Gabor Joseph Tigyi, M.D., Ph.D.
Harriet Van Vleet Professor and Department Chair
Department of Physiology, University of Tennessee Health Science Center, Memphis
Professor of Chemistry, University of Memphis (adjunct)
Professor of Graduate Studies, Hokkaido University, Japan (visiting)
Foreign Member, Hungarian Academy of Science, Budapest
Member, European Academy of Arts, Letters and Sciences, Paris
Chief Scientific Officer, RxBio Inc.

PERSONAL

Date and Place of Birth: February 20, 1958; Pécs, Hungary
Citizenship: USA by naturalization

Address: Department of Physiology
University of Tennessee Health Sciences Center
894 Union Avenue
Memphis, TN 38163
Tel.: (901) 448-4793
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http://physio1.utmem.edu/~tigyig/index.html

EDUCATION

M.D. (*summa cum laude*), University Medical School of Pécs, Hungary, 1976-1982

Ph.D. Cellular and Molecular Neurobiology, Budapest (*with honors)*
Thesis: Lysophosphatidate in the regulation of cell proliferation and neuronal differentiation

Postgraduate Training: **Massachusetts Institute of Technology**, Department of Laser Spectroscopy
Mentors: Lawrence R. Ryan and Geza J. Jako. 1979-1980.
Biomedical Center, University of Uppsala, Department of Biochemistry
Mentors: Stellan Hjerten and Paul Roos. 1983.
Max-Planck Institute for Biophysical Chemistry, Laboratory of Molecular Biology, Gottingen, Germany. Mentor: Tom Jovin. 1984.
University of California, Irvine. Laboratory of Cellular and Molecular Neurobiology, Department of Psychobiology. Mentor: Ricardo Miledi, Fellow of the Royal Society and Member of the National Academy of Science, USA. 1986-1990.

ACADEMIC APPOINTMENTS

2007-present	**Chair**, Department of Physiology, University of Tennessee Health Science Center, ,Memphis
2006-present	**Harriet Van Vleet Chair in Oncology Research,** University of Tennessee Health Science Center, Memphis
2005-present	**Professor of Graduate Studies** (visiting, on contract 2006-2011), Faculty of Pharmacology, Hokkaido University, Sapporo, Japan
2003-present	**Professor of Chemistry** (adjunct), Department of Chemistry, University of Memphis
2002-present	**Associate Director for Basic Science**, University of Tennessee Cancer Institute
2001-present	**Founder and Chief Scientific Officer,** RxBio Inc. - an emerging biotechnology company
2000	**Visiting Professor**, Faculty of Pharmaceutical Sciences, Hokkaido University, Japan.
2000	**Visiting Professor**, Ochanomizu University, Tokyo, Japan
1999-present	**Professor,** Department of Physiology, University of Tennessee Health Science Center, Memphis**.**

1997-2005	**Visiting Professor**, City University of New York, Queens College Department of Chemistry and Biochemistry
1995-present	**Member**, Cardiovascular-Renal Center of Excellence, Department of Physiology, University of Tennessee, Memphis.
1995-1999	**Associate Professor** – with tenure (1996); Department of Physiology, University of Tennessee, Memphis
1994-present	**Member,** Center of Excellence in the Neurosciences, University of Tennessee, Memphis
1992-1995	**Assistant Professor**, Department of Physiology and Biophysics, University of Tennessee, Memphis
1990-1992	**Assistant Professional Researcher**, Laboratory of Cellular and Molecular Neurobiology, Department of Psychobiology, University of California, Irvine

HONORS

2013 **Plenary lecture**, Bioactive Lipid Mediates in Cancer, Inflammation and Other Diseases, St. Juan, PR
2013 **Keynote speaker**, FASEB Summer Conference on Lysophospholipids, Niseko, Japan
2011 **Outstanding Research Advisor Award** – College of Graduate Health Science, University of Tennessee Health Science Center
2011 **Journal of Lipid Research Award** – FASEB Summer Conference, Lucca, Italy
2010 **NAITO Foundation Lecturer**, Frontiers in Lipid Research, Sapporo, Japan
2008 RxBio developed a product that was selected by the 2008 **Better World Project** as one of the top 100 examples from across the globe of how innovation from academic research makes its way to the market.
2007 **Member of the Board**, IRIS Chamber Orchestra, Germantown, Tennessee
2007 **Member**, European Academy of Arts, Letters and Sciences, Paris
2006 **Nominee**, Wheeley Prize, University of Tennessee
2005 **Keynote Speaker**, University of Tokyo 21st Century COE symposium "Drug discovery and chemical biology"
2005 **Keynote Speaker**: FASEB Summer Conference on Lysophospholipids in Biology and Diseases
2005 **President,** Tennessee Road Warrirors, International Plastic Modelers Society Chapter, Memphis
2004 **Foreign Member of the Hungarian Academy of Sciences**
2002 **Guest Editor** – *Biochimica et Biophysica Acta* Special Issue on Lysophospholipids
2001 **Takeda Foundation Lecturer**, Symposium on Lipids in Signaling and Related Diseases, Tokyo
1997-2000 **Established Investigator of the American Heart Association**
1998 **President** of the Faculty Organization of the College of Medicine, University of Tennessee, Memphis.
1996 **Nagayoshi Nagai Prize,** Tokushima University, Tokushima, Japan
1996 **Keynote Speaker,** Lipid Session, Japanese Biochemical Society Annual Meeting, Kanazawa
1984 **International Cell Research Organization Fellowship**
1983 **Merit Medal** for Higher Education, Ministry of Education of Hungary for 4.0 GPA through higher education
1981 **First Place Award**, National Research Conference for Medical Students. Debrecen, Hungary.
1980 **Special Award**, 1st International Research Conference for Medical Students. Hradec Kralove, Czechoslovakia.
1979 **First Place Award**, National Research Conference for Medical Students. Pécs, Hungary.

EDITORIAL BOARDS

Progress in Lipid Research – Executive Editor 2013.
Biochimica Biophysica Acta – 2000-present. Guest Editor, Special Issue on Lysophospholipids, 2002 and 2008
Journal of Biological Chemistry – 2003-2014
Journal of Cellular Biochemistry – 2003, 2008, 2012. Guest Editor, special volume on lysophospholipids

GRADUATE LEVEL TEACHING

Master Course in Biomedical Sciences, 2013
Interdisciplinary Graduate Course - Kidney physiology, 2005-
Kidney Physiology to Dentistry and Pharmacy Students, 2002-
Scientific Writing – through the reviewer's eyes, 2006, 2007
Course Director, Physiology to Dentistry and Pharmacy Students, 2001
Medical Physiology – Osmoregulation, fluid balance, pH regulation, 1993-present
Respiratory Physiology Lectures to Dental Students — D1 Course, UT-Memphis; 1993-1999
Graduate Electrophysiology, UT-Memphis; 1994, 1997, 2001, 2003
Human Physiology Review — to Advanced Placement Biology Students at White Station High School, Memphis City Schools; 1995, 1996
Biology '80: "Brain and behavior," Neurobiology Lecture Course; 1991, University of California, Irvine
Biology '79: "How the brain works," Neuroscience Lecture Course; 1990, 1991, University of California, Irvine.
Biology 105, Psychobiology Laboratory Course for Undergraduates; 1988, 1989, University of California, Irvine
Biochemical Separation Methods Postgraduate Course, 1984. Budpaest
Biophysics Laboratory Course, University Medical School; Pécs, Hungary; 1977-1982

