Matthew Bogyo

Department of Pathology
Stanford Medical School
300 Pasteur Drive
Stanford, CA 94305

(650) 725-4132 (office)
mbogyo@stanford.edu

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA
Ph.D. in Biological Chemistry- Department of Chemistry, September 1997
Advisor: Dr. Hidde Ploegh

Bates College, Lewiston, ME
Bachelor of Science in Chemistry, May 1993
Advisor: Dr. Tom Wenzel

PROFESSIONAL AND ADVISORY POSITIONS

Positions and Employment

1991-93	Council on Undergraduate Research AIURP Fellow- Bates College, Lewiston, ME
1993-97	Graduate Student- Massachusetts Institute of Technