure and inhibition of human 5-lipoxygenase.
J Lipid Res. (2006);47(11):2462-2474
26. McCulley J.P., Aronowicz J.D., Uchiyama E., Shine W.E., **Butovich I.A.**
Correlations in a change in aqueous tear evaporation with a change in relative humidity and the impact.
Am J Ophthalmol. (2006);141(4):758-760
27. **Butovich I.A.**
A one-step method of 10,17-dihydro(peroxy)docosahexa-4Z,7Z,11E,13Z,15E,19Z-enoic acid synthesis by soybean LOX.
J Lipid Res. (2006);47(4): 90-800
28. McCulley J.P., Uchiyama E., Aronowicz J.D., **Butovich I.A.**
Impact of evaporation on aqueous tear loss.
Trans Am Ophthalmol Soc. 2006;104:121-128
29. **Butovich I.A.**
On the structure and synthesis of neuroprotectin D1, a novel anti-inflammatory compound of the docosahexaenoic acid family.
J Lipid Res. (2005);46(11):2311-2314
30. **Butovich I.A.**, Hamberg M., Rådmark O.
Novel oxylipins formed from docosahexaenoic acid – 10(S)-hydroxydocosahexaenoic acid and 10,20-dihydroxydocosahexaenoic acid.
Lipids (2005);40(3):249-257

31. **Butovich I.A.**, Reddy C.C.
Inhibition of potato tuber lipoxygenase by linoleyl hydroxamic acid: kinetic and EPR spectral evidences for a two-step reaction.
Biochem J. (2002);365(Pt 3):865-871
32. Sánchez C., **Butovich I.**, Braña A.F., Rohr J., Méndez C., Salas J.A.
The biosynthetic gene cluster for the antitumor rebeccamycin: characterization and generation of indolocarbazole derivatives.
Chemistry & Biology (2002);9(April):519-531
33. **Butovich I.A.**, Kharchenko O.V., Naboka Iu.N., Kazachkov M.G.
Characteristics of the aggregative state of the substrate in the reaction of 5-lipoxygenase oxidation of linoleic acid.
Ukr Biochem. J. (2001);73(2):39-43
34. **Butovich I.A.**, Reddy C.C.
Enzyme-catalyzed and enzyme-triggered pathways in dioxygenation of 1-monolinoleoyl-rac-glycerol by potato tuber lipoxygenase.
Biochim Biophys Acta (2001);1546(2):379-398
35. **Butovich I.A.**, Pechous S., Reddy C.C.
Characterization of non-heme iron center in potato tuber lipoxygenase by EPR spectroscopy.
FASEB J. (2001);15(5):876
36. **Butovich I.A.**, Lukyanova S.M., Reddy C.C.
Oxidation of linoleyl alcohol by potato tuber lipoxygenase: Kinetics and positional, stereo- and geometrical (cis,trans) specificity of the reaction.
Arch Biochem Biophys. (2000);378(1):65-77
37. **Butovich I.A.**
Enzyme-substrate interactions in lipoxygenase oxidation of ionizable and non-ionizable substrates – linoleic acid and linoleyl alcohol.
Proc Natl Acad Sci. of Ukraine (2000);N8:155-160
38. Kvochina L.I., Tumanovs'ka L.V., Marchenko H.I., Moibenko O.O., **Butovych I.A.**
The protective effect of omega-3 polyunsaturated fatty acids on the activity of the isolated rat heart during myocardial ischemia-reperfusion.
Fiziol Zh. (2000);46(2):98-108
39. Kharchenko O.V., Kulinichenko H.I., **Butovych I.A.**
Kinetic mechanisms of linoleic acid oxidation by 5-lipoxygenase from *Solanum tuberosum* L.
Ukr Biochem. J. (1999);71(4):40-44
40. Kharchenko O.V., Cernjuk, V.N., **Butovich I.A.**
Inhibition of porcine leukocyte 12-lipoxygenase oxidation of linoleic acid by linoleyl hydroxamic acid.
Ukr Biochem. J. (1999);71(1):35-40
41. **Butovich I.A.**, Kharchenko O.V.
The role of phospholipids in regulation of activity of porcine leukocyte 12-lipoxygenase.
Ukr Biochem. J. (1999);71(1):30-34

42. **Butovich I.A.**, Lukyanova S.M., Reddy C.C.
Oxidation of linoleyl alcohol by potato tuber lipoxygenase: possible mechanism and the role of carboxylic group in substrate binding.
Biochem Biophys Res Commun. (1998);249(2):344-349
43. Kukoba T.V., Seredenko M.M., **Butovych I.A.**, Moibenko O.O.
The effect of linoleyl hydroxamic acid on lipid peroxidation processes and on the enzymatic activity of the antioxidant system in rats under hypoxia.
Fiziol Zh. (1998);44(5-6):43-48
44. Parshikova T.V., Mogilevich T.V., Ogi S.A., **Butovich I.A.**
The influence of 13(S)-hydroxy linoleic acid on the growth of barley (*Hordeum vulgare*, L.).
Physiol Biochem Cult Plants (1997);29(6):435-439
45. Bondarenko L.B., Oghiy S.A., **Butovich I.A.**
Fatty acids hydroxamic derivatives as inhibitors of 5-lipoxygenase.
Adv Exp Med Biol. (1997);407:471-475
46. **Butovich I.A.**, Babenko V.M.
A new biomimetic system for investigation of lipoxygenase reaction mechanism.
Prost Leukotrienes and Essential Fatty Acids. 1996;55(1):129
47. Brovkovich V.M., Moibenko A.A., **Butovich I.A.**, Brovkovich S.D., Ogi S.A.
Effect of lipoxygenase derivatives of linoleic acid on functional activity of neutrophils.
Ukr Biochem J. (1996);68(3):79-84
48. Bondarenko L.B., Kharchenko O.V., **Butovich I.A.**
Combined effect of phosphatidyl inositol and linoleate hydroxamic acid on 5-lipoxygenase.
Pharm Chem J. (1996);30(3):175-177
49. Bondarenko L.B., Ogi S.A., Tsernyuk V.N., **Butovich I.A.**
Hydroxamic derivatives of saturated fatty acids as inhibitors of 5-lipoxygenase.
Biopolymers and the Cell. (1996);12(2):29-33
50. Bondarenko L.B., Ogi S.A., **Butovich I.A.**
Effects of linolenic acid and its hydroxamic derivative on 5-lipoxygenase.
Biopolymers and the Cell. (1996);12(2):34-37
51. Mogilevich T.V., Parshikova T.V., Babenko V.M., Ogi S.A., Kukhar V.P., **Butovich I.A.**
Activation of oxidation of linoleic acid by 5-lipoxygenase from barley by phosphatidyl inositol.
Proc Natl Acad Sci of Ukraine. (1996);7:120-124
52. Liu B, Khan W.A., Hannun Y.A., Timar J., Taylor J.D., Lundy S., **Butovich I.**, Honn K.V.
12(S)-hydroxyeicosatetraenoic acid and 13(S)-hydroxyoctadecadienoic acid regulation of protein kinase C- α in melanoma cells: role of receptor-mediated hydrolysis of inositol phospholipids.
Proc Natl Acad Sci U S A. (1995);92(20):9323-9327
53. Cherednichenko G.A., Moibenko A.A., **Butovich I.A.**, Ogi S.A.
Effect of 13(S)-HPODE, a lipoxygenase product of linoleic acid, on calcium transport and Na,K-ATPase activity in the myocardial sarcolemma.
Bull Exp Biol Med. (1995);120(9):255-258

54. Bondarenko L.B., Kharchenko O.V., **Butovich I.A.**
Effect of 1,25-dihydroxyvitamin D3 on 15-lipoxygenase activity.
Vopr Med Khim. (1995);41(3):29-31
55. **Butovich I.A.**, Kharchenko O.V., Babenko V.M.
On the interfacial phenomena in lipoxygenase catalysis.
Adv Prostaglandin Thromboxane Leukotriene Res. (1995);23:159-161
56. Bondarenko L.B., Kharchenko O.V., **Butovich I.A.**
Kinetic characteristics of 5-lipoxygenase inhibition by 1,25-dihydroxyvitamin D3.