UNDERGRADUATE/GRADUATE STUDENTS TRAINED

Le-Thiet Thanh	Postdoctoral UNESCO fellow, Institute of Biophysics, Biological Research Center of the Hungarian Academy of Sciences
David Dyer	Graduate student, Department of Psychobiology, University of California, Irvine
Cindy J. Asselin	Howard Hughes Undergraduate Excellence in Research Institute
Sandra Win	Howard Hughes Undergraduate Excellence in Research Institute
David Fischer	Graduate student, Department of Developmental and Cell Biology, University of California, Irvine
Corey Wallace	Young Memphis Scholars Program
James Travis	Undergraduate at Christian Brothers University and recipient of REU award from NSF. He completed his graduation thesis work in his lab, presented it at the Annual Meeting of the West Tennessee Academy of Sciences in Union City, and won third place.
Vaughn Massey	Recipient of REU award from NSF; medical student
Frakeeta Marshall	Minority student of Central High School, participant in Young Memphis Scholars Program; she won third place in the City Science Fair.
Danielle Townsend	Undergraduate participants in the Graduate Summer Enrichment Program
Faith Marshall	Young Memphis Scholars Summer Science Institute
Antoni Jarret	Young Memphis Scholars Summer Science Institute
Brandon Sharp	Young Memphis Scholars Summer Science Institute
Amelia Zellander	Young Memphis Scholars Summer Science Institute
Steven Dirmeyer	Young Memphis Scholars Summer Science Institute
Rebecca West,	Young Memphis Scholars Summer Science Institute
Nico West	Undergraduate student
David Smith	Undergraduate student
Nilay Gandhi	Young Memphis Scholars Summer Science Institute
Sergio Klimkowski	Young Memphis Scholars Summer Science Institute
Tamás Virág	Graduate student; graduated in January, 2004
Rebecca West	Undergraduate student, University of Memphis
Yuko Fujiwara	Graduate student; graduated in March, 2004
Sana Mujahid	Undergraduate, CHristion Brothers University
Takemitsu Sano	Graduate student; graduated in March, 2006
Gangadhar Durgam	Graduate student; graduated in May, 2005
Renuka Gupte	Graduate student; graduated in 2011
Shuyu E	Graduate student; graduated in 2010
Alyssa Bolen	Graduate student; graduated in 2011
Ryoko Tsukahara	Graduate student; graduated in 2012

POSTDOCTORAL FELLOWS TRAINED

1994-1996	Michael Ferrebee, M.D. Critical Care Medicine Fellow, Le Bonheur Children's Hospital. Currently Faculty at University of West Virginia.
1994-2001	David Fischer, Ph.D. Currently Senior Scientist, Group Leader, SERONO Inc., Boston.
1995-1996	Thanh Le-Thiet, Ph.D. Postdoctoral fellow. Currently Assistant Professor.
1996-1998	Zhong Guo, M.D.
1996-1998	Károly Liliom, Ph.D. Postdoctoral fellow. Currently Senior Scientist, Group Leader, Institute of Enzymology Hungarian Academy of Sciences.
1997-1998	Guoping Sun, Ph.D. Currenlty Patent Examiner at US Patent Office.
1997-2001	Nora Nusser, M.D. Currently Assistant Professor.
1998-1999	Balazs Debreceni, M.D. Currently Assistant Professor.
1998-2002	Junming Yue, Ph.D. Currently Assistant Professor.
1998-2002	De-an Wang, Ph.D. Currently Assistant Professor.
1998-2003	Daniel Baker, Ph.D. Currently Assistant Professor.
1999	Agnes Sebök, M.D., Ph.D. Currently Associate Professor.
1999-2000	Muhammad Emaduddin, Ph.D.
1999-2000	Don Elrod, Ph.D. Currently Senior Scientist.
1999-2001,	Károly Liliom, Ph.D. Visiting Scientist.
2000-2001	Vineet Sardar, Ph.D. Currently Senior Scientist, Pfizer.
2000-2001	Sanford Mendonca, Ph.D.
2000-2003	Kazuaki Yokoyama, Ph.D. Currently Associate Professor, Teikyo University.
2001-2002	Zsolt Lorincz, Ph.D. Currently Scientific Director of Targetx Inc.
2001-2002	Dagmar Meyer zu Heringdorf, M.D. Currently Associate Professor, University of Essen, Germany.
2002 -2003	Sandor Cseh, Ph.D. Currently Chief Scientist, Targetx Inc.
2002-2004	Satoshi Yasuda, Ph.D. Currently Assistant Professor, Medical University of Hokkaido.
2002-present	Yuko Fujiwara, PhD. Research Associate.
2003-2006	Natalia Makarova, M.D., Ph.D. Instructor. Currently Senior Scientist, Georgia Institute of Technology.
2003-2006	Michelle Walker, Ph.D. Post-doctoral fellow.
2003-present	Tamotsu Tsukahara, Ph.D. Post-doctoral fellow.
2004-present	William J. Valentine, Ph.D. Post-doctoral fellow.
2005	Rosalie Allen, Ph.D. Post-doctoral fellow.
2006-2011	Daniel Osbone, Ph.D. Post-doctoral fellow.
2007-2010	Huazhang Guo, M.D., Ph.D. Research Associate.
2007-2010	Juanxiong Liu, Ph.D. Research Associate.
2008-2012	Gyongyi Kiss. Post-doctoral fellow.
2008-2013	James I. Fells. Post-doctoral fellow.
2009-present	SueChin Lee. Post-doctoral fellow.
2012	Barbara Serrano-Flores. UNAM, Mexico.
2012-2013	Zsolt Lorincz, Visiting Professor.
2012-2013	Erzsebet Szabo. Post-doctoral fellow.
2012-2013	Andrea Balogh. Post-doctoral fellow.
2012-present	Souvik Banerjee. Post-doctoral fellow.
2012-present	Yoshibumi Shimizu. Post-doctoral fellow.

Dissertation Committee Member

Ji-Wei Wang, Department of Physiology, Ph.D. awarded in 1995
Jianyi Zhang, Department of Physiology, Ph.D. awarded in 1996
Glen Pyle, Ph.D. Department of Physiology, awarded in 1998
Quin Ching, Department of Physiology, Ph.D. awarded in 2000
Keven Williams, Department of Physiology, Ph.D. awarded in 2000
Veronika Zsiros, Department of Anatomy and Neuroscience, 2000-2002
Matthew Fabian, Department of Physiology, Ph.D. awarded in 2001
Steven Lloyd, Department of Anatomy and Neuroscience, Ph.D. awarded in 2003
Guan Yao, Department of Biochemistry, Ph.D. awarded in 2003

Chunying Li, Department of Physiology, Ph.D. awarded in 2005
Mitzi Dunagan, Department of , Ph.D. awarded in 2011
James Fells, Department of Chemistry, University of Memphis
Shi Jin, Department of Physiology, University of Tennessee Health Science Center
Donna Perygin, Department of Chemistry, University of Memphis
Jesica Williams, Department of Chemistry, University of Memphis

ADMINISTRATIVE APPOINTMENTS

National and International

Conference co-chair, FASEB Summer Conference on Lysophospholipids, Il Ciocco, Italy, **YEAR?**
Program Committee, International Eicosanoids and Lipid Mediator Conference 2011, Seattle, Washington
Conference Chair, Program Committee, International Eicosanoids and Lipid Mediator Conference 2009, Cancun, Mexico
Program Committee, International Eicosanoids and Lipid Mediator Conference 2007, Montreal, Canada
Program Committee, International Conference on Phospholipase A2 and Lipid Mediators, Berlin, 2005
Outside Review Team, RIKEN Tokyo, Supramolecular Systems Program, 2003
Chair, FASEB Summer Conference on Lysolipid Mediators, 2003
Site Committee, RIKEN Supramolecular Biology Group, Tokyo, 2003
Co-Chair, FASEB Summer Conference on Lysolipid Mediators, 2001
National Cancer Institute Subcommittee C, Program Project Review Panel member, 2002
Member of the Organizing Committee, International Congress on Platelet Activating Factor and Lipid Mediators, Japan, 2001.
Steering Committee, New York Academy of Sciences, Symposium on Lysolipid Mediators in Health and Disease, 1999.
Fogarty International Collaborative Programs, NIH Study Section, Regular member, 1998-2002. *Ad hoc* member 2003-2005.
Conference Chair, 33rd Southeastern Lipid Conference, Cashiers, North Carolina, November 4-6, 1998
Member of *ad hoc* grant review committee for NSF Integrative Biology Neuroscience program, 1997
Member, Scientific Advisory Council to the Biological Research Center of the Hungarian Academy of Sciences, 1991-present
Organizing Committee for the Summer Science Institute, 1988
Ad hoc reviewer for the Spinal Cord Research Foundation of the Paralyzed Veterans of America, 1996

University Committees:

Vice Chancellor for Research Search Committee, Co-chair, 2014
Pharmacology Chair Search Committee, Chair, 2013
Vice Chancellor for Research Search Committee, Co-chair, 2011
Research and Licensing Strategies Task Force, UTHSC, member, 2006
Execution and Implementation. Strategic Planning Working Group .Chair, 2006
UTHSC Large Equipment Committee, 2006
UT State-Wide Cancer Center Planning Task Force, 2006
UTCI Director Search Committee, 2003
UTCI Community Advisory Committee, 2002-present
UT Cancer Center Internal Advisory Committee, 2002-present
UT Cancer Center External Advisory Committee, 2002-present
Bioinformatics/Genomics Search Committee, 2001
Anatomy and Neuroscience Chair Search Committee, 2000
President of the Dean's Faculty Advisory Committee, College of Medicine, UT-Memphis, 1998-1999.
Research Advisory Committee to the Dean-elect for the College of Medicine, UT-Memphis, 1998
Transgenesis Research Task Force, UT Memphis, 1998-present
President-elect of the Faculty Organization for the College of Medicine, UT-Memphis, 1997-1998
Faculty Recruitment Committee, Department of Physiology, UT Memphis, 1997-present
Coordinator for the Molecular and Cellular Neuroscience Seminar Program with the Center for Neuroscience, UT-Memphis, 1997-present

Scientific Advisory Committee of the Brain Injury Research Institute, 1995.
Executive Committee of the Faculty Organization for the College of Medicine, UT-Memphis, 1994-1999
Program Director on an NSF grant proposal entitled "Young Memphis Scholars — Summer Enrichment Program for High School Students," 1993-1998
Graduate Training Committee, Department of Physiology and Biophysics, UT-Memphis,1992-1998

RESEARCH AND OTHER EXTERNAL SUPPORT

Current Support

06/30/13-06/29/18. 1 U01 AI107331-01. "IND-Enabling Preclinical Development of a New Radiomitigator." This project is aimed at the preclinical development of LPA_2 agonists with radiomitigator action. ROLE: PI. 3.6 calendar months.
04/01/12-03/31/17. NIH R01 2R01CA092160-11. "Anticancer Strategies Targeting the Autotaxin-LPA Receptor Axis." $1,250,000. ROLE: PI. 2.4 calendar months.
VA Merit Award 1101BX001187-01, Grant 10690312. "Novel Radiomitigators Targeting LPA Receptors." VA Merit Review Grant.
Van Vleet Oncology Support fund. Continuous. $100,000 per year. This endowment supports the PI's oncology research and provides cost sharing for the CA092160 grant. 0.1 calendar months/

Completed Support during the Last 3 Years

09/01/12-09/30/12. W911QY-12-1-0006 (PI: Strobos). "Rx100: In Vitro Mechanism of Action and Preclinical Pharmacokinetic/Pharmacodynamic Testing in an NHP, GI-ARS Model." $394,000. The major objective of this subcontract is to provide pharmacological characterization of a Rx100 for an IND filing to the FDA. ROLE: Subcontract, PI. 2.4 calendar months.
09/01/08-07/31/13. 5 R01 AI080405-02. "Analysis of Radiomitigative Cell Signaling." $1,250,000 + $100,000 administrative supplement. The major goal of this project was to elucidate the radiomitigating cell signaling of octadecenyl thiophosphate. ROLE: PI. 3.96 calendar months.
09/01/08-07/31/13. AI-R01 080405-01. "Analysis of Radiomitigative Cell Signaling." $1,250,000 direct cost. The major goal of this project was to elucidate the radiomitigating cell signaling of octadecenyl thiophosphate. ROLE: PI.
08/01/06-05/31/11. 5 R01 HL084007-04 (PI: Parrill). "Computational Approach to Ligand Discovery for LPA GPCR and PPAR." ROLE: Co-PI.

Past Support

2009-2012 1 RC2 AI087550-01. NIH/NIAID. "Preclinical Development of a GI Radiation Countermeasure." ROLE: PI.
AI 078514. NIH/NIAID. "Development of a Novel Gastrointestinal Radiomitigator." $1,449,000. The main objective of this grant was to determine the therapeutic efficacy of octadecenyl thiophosphate, a novel radiomitigators, using mouse and non-human primate models of radiation-induced mucositis. ROLE: PI.
2007-2009 1 RC1 AI078514-01. "Development of a Novel Gastrointestinal Radiomitigator." ROLE: PI
2007-2009 1 RO-3 AI0170942-01 (PI: A.P. Naren). 04/1/07 to 06/30/09 NIH/NIAID. "V. Cholerae as a Bioterror Agent: New Means of Treating a Potential Pandemic." ROLE: Collaborator.
2006-2011 NIH R01 (PI: A.P. Naren). "CFTR-Dependent Protein Interactions Regulate Diarrhea." Co-investigator
2006-2010 NIH R01 (PI: A. Parrill). "Computational Approach to Ligand Discovery for LPA GPCR and PPAR." ROLE: Co-PI.
2006-2009 DOD, University of Tennessee Cancer Institute Enhancement Grant. "Novel Methods for Imaging PET Biomarkers and Gene Therapy of Cancer."

2005-2010 NIH R01. “LPA Signaling through the GPCR-PPARg Axis.” $1,250000 direct cost. ROLE: PI.
2003-2007 NIH R01. “Therapeutically Promising Phospholipid Growth Factors." $1,250,000 direct cost. ROLE: PI.
2002-2003 Vascular Biology Center of Excellence Pilot Grant. "Atherogenic effects of LPA." $40,000. ROLE: PI.
2001-2011 5 R01 CA092160-09. "Ligand Recognition by Phospholipid Growth Factor Receptors." ROLE: PI.
2000-2003 NSF. US-Japan Collaborative Programs. $25,000. ROLE: PI.
2000 MCRR Shared Instrumentation Grant Proposal for a BIACORE Spectrometer (PI: L. Jennings). ROLE: Participant user.
1999-2003 NIH RO1 (PI: M. Watsky). “Influence of Ion Channels on Corneal Wound Healing.” ROLE: Co-PI. 10% effort.
1999-2002 American Heart Association National Chapter (PI: A. Parrill). "Computational Approach to S1P Receptor Function." Subcontract $32,000/year.
1999 MCRR Shared Instrumentation Grant Proposal for a Liquid Chromatography-Triple Quadrupole Mass Spectrometer (PI: D. Desiderio). ROLE: Participant user.
1998-2002 NSF. "Modulation of Neuronal Differentiationby Growth Factor-Like Phospholipids" (2nd Renewal). $495,855 direct cost. ROLE: PI.
1998-2002 NIH R01. "Therapeutically Promising Phospholipid Growth Factors." $687,159 direct cost. ROLE: PI.
1998-2002 NIH RO1 (PI: L. Johnson). “Role of Polyamines in Early GI Mucosal Restitution.” ROLE: Co-PI. 5% effort.
1997-2000 Industrial Research Grant for lipid mediator receptor research from LXR Biotechnology, Inc. $70,000/annually.
1997-2000 Established Investigator Award — application to the American Heart Association. "Cardioprotective Sphingolipids and Their Receptors." $75,000 annually.
1997 NSF. Shared Equipment Grant for a Phosphorimager. $59,651. ROLE: Co-PI with T. Patel, UT-Memphis Pharmacology Department.
1996-1998 NSF. "Young Scholars at the University of Tennessee, Memphis." $251,000. ROLE: PI/Program Director.
1995-1998 NATO. Collaborative grant with Dr. Lutz Pott of Ruhr University, Bochum, Germany. $12,000.
1994-1998 National Science Foundation, Washington (renewal). "Study of a Serum Factor That Activates the Phosphatidylinositol System." $308,000. ROLE: PI.
1994-1997 Grant-in-Aid, American Heart Association, National Center. “Molecular Analysis of the Lysophosphatidate Receptor." $120,000. ROLE: PI.
1994-1996 Spinal Cord Research Foundation of the Paralyzed Veterans of America. "Lysophosphatidic Acid — an Endogenous Inhibitor of Neurite Outgrowth — Role in Acute Spinal Cord Injury." $64,600. ROLE: PI.
1993-1995 Le Bonheur Children Hospital Research Grant. "Production of Growth Factor-Like Phospholipid Mediators during Blood Coagulation". $9,800. ROLE: Co-PI.
1993-1994 University Medical Group Corp. "Do Growth Factor-Like Phospholipid Mediators Promote Wound Healing?" $12,500. ROLE: PI.
1992-1994 American Paralysis Association. "Lysophosphatidic Acid — an Endogenous Inhibitor of Neurite Outgrowth — Role in Acute CNS Injury.". $30,000. ROLE: PI.
1990-1994 NSF. "Study of a Serum Factor That Activates the Phosphatidylinositol System." $188,000. ROLE: PI.
1984-1985 Richter Gedeon Pharmaceutical Works, Budapest. "The Effect of Vinpocetine on Acute Allergic Encephalomyelitis." $25,000. ROLE: PI.
1983-1984 Hungarian Academy of Sciences Young Investigator Award. "Changes in the Synaptic Membrane Architecture during Depolarization." Amount equivalent to U.S. $50,000. ROLE: PI.
1983 UNESCO-International Cell Research Organization Training Fellowship to attend Graduate School at the University of Uppsala, Sweden.