Pharm Chem J. (1995);29(5):313-315
57. Mogilevich T.V., Ogi S.A., Kukhar V.P., **Butovich I.A.**
Oxidation of linoleic acid by immobilized lipoxygenase in water and water/organic mixtures.
Proc Natl Acad Sci. of Ukraine. (1995);7:108-111
58. Bondarenko L.B., Kharchenko O.V., **Butovich I.A.**
Combined effect of phosphatidyl choline and linoleyl hydroxamic acid on 5-lipoxygenase activity.
Pharm Chem J. (1995) 29(6):392-394
59. Honn K.V., Tang D.G., Gao X., **Butovich I.A.**, Liu B., Timar J., Hagmann W.
12-lipoxygenases and 12(S)-HETE: role in cancer metastasis.
Cancer Metastasis Rev. (1994);13(3-4):365-396
60. Bondarenko L.B., Kharchenko O.V., **Butovich I.A.**
A hormonally-active form of vitamin D3 – 1,25-dihydroxyvitamin D3 – an inhibitor of leukocyte lipoxygenase.
Vopr Med Khim. (1994);40(5):2-4
61. **Butovich I.A.**, Bondarenko L.B., Kutnyaya M.Yu., Naboka Yu.M., Ogi S.A.
Influence of proteins on catalytic properties of 15-lipoxygenase in the reaction of linoleic acid oxidation.
Biotechnology. (1994); N1:36-38
62. Moibenko A.A., Grabovskii L.A., Kotsiuruba V., Bulakh V.N., Tumanovskaia L., Azarov V.I., **Butovich I.A.**
The mechanisms of the changes in coronary vascular resistance in anaphylactic shock.
Fiziol Zh Im I. M. Sechenova. (1994);80(2):77-82
63. **Butovich I.A.**, Kharchenko O.V., Bondarenko L.B., Babenko V.M., Livarchuk L.V.
Linoleyl hydroxamate as 5-lipoxygenase inhibitor.
Biochemistry (Moscow) (1994);59(6):597-600
64. **Butovich I.A.**, Mogilevich T.V., Ogi S.A., Kutnyaya M.Yu., Kukhar V.P.
Catalytic properties of soybean lipoxygenase immobilized on modified silica.
Rus J Bioorg Chem. (1994);20(10):615-619
65. Marchenko H.I., Kotsiuruba V.M., **Butovich I.A.**, Sorochnytskyi A.E., Zrazhevska V.K., Tumanovska L.V.
The correction of disorders in arachidonic acid metabolism in coronary spasm of an immune origin.
Fiziol Zh. (1994);40(3-4):81-87

66. Piletskii S.A., **Butovich I.A.**, Kukhar V.P.
Construction of molecular sensors based on substrate-selective polymeric membranes.
J Analit Chem. (USSR). (1992);47(9):1231-1234
67. **Butovich I.A.**, Tsys E.V., Mogilevich T.V.
Oxidation of linoleic acid and methyl linoleate by potato and soybean lipoxygenases: a comparative study.
Biochemistry (Moscow). (1992);57(10):1012-1019
68. **Butovich I.A.**
Study by reverse-phase high-performance liquid chromatography of the adsorption of linoleic acid and of methyl linoleate on the interface between polar and non-polar phases.
Russ J Phys Chem. (1992);66(7):988-991
69. **Butovich I.A.**, Parshikova T.V., Babenko V., Livarchuk L., Kharchenko O.V., Kukhar V.P.
Regulatory role of phospholipids in linoleic acid oxidation by 5-lipoxygenase.
Biol Membr. (1992);9(6):611-616
70. **Butovich I.A.**, Tsys E.V., Mogilevich T.V., Kukhar V.P.
Influence of physicochemical factors on lipoxygenase oxidation of linoleic acid.
Bioorg Chem. (USSR). (1991);17(9):1273-1280
71. **Butovich I.A.**, Soloshonok V.A., Kukhar V.P.
The unusual action of (R,S)-2-hydroxy-2-trifluoromethyl-trans-n-octadec-4-enoic acid on 5-lipoxygenase.