Awarded But Not Accepted by Principal Investigator

1994-1996 American Heart Association, Tennessee Chapter. "A Study of Growth Factor-Like Lipid Mediators on Neuronal Survival and Differentiation." $50,000. ROLE: PI. Awarded, but not accepted due to funding of other projects.

SOCIETY MEMBERSHIPS

2013-present American Pharmacological Society
2007-present European Academy of Arts, Letters and Sciences, Paris
2005-present North American Vascular Biology Organization
2004-present Hungarian Academy of Sciences, Foreign Member
2001-present American Society of Biochemistry and Molecular Biology
1999-present New York Academy of Sciences
1995-present American Physiological Society
1992-present ΣX Research Society
1992-present American Society for the Advancement of Science
1992-present Society for Neuroscience
1985-present European Association for Neurochemists
1985-present Hungarian Biochemical Society
1984-present Hungarian Biophysical Society
1984-present IBRO
1983-present Society for Basic and Clinical Immunologists

COLLABORATIONS

National and International

Dr. Olivier Peyruchaud, INSERM, Lyon, France
Dr. Akira Tokumura, Tokushima University, Japan
Dr. Robert Bittman, Queens College, New York
Dr. Wouter Moolenaar, Cellular Biochemistry, The Netherlands Cancer Institute, Amsterdam
Dr. Lutz Pott, Head of Muscle Physiology Group, Department of Physiology, Ruhr University, Bochum, Germany
Dr. Kimiko Murakami, Department of Biology, Ochanomizu University, Tokyo, Japan
Dr. Hiromu Murofushi, Department of Biochemistry, Tokyo University
Dr. Ian Bathurst, LXR Biotechnology, Inc., Richmond, California
Dr. Ala Bielawska, Department of Medicine, Duke University, Durham, North Carolina
Dr. Sarah Spiegel, Department of Biochemistry, Georgetown University, Washington, D.C.
Dr. Takao Shimizu, Department of Biochemistry, University of Tokyo, Japan.
Dr. Wolfgang Seiss, Cardiovascular Research Institute, University of Munich, Germany
Dr. Judy Berliner, Department of Pathology, UCLA
Dr. Yasuyuki Igarashi, Faculty of Pharmaceutical Science, Hokkaido University
Dr. Tom Stossel, Harvard University
Dr. David Brindley, Signal Transduction Group, The Heritage Foundation Research Centre, Edmonton, Canada
Dr. John Castracane, Exalpha Biologicals, Boston, Massachusetts
Dr. Tom McIntyre, Cleveland Clinic Foundation
Dr. Nigel Pyne, Strahclyde Institute, Glasgow
Dr. Fang-Tsyr Lin, University of Alabama, Birmingham
Dr. Larry DeLucas, University of Alabama, Birmingham
Dr. Abby Parrill, Department of Chemistry, Computational Research Institute on Materials at the University of Memphis
Dr. Gordon Mills, Division of Experimental Therapeutics, MD Anderson Cancer Center
Dr. Glenn Prestwich, Department of Chemistry, University of Utah
Dr. Richard J. Kirby, Sanford-Burnham Institute, Florida

Local

Dr. Daniel Baker, University of Memphis
Dr. Abby Parrill, University of Memphis
Dr. Dominic Desiderio, Department of Neurology, Stout Mass Spectroscopy Laboratory, UT-Memphis
Dr. Leslie Ballou, Department of Medicine, Connective Tissue Research Group, VA Medical Center, Memphis
Dr. Duane Miller, Department of Pharmaceutical Sciences, UT-Memphis
Dr. Ram Gollamudi, Department of Medicinal Chemistry, UT-Memphis
Dr. Russell Chesney, Department of Pediatrics, UT-Memphis
Dr. Yi Zheng, Department of Biochemistry, UT-Memphis
Dr. Kafait U. Malik, Department of Pharmacology, UT-Memphis
Dr. Leonard R. Johnson, Department of Physiology, UT-Memphis
Dr. Mitchell Watsky, Department of Physiology, UT-Memphis
Dr. Jonathan Jaggar, Department of Physiology, UT-Memphis
Dr. A.P. Naren, Department of Physiology, UT-Memphis
Dr. Christopher Waters, Department of Physiology, UT-Memphis

PATENTS AND DISCLOSURES

1. Procedure for separation and detection of antigen-specific cells. Najbauer, J., **G. Tigyi**, P. Nemeth, and F. Kilar. Registry No. 196 511. Date of validity: July 10, 1984.
2. Method and pharmaceutical composition for treating demyelinization of autoimmune origin, particularly multiple sclerosis. **Tigyi, G.**, B. Bozoky, K. Szegvari, and T. Frank. U.S. Patent Ser. No. 07/233,076. Date of validity: August 17, 1988.
3. A serum factor that activates the phosphatidylinositol second messenger system. **Tigyi, G.**, and Miledi, R. University of California Patent Disclosure, 1988.
4. Lysophosphatidate-induced neurotrophism and neurite outgrowth. **Tigyi, G.** Patent disclosure, University of Tennessee Research Corporation. 1993.
5. Lysophosphatidate-induced regeneration of corneal cells. **Tigyi, G.**, and M. Watsky. 1995.
6. Molecular cloning strategy for the lysophosphatidate receptors using degenerate oligonucleotides. **Tigyi, G**. Patent disclosure, University of Tennessee Research Corporation. 1995. sold licensing rights to LXR Biotechnology, Richmond, California.
7. Accelerated wound healing after lysophosphatidate treatment in the skin. **Tigyi, G**., L. Balazs, J. Okolicany, and M. Ferrebee. Patent disclosure, University of Tennessee Research Corporation. 1995.
8. Nucleotide sequence of a high affinity receptor for lysophosphatidic acid from *Xenopus*. **Tigyi, G.**, Z. Guo, Liliom, K., and D. Fischer. 1996.
9. Compositions containing lysophosphatidic acids which inhibit apoptosis, methods of making compositions and uses thereof. Erickson, J., D. Fischer, G. Goddard, Liliom, K., D. Miller, G. Sun, and **G. Tigyi**. US Patent Application, 1997.
10. Development of new and novel phospholipid growth factor receptor ligands for cancer treatment. Miller, D., **G. Tigyi**, G. Sun, and D. Baker. US Patent Application, 2000.
11. Recombinant baculoviruses expressing the lysophosphatidate receptors EDG2, 4, and 7. Patent disclosure, University of Tennessee Research Corporation. 1995. Licensed to Exalpha Biologicals, Inc., Boston, MA.
12. Miller, D.D., **G. Tigyi,** D.L. Baker, J.T. Dalton, V.M. Saradar, D.B. Elrod, H. Xu, Liliom, K., D.J. Fischer, T. Virag, and N. Nusser. LPA receptor agonists and antagonists and methods of use. 6,875,757, 2001.
13. Inhibition of neointima formation by PPARg antagonist GW9662. Baker, D.L., C. Zhang, and **Tigyi, G**. PD03007, 2003.
14. Acetal phosphatidic acids as LPA receptor ligands. Miller, D., **G. Tigyi**, et al. 2004.
15. Use of lysophosphatidic acid (LPA) mimics or derivatives to modulate Ppar-gamma receptor activity and inhibit autotaxin (Atx) activity. **Tigyi, G.**, D.D. Miller, V. Gududuru, G. Durgam, D.L. Baker, and Y. Fujiwara. May 6, 2005.
16. New synthesized glycerol acetal phosphates and thiophosphates (GAPs) as selective LPA agonists and antagonists and PPARgamma ligands. **Tigyi, G**., W. Deng, S. E, R. Tsukahara, G.G. Durgam, V. Gududuru, andA.L. Parrill-Baker. October 21, 2006.

17. LPA receptor agonists and antagonists and methods of use. Miller, **G. Tigyi**, T. Virag, G. Durgam, M.D. Walker, and R. Tsukahara. 7,217,704. 2007.
18. Theoretical models of the LPA_1, LPA_2, LPA_3, S1P1, S1P2, S1P3, S1P4, S1P5, and
19. LPA_4 G protein-coupled receptors. **Tigyi, G.**, A.L. Parrill-Baker, D. Perygin, and J. Fells. May 25, 2007.
20. Lysophosphatidic acid analogs and inhibition of neointima formation. **Tigyi, G.**, D.L. Baker, and C. Zhang. 2008.
21. Inhibitors of autotaxin. Gupte, R., R. Patil, **G. Tigyi**, and D.D. Miller. January 20, 2010.

INVITED PRESENTATIONS

1983 Monoclonal antibodies to myelin basic protein and their cross-reactivities in mapping epitope homologies with non-MBP antigens. International Symposium of Demyelinating Diseases, American Multiple Sclerosis Society. Airlie House, Virginia.
1984 Cross-reactivities of myelin basic protein specific monoclonal antibodies. Symposium on Neurotransmitter Function in Health and Disease. European Neurochemical Society Congress. Budapest, Hungary.
1984 Monoclonal antibodies and their applications in neuroimmunological disorders. XIII Annual Meeting of the Hungarian Clinical Immunological Society. Szekesfehervar, Hungary.
1986 University of California Riverside, Department of Biochemistry.
1992 Department of Neurology, University of California Irvine Medical Center.
1995 Keystone Symposium on The Role of Lipid Messengers in Signal Transduction Pathways, Cellular Regulation and Disease.
1995 LXR Biotechnology, Inc. Richmond, CA.
1996 The Netherlands Cancer Institute, Amsterdam.
1996 Department of Pharmacology, The University of Essen, Germany.
1996 Department of Physiology, The Ruhr-University. Bochum, Germany.
1996 Paralyzed Veterans of America, Scientific Review and Advisory Panel Meeting, Memphis, Tennessee.
1996 Department of Pharmacology and Toxicology, University of Freiburg, Germany.
1996 VA Medical Center, Memphis, Tennessee.
1996 Center for Excellence in Neuroscience, UT-Memphis.
1996 Department of Developmental Neuroscience, St. Jude Children's Research Hospital. Memphis, Tennessee.
1997 International Symposium on Messengers of Life and Death in the Nervous System. The University of Kentucky, Lexington.
1997 Lipid Mediators in the Nervous System Satellite Symposium to International Society for Neurochemistry Congress. New Orleans, Louisiana.
1997 Department of Biophysics, University Medical School. Pécs, Hungary.
1997 5th International Symposium on Eicosanoids and Other Bioactive Lipids in Cancer; Inflammation and Related Diseases. San Diego, California.
1997 Keynote speaker, Lipid Symposium, Japanese Biochemical Society Annual Meeting. Kanazawa, Japan. September 22-25, 1997.
1997 Department of Pharmacology, Tokushima University. Japan.
1997 Department of Pharmacology, University of Kyoto. Japan.
1997 Department of Biochemistry and Molecular Biology. Tokyo, Japan.
1997 Department of Biology, Ochanomizu University. Tokyo, Japan.
1997 Department of Biochemistry, University of Tokyo. Japan.
1997 Visiting Professor, Department of Chemistry and Biochemistry, Queens College, City University of New York.
1998 Department of Pharmacology, UT-Memphis.
1998 The Hormel Institute. Austin, Minnesota.
1998 Department of Organphysiologie, Ruhr Universitat. Bochum, Germany.
1998 6th International Conference on Platelet Activating Factor and Related Lipid Mediators. New Orleans, Louisiana.
1998 10th International Conference on Phosphoproteins and Signal Transduction. Jerusalem.
1998 Cardiovascular Research Institute, University of Munich. Germany.

1998 Dept. of Physiology, Ruhr Universitat. Bochum, Germany.
1998 Center for Excellence in Neuroscience, Lousina State University, School of Medicine. New Orleans, Louisiana.
1999. Lipid Signaling Group, University of Alberta. Edmonton, Canada.
1999 New York Academy of Sciences Symposium on Lysolipids.
1999 Visiting Professor, Department of Chemistry and Biochemistry, Queens College, City University of New York.
2000 Tokyo Metropolitan Institute of Gerontology. Japan.
2000 RIKEN, Supramolecular Interaction Programme. Japan.
2000 Hokkaido University, Faculty of Pharmaceutical Science. Japan.
2000 Department of Biochemistry, Medical College of Hokkaido. Japan.
2000 Mitsubishi-Kasei Institute of Life Sciences. Tokyo, Japan.
2000 Department of Biochemistry, Kanazawa Medical School. Japan.
2000 Congress of the International Society for Study of Fatty Acids and Lipids. Tsukuba, Japan.
2000 Department of Biochemistry, Eotvos Lorand University. Budapest, Hungary.
2000 100 Years after Luigi Galvani – Symposium on Neural Transmission. University of Rome. Italy.
2000 Ceretek Incorporated, South San Francisco. California.
2001 Department of Cell Biology, University of Georgia. Athens, Georgia.
2001 7th Congress on PAF and Lipid Mediators. Chair and plenary speaker. Tokyo, Japan.
2001 1st Takeda Symposium on Pharmascience. Tokyo, Japan.
2001 Hokudai Symposium on Sphingolipid Biology. Sapporo, Japan.
2002 Women's and Brigham Hospital, Harvard Medical School. Boston, Massachusetts.
2002 Department of Biochemistry, Kyoto University, School of Graduate Sciences. Japan.
2002 Department of Neuroscience, Osaka University school of Medicine. Japan.
2002 Faculty of Pharmaceutical Science, Hokkaido University. Japan.
2003 Reeves Center for Neuronal Regeneration, University of California Irvine.
2003 Faculty of Pharmaceutical Science, Hokkaido University. Japan.
2003 Ochanomizu University. Tokyo, Japan.
2003 University of Memphis, Department of Chemistry. Memphis, Tennessee.
2003 Grand Rounds, Department of Pathology, UTHCS, Memphis.
2004 Vessel Club. Washington, D.C.
2004 FEBS Lecture Course and 4th Dubrovnik Signaling Conference. Croatia.
2004 Center for Biophysics and Engineering, University of Alabama Birmingham.
2004 Department of Biochemistry, Hokkaido School of Medicine. Japan.
2004 First International Sapporo Sphingolipid Symposium, Hokkaido University. Japan.
2004 Sphingolipid Gordon Conference. Harima, Japan.
2004 8th PAF and Lipid Mediator Conference. Berlin, Germany.
2005 Ochanomizu University. Tokyo, Japan.
2005 LPA - from ligand to mediator to medicine – Experimental Biology Symposium, Society for Pharmacology and Experimental Therapeutics.
2005 Keynote Speaker, FASEB Summer Conference on Lysophospholipids in Biology and Medicine.
2005 Symposium on Chemical Biology, University of Tokyo Center of Excellence, Faculty of Pharmacy. Japan.
2005 City University of New York, School of Graduate Studies.
2006 University of Arkansas Cancer Center.
2006 University of Kentucky, Department of Biochemistry.
2006 University of Munich, Cardiovascular Research Institute. Germany.
2006 International Symposium on Atherosclerosis. Rome, Italy
2006 Angelini Research Laboratories. Palomba, Italy.
2006 Graduate School, Hokkaido University. Japan
2006 Plenary Speaker, International Conference on Bioscience of Lipids. Pecs, Hungary.
2007 Invited seminar: University of Memphis, Bioengineering Program, January 17, 2007.
2007 Plenary Speaker, Sphingolipid Symposium in Honor of Senitchiro Hakomori. Tokushima, Japan.
2007 Invited Speaker, 3d International Symposium on Phospholipases and Lipid Mediators. Sorrento, Italy. May 24-29, 2007.
2007 Invited Speaker, FASEB Summer Conference on Lysophospholipids in Biology and Disease. Tucson, Arizona.
2007 Centenary Institute. Sydney, Australia.