Eur J Biochem. (1991);199(1):153-165
72. Soloshonok V.A., Rozhenko A.B., **Butovich I.A.**, Kukhar V.P.
Reactions of methyl trifluoropyruvate with terminal olefins.
J Org Chem USSR (1991);26(10):1771-1775
73. **Butovich I.A.**, Kukhar V.P.
Amphiphilic aliphatic acids as activators of 5-lipoxygenase. The adsorption-micellar regulatory mechanism.
Proc Natl Acad of the USSR. (1991);316(6):1486-1490
74. **Butovich I.A.**, Babenko V.M., Livarchuk L.V, Mogilevich T.V., Kukhar V.P.
Activation of the oxidation of linoleic acid by 5-lipoxygenase from potato tubers, induced by phosphatidic acid.
Biochemistry (Moscow). (1991);56(4):744-747
75. **Butovich I.A.**, Bridnya V.P., Kukhar V.P.
Linoleate-hydroxamic acid: a suicide inhibitor of lipoxygenase.
Biochemistry (Moscow). (1991);55(7, part 1):908-912
76. **Butovich I.A.**, Soloshonok V.A., Solodenko V.A., Kukhar V.P.
Activation of 5-lipoxygenase by lipophilic n-alkyl-containing acids – an allosteric process.
Bioorg Khim. (1990);16(2):270-271
77. **Butovich I.A.**, Kukhar V.P.
Potato 5-lipoxygenase. Kinetics of linoleic acid oxidation.
Ukr Biochem J. (1989);61(2):106-108

78. **Butovich I.A.**, Kukhar V.P., Bridnya V.P., Radchenko O.A., Kotlinskaya A.
Polyfluorosubstituted alcaidynoic carboxylic and hydroxamic acids as new inhibitors of lipoxygenases.
Proc Natl Acad Sci of Ukraine, ser. B. (1989);5:55-58
79. **Butovich I.A.**, Mogilevich T.V., Kukhar V.P.
Activity of lipoxygenase incorporated into reversed micelles of aerosol OT in octane.
Ukr Biochem J. (1989);61(2):54-59
80. **Butovich I.A.**, Kukhar V.P., Tsys E.V., Bridnya V.P.
Method of preparation of hydroperoxides of polyunsaturated fatty acids.
Patent of the USSR (1988) N 1631086
81. Kornilov A.M., Sorochinskii A.E., **Butovich I.A.**, Kukhar V.P.
Catalytic asymmetric epoxidation of methyl-7-oxy-5e-heptenoate.
Zh Org Khim. (1987);23(11):2470-2471
82. **Butovich I.A.**, Tertykh V.A.
Adsorption of proteins at the surface of chemically modified silica.
Theor Exp Chem. (1987);23(11):237-241
83. **Butovich I.A.**, Semichaevskii V.D.
Catalytic properties of extracellular phenol oxidases from the higher basidiomycete *Pleurotus ostreatus* (Fr.)
Kumm.
Ukr Biochem J. (1986);58(4):18-26
84. **Butovich I.A.**
Stability and catalytic properties of o-diphenol oxidase. 1. Oxidation of o-diphenols.
Ukr Biochem J. (1986);58(1):10-16
85. **Butovich I.A.**
Stability and catalytic properties of o-diphenol oxidase. 2. Oxidation of mono-phenols.
Ukr Biochem J. (1986);58(1):16-21
86. **Butovich I.A.**, Tertykh V.A.
Inactivation of o-diphenoloxidase in the pyrocatechol oxidation reaction.
Ukr Biokhim Zh. (1984);56(5):527-532
87. **Butovich I.A.**, Tertykh V.A.
A method for determining the o-diphenoloxidase activity in the pyrocatechol oxidation reaction.
Ukr Biochem J. (1984);56(4):437-441
88. **Butovich I.A.**, Yanishpolskii V.V.
Immobilized o-diphenoloxidase in analysis of aqueous solutions of phenols.
Adsorption and Adsorbents. (1984);12:71-74
89. **Butovich I.A.**, Semichaevskii V.D., Tsarevich N.V.
Phenoloxidizing ability of extracellular enzymes of *Pleurotus ostreatus* (Fr. Kumm).
Proc Natl Acad Sci of Ukraine, ser. B. (1984);10:80-83