2007 University of Adelaide. Adelaide, Australia.
2008 University of Michigan. Ann Arbor, Michigan.
2008 Igarashi Symposium, Hokkaido University. Japan.
2008 Japanese Biochemical Society Keynote Address. Tokushima, Japan.
2008 Otsuka Pharmaceuticals Discovery Center, Tokushima, Japan.
2008 Vessel Club. San Diego, Califonia.
2008 Hungarian Biochemical Society Annual Meeting, Keynote Speaker. Szeged, Hungary.
2008 British Pharmacological Society Symposium of Lysophospholipids. West-Essex, UK.
2008 Southeastern Lipid Society Annual Meeting. Georgia.
2009 Department of Pharmacology, University of Pittsburgh. Pittsburgh, Pennsylvania.
2009 Invited Speaker - Phospholipase A2 and Lipid Mediators. Tokyo, Japan.
2009 Invited Speaker - FASEB Summer Conference. Carefree, Arizona.
2009 Department of Cell Biology, University of Alabama at Birmingham.
2010 University of California Davis.
2010 University of Tennessee, College of Veterinary Medicine. Knoxville, Tennessee.
2010 Niigata University, Department of Physiology, Center for Nephrology. Japan.
2010 City University of New York.
2010 Invited Speaker - NAITO Conference. Sapporo, Japan.
2011 University of Arkansas Cancer Center. Little Rock, Arkansas.
2011 Invited Speaker - International Biochemical Society Meeting. Merida, Mexico.
2011 Invited Speaker - FASEB Summer Conference on Lysophospholipids. Il Ciocco, Italy
2011 Invited Speaker - LIPID MAPS Annual Meeting. San Diego, California.
2011 Invited Speaker - Eicosanoids and Lipid Mediators in Cancer, Inflammation and Other Diseases. Seattle, Washingtn.
2011 Strathclyde University. Glasgow.
2011 British Biochemical Society Centennial Meeting on Cell Signaling, Edinburgh
2012 Invited Speaker - FEBS Trauining Course on Lipid Signaling in Cancer. Vico Equense, Italy.
2012 University of Kentucky, Cardiovascular Research Center. Lexington, Kentucky.
2012 Department of Chemistry and Biochemistry, Queens College, City University of New York.
2012 Invited Speaker - FASEB Summer Conference on Phospholipid Metabolism. Saxtons River.
2012 Department of Nuclear Engineering, University of Tennessee Knoxville.
2012 Veterans Medical Center. Memphis, Tennessee.
2012 Department of Physiology, Semmelweiss University. Budapest, Hungary.
2012 Keynote Speaker - Postdoctoral Research Day, University of Tennessee Health Science Center. Memphis, Tennessee.
2013 Murofushi Symposium, Ochanomizu University. Tokyo, Japan.
2013 Tokushima University. Japan,
2013 Nagasaki University. Japan,
2013 Keynote Lecture - FASEB Summer Conference.
2013 Plenary Lecture - Bioactive Lipids in Cancer, Inflammation and Related Diseases.

PUBLICATIONS

Book Chapters

1. **Tigyi, G.** Antibody production with hybridomas. In: *Molecular Methods in Immunology*, edited by F. Antoni and P. Zavodszky. Budapest: Medicina Press, 1987.
2. Dyer, D., **Tigyi**, **G.**, and Miledi, R. Neurite retraction and suppression of early responses to nerve growth factor in PC12 cells by a serum protein. In: *Proceedings of the Miami Bio/Technology Winter Symposium*, edited by R.L. Rotundo *et al*. Oxford/Washington: IRL Press, 1989, p. 81.
3. **Tigyi, G.**, and Miledi, R. Isolation and characterization of a novel serum factor that stimulates the phosphoinositide-Ca^{2+} signaling system. In: *Proceedings of the Third International Regeneration Symposium, Neurology and Neurobiology Series*, edited by F. J. Seil. New York: Alan R. Liss, 1989.
4. Dyer, D., **Tigyi, G.**, and Miledi, R. Antimitogenic and neurite retraction effects caused by a serum factor that stimulates the phosphoinositide- Ca^{2+} signaling system. In: *Proceedings of the Third International Regeneration Symposium, Neurology and Neurobiology Series,* edited by F. J. Seil. New York: Alan R. Liss, 1989.

5. **Tigyi, G.**, Fischer, D.J. Liliom, K., Guo, Z., Virág, T., Sun, G, Miller, D.D., Murakami-Murofushi, K. Kobayashi, S., and Erickson, J.R. Determinants of receptor subtype specificity in the LPA-like lipid mediator family. In: *Eicosanoids and Other Bioactive Lipids in Cancer, Inflammation and Related Diseases*, edited by K.V. Honn, S. Nigam, L.J. Marnett, and E. Dennis. New York/London/Washington, DC/Boston, 1998.
6. **Tigyi, G.**, Liliom, K., Fischer, D.J., and Guo, Z. Phospholipid growth factors: identification and mechanism of action. In: *Lipid Second Messengers*, edited by R. Rubin and S. Laychock. CRC Press, pp. 51-81, 1998.
7. Goetzl, E.J., Lee, H., and **Tigyi, G.** Lysophosholipid growth factors. Cytokine reference.**:/** Academic Press. New York/London, pp. 1407-1418, 2000.
8. **Tigyi, G**. Lysophosphatidate and sphingosine 1-phosphate receptors. In: *Encyclopedia of Biological Chemistry*, edited by W.J. Lennarz and M.D. Lane. Elsevier, pp. 602-604, 2005.
9. Dopico, A., and **Tigyi, G.** Lipid species and membrane composition., edited by A. Dopico. Humana Press, 2007.
10. Valentine, W.J., and **Tigyi, G**. High throughput assays to measure intracellular Ca^{2+} mobilization in cells that express recombinant S1P receptor subtypes. *Meth. Mol. Biol*. 874: 77-87, 2012. PMID: 22528441.

Refereed Journal Articles

1. Hegedus, J., **Tigyi, G.**, and Hegedus, I. (1983) Optoacoustic spectroscopy and its application in structural studies of biomaterials. *Meth. Exp. Med*. (Budapest) 35: 201-208.
2. **Tigyi, G.**, Hegedus, J. and Hegedus, I. (1983) Optoacoustic spectroscopy as a new tool for structural studies of striated muscle. *Studia Biophysica* (Berlin) 95: 151-160.
3. **Tigyi, G.** Modern biochemical separation methods — a review. *Biochemistry* (Budapest) 7: 41-43, 1983.
4. Kilar, F., Najbauer, J., and **Tigyi, G.** (1983) Presence of myelin basic protein in cerebrospinal fluid and sera of patients with multiple sclerosis. *Acta Biochim. Biophys*. 19: 108.
5. **Tigyi, G.**, Balazs, L., Monostori, E., and Ando, I. (1984) Isolation of the human myelin basic protein by immunoaffinity chromatography with a monoclonal antibody. *Mol. Immunol*. 21: 889-894.
6. **Tigyi, G.**, and Kovacs, K. (1985) Production and characterization of monoclonal antibodies to the hydrogenase of *Thiocapsa roseopersicina*. *Curr. Microbiol*. 11: 329-324.
7. **Tigyi, G.**, Juntti, N., and Johansson, D.-E. (1985) Screening for monoclonal antibodies against a mycoplasmal membrane protein by protein electroblotting. *Protides in Biol. Fluids* 33: 575-578.
8. Kovacs, K., **Tigyi, G.**, and Alfons, H. (1985) Purification by hydrogenase by fast protein liquid chromatography (FPLC) and by conventional techniques: a comparative study. *Prep. Biochem*. 15: 321-324.
9. **Tigyi, G.**, Bagyinka, Cs., and Kovacs, K. (1986) Protein structural changes associated with active and inactive states of hydrogenase from *Thiocapsa roseopersicina*. *Biochemie* 66: 69-74.
10. Najbauer, J., **Tigyi, G.**, and Nemeth, P. (1986) ASCAA-antigen specific cell adherence assay — a simple method for separation of antigen specific hybridoma cells. *Hybridoma* 5: 361-379.
11. Najbauer, J., Kosaras, B., and **Tigyi, G.** (1987) Adherence of cells to myelin basic protein. Part 1. Adherence of red and white blood cells from patients with multiple sclerosis to myelin basic protein. *Acta Neurol. Scand*. 76: 172-175.
12. Najbauer, J., Bozoky, B., and **Tigyi, G.** 1987 () Adherence of cells to myelin basic protein. Part 2. Adherence of red blood cells of SJL mice with chronic relapsing EAE. *Acta Neurol. Scand*. 76: 176-182.
13. Kilar, F., Mod, A., and **Tigyi, G.** (1987) Detection of myelin basic protein and anti-myelin basic protein antibodies in the serum of patients with multiple sclerosis. *Arch Neurol*. (Budapest) 40: 573-576.
14. Kovesi, Gy., Mohai, K., and **Tigyi, G.** (1987) Immunoscintigraphic detection of transplanted murine tumors using I^{125}-labeled anti-myelin basic protein antibodies. *Hung. Oncol*. 31: 244-249.

15. Kovacs, K., Bagyinka, Cs., and **Tigyi, G.** (1988) Proteolytic resistance and its utilization in purification of hydrogenase from *Thiocapsa roseopersicina*. *Biochim. Biophys. Acta* 935: 166-172.
16. Najbauer, J., Szekeres-Bartho, J., and **Tigyi, G.** (1989) Modulation of cell-cell and cell-antigen interaction by 1,25-dihydroxy vitamin D3 and D3 sulfate *in vitro*: a study on pregnancy lymphocytes and hybridoma cells. *Immunol. Lett*. 317-322.
17. Kovacs, K.L., Seefeldt, L.C., **Tigyi, G.**, Doyle, C.M., Mortenson, L.E., and Arp, D. (1989). Immunological relationship among hydrogenases. *J. Bacteriol*. 171: 430-435.
18. Czysewska, H., Bagyinka, C. Kovacs, K.m and **Tigyi, G.** (1989) Purification and characterization of the high potential iron sulphur protein from *Thiocapsa roseopersicina*. *Acta Biochim. Biophys*. 266: 361-375.
19. **Tigyi, G.**, Matute, C., and Miledi, R. (1990) Monoclonal antibodies to cerebellar pinceau terminals obtained after immunization with brain mRNA injected *Xenopus* oocytes. *Proc. Natl. Acad. Sci. USA* 87: 528-532.
20. **Tigyi, G.**, Dyer, D., Matute, C., and Miledi, R. (1990) A serum factor that activates phosphoinositide signaling in *Xenopus* oocytes. *Proc. Natl. Acad. Sci. USA* 87: 1521-1525.
21. Kovacs, K., **Tigyi, G.**, Le Thiet, T., and Bagyinka, Cs. (1991) Structural rearrangements in active and inactive forms of hydrogenase from *Thiocapsa roseopersicina*. *J. Biol. Chem*. 266: 947-951.
22. **Tigyi, G.**, and Parker, I. (1991) Microinjection into *Xenopus* oocytes: a precise semi-automatic instrument and optimal parameters for injection of mRNAs. *J. Biochem. Biophys. Meth*. 22: 243-252.
23. Matute, C., **Tigyi, G.**, and Miledi, R. (1991) Monoclonal antibodies against rat brain mRNA injected *Xenopus* oocytes — the oocyte as an immunological expression vector. *J. Neurosci. Res*. 29: 77-86.
24. **Tigyi, G.**, Henschen, A., and Miledi, R. (1991) A factor that activates oscillatory chloride currents in *Xenopus* oocytes copurifies with a subfraction of serum albumin. *J. Biol. Chem*. 266: 20602-20609.
25. Dyer, D., **Tigyi, G.**, and Miledi, R. (1992) The effect of serum albumin on PC12 cells. I. Neurite retraction and activation of the phosphoinositide second messenger system. *Mol. Brain Res*. 14: 293-301.
26. Dyer, D., **Tigyi, G.**, and Miledi, R. (1992) The effect of serum albumin on PC12 cells. II. Intracellular calcium transients and their role in neurite retraction. *Mol. Brain Res*. 14: 302-309.
27. **Tigyi, G.**, and Miledi, R. (1992) Lysophosphatidates bound to serum albumin activate membrane currents in *Xenopus* oocytes and neurite retraction in PC12 pheochromocytoma cells. *J. Biol. Chem*. 267: 21360-21367, 1992.
28. **Tigyi, G.**, Dyer, D., and Miledi, R. (1994) Lysophosphatidic acid possesses dual action in cell proliferation. *Proc. Natl. Acad. Sci. USA* 1: 1908-1912.
29. Buneman, M, Ferrebee, M., **Tigyi, G.**, and Pott, L. (1994) Characterization of an albumin-associated phospholipid factor with muscarinic activity in cardiac cells. *J. Physiol*. (London) 480: 90-92.
30. Marsal, J., **Tigyi, G.**, and Miledi, R. (1995) Incorporation of *Torpedo* acetylcholine receptors and Cl^- channels into *Xenopus* oocytes following injection of *Torpedo* electroplaque membranes. *Proc. Natl. Acad. Sci. USA*. 92: 5224-5228,\.
31. **Tigyi, G.**, Hong, L., Shibata, M., Parfenova, H., Yakubu, M., and Leffler, C. (1995) Lysophosphatidic acid alters cerebrovascular reactivity in piglets. *Am. J. Physiol. (*Heart Circ. Physiol.) 37: H2048-H2055.
32. **Tigyi, G.**, Fischer, D., Yang, C., Dyer, D,, Sebök, A., and Miledi, R. Lysophosphatidic acid-induced neurite retraction in PC12 cells: control by phosphoinositide-Ca^{2+} signaling and Rho. *J. Neurochem*. 66: 537-548,
33. **Tigyi, G.**, Fischer, D., Dyer, D,, A. Sebök, and Miledi, R. (1996) Lysophosphatidic acid-induced neurite retraction in PC12 cells: neurite protective effects of cyclic AMP signaling. *J. Neurochem*. 66: 549-558, 1996.
34. Liliom, K., Murakami-Murofushi, K., Kobayashi, H., Murofushi, H., and **Tigyi, G.** (1996) *Xenopus* oocytes express multiple receptors for LPA-like lipid mediators. *Am. J. Physiol*. (Cell Physiol.) 39: C772-C778.

35. Bittman, R., Swords, B., Liliom, K., and **Tigyi, G.** (1996) A short synthesis of lipid phosphoric acids analogues inhibiting the lysophosphatidate receptor. *J. Lipid Res*. 37: 391-398.
36. Liliom, K., Bittman, R., Swords, B., and **Tigyi, G.** (1996) *N*-palmitoyl-serine- and *N*-palmitoyl-phosphoric acids are selective competitive antagonists of the lysophosphatidic acid receptors. *Mol. Pharmacol*. 50: 616-623.
37. Zheng, Y., Fischer, D., **Tigyi, G.**, Gorsky, J.Y., and Xu, Y. (1996) The faciogenital dysplasia gene product FGD1 functions as a CDC42Hs specific guanine nucleotide exchange factor. *J. Biol. Chem*. 271: 33169-33172.
38. Buenemann, M., Brandts, B.K., Pott, L., Liliom, K., J.-L. Tseng, D. M. Desiderio, G. Sun, D. Miller, and **Tigyi, G.** Lysosphingomyelin and sphingosine 1-phosphate activate IKACh through the same high affinity receptor in guinea pig atrial myocytes. *EMBO J*. 15: 5524-5537, 1996.
39. Guo, Z., Liliom, K., D. J. Fischer, I. C. Bathurst, D. J. Tomei, M. C. Kiefer, and **Tigyi, G.** Molecular cloning of a high affinity receptor for the growth factor-like phospholipid mediator lysophosphatidic acid. *Proc. Natl. Acad. Sci. USA* 93: 14367-14372, 1996.
40. Tigyi, J., **Tigyi, G.**, Liliom, K., and Miledi, R. Local anaesthetics inhibit receptors coupled to phosphoinositide signaling in *Xenopus* oocytes. *Pflügers Archiv.-Eur. J. Physiol*. 433: 478-487, 1997.
41. Santos, M. F., S. A. McCormack, J. Okolicany, Y. Zheng, L. R. Johnson, and **Tigyi, G.** The small molecular weight GTPase Rho is important for mucosal wound healing *in vitro*. *J. Clin. Invest*. 100: 216-225, 1997.
42. Yakubu, M., Liliom, K., **Tigyi, G.**, and C. Leffler. Intrathecal injection of endothelin-1 (ET-1) mimics subarachnoid hematoma (SAH)-induced changes in cerebral microvascular reactivity: possible role for lysophosphatidic acid (LPA). *Am. J. Physiol*. (Regul. Integr. Comp. Physiol.) 273: R703-R709, 1997.
43. Erickson, J. R., J. J. Wu, J. G. Goddard, **Tigyi, G.**, K. Kawanishi, L. D. Tomei, and M. C. Kiefer. The putative lysophosphatidic acid receptor Edg-2/Vzg-1 functionally couples to the yeast pheromone response pathway. *J. Biol. Chem*. 273: 1506-1510, 1998.
44. Liliom, K, Z. Guan, J. L. Tseng, D. M. Desiderio, **Tigyi, G.**, and M. A. Watsky. Growth factor-like phospholipids generated following corneal injury. *Am. J. Physiol*. 274 (Cell Physiol.) 43: C1065-C1074, 1998
45. Liliom, K., D. J. Fischer, T. Virág, G. Sun, D. D. Miller, J.-L. Tseng, D. M. Desiderio, M. Seidel, J. R. Erickson, and **Tigyi, G.** Identification of a novel growth factor-like lipid, 1-O-cis-alk-1'-enyl-2-lyso-sn-glycero-3-phosphate (Alkenyl-GP) that is present in commercial sphingolipid preparations. *J. Biol. Chem*. 273: 13461-13468, 1998.
46. Fischer, D. J., Liliom, K., Z. Guo, T. Virág, G. Sun, D. D. Miller, KMurakami-Murofushi, K.S. Kobayashi, J. R. Erickson, and **Tigyi, G.** Naturally occurring analogs of lysophosphatidic acid elicit different cellular responses through selective activation of multiple receptor subtypes. *Mol. Pharmacol*. 54: 979-988, 1998.
47. Siess, W., K. J. Zangl, M. Essler, M. Bauer, R. Brandl, C. Corrinth, R. Bittman, **Tigyi, G.**, and M. Aepfelbacher, M. Lysophosphatidic acid mediates the rapid activation of platelets and endothelial cells by mildly-oxidized LDL and accumulates in human atherosclerotic lesions. *Proc. Natl. Acad. Sci. USA* 96: 6931-6936, 1999.
48. Sebök, A., M. F. Santos, Z. Guo, N. Nusser, B. Debreceni, and **Tigyi, G.** RhoA regulates neuronal commitment and neurite outgrowth in differentiating PC12 cells. *J. Neurochem*. 73: 949-960,1999.
49. Rizza, C., N. Leitinger, , M. Giese, T. Tyner, J., Yue, D.,Wang, D.J., Fischer, **Tigyi, G.** and J. A. Berliner. LPA as a regulator of endothelial/leukocyte interaction. *Lab. Invest*. 79: 1227-1235, 1999.
50. Lehman, M., A. Fournier, I. Selles-Navarro, P. Dergham, N. Leclerc, **Tigyi, G.**, and L. McKerracher. Inactivation of Rho signaling pathway promotes CNS axon regeneration *J. Neurosci*. 19: 7537-7547, 1999.
51. Li, R., B. Debreceni, K. Zhu, **F. Tigyi**, and Y. Zheng. Localization of effector-specifiying regions of the small GTPase Cdc42. *J. Biol. Chem*. 274: 29648-29654, 1999.
52. Leitinger, N., T. R. Tyner, L. Oslund, C. Rizza, G. Subbanagounder, H. Lee, P. T. Shih, N. Mackman, **Tigyi, G.**, M. C. Territo, J. A. Berliner, and D. K. Vora. Structurally similar

oxidized phospholipids differentially regulate endothelial binding of monocytes and neutrophils. *Proc. Natl. Acad. Sci, USA* 96:12010-12015, 1999.

53. **Tigyi, G.,** D. J. Fischer, D. Baker, D. A. Wang, J. Yue, N. Nusser, T. Virag, V. Zsiros, Liliom, K., D. Miller, and A. Parrill. Pharmacological characterization of phospholipid growth factor receptors. *Ann. New York Acd.Sci.* 905: 34-53, 2000.
54. Balazs, L., J. Okolicany, M. Ferrebee, and **Tigyi, G.** Topical application of LPA accelerates wound healing. *Ann. New York Acad. Sci.* 905: 270-273., 2000
55. Baker, D. L., E. S. Umstot, D. M. Desiderio, and **Tigyi, G.** Quantitative analysis of lysophosphatidic acid in human blood fractions. *Ann. New York Acad. Sci.* 905: 267-269, 2000.
56. Parrill, A. L., D. L.Baker, D.-A. Wang, D. J. Fischer, J. van Brocklyn, S. Spiegel, and **Tigyi, G.** Structural features of EDG1 receptor-ligand complexes revealed by computational modeling and mutagenesis. *Ann. New York Acad. Sci.* 905: 330-339, 2000.
57. Liliom, K., M. Bueneman, G. Sun, D. Miller, D. M. Desiderio, B. Brandts, K. Bender, Pott, L., N. Nusser, and **Tigyi, G.** Sphingosylphosphorylcholine is a bona fide mediator regukating heart rate. *Ann. New York Acad. Sci.* 905: 308-310, 2000.
58. Fischer, D. J., KMurakami-Murofushi, K.and **Tigyi, G.** Characterization of endogenous and heterologously expressed LPA receptor subtypes. *Ann. New York Acad. Sci.* 905: 287-289, 2000.
59. Murakami-Murofushi, K., M. Mukai, S. Kobayashi, T. Kobayashi, **Tigyi, G.,** and Murofushi, H. A lipid mediator, cyclic phosphatidic acid (cPA), and its biological functions. *Ann. New York Acad. Sci.* 905: 319-321, 2000.
60. Essler, M., K. J. Zangl, M. Bauer, M. Retzer, **Tigyi, G.,** M. Apfelbacher, and W. Siess. Stimulation of platelets and endothelial cells by mildly oxidized LDL proceeds through activation of lysophosphatidic acid receptors and the Rho/Rho kinase pathway. *Ann. New York Acad. Sci.* 905: 282-286, 2000.
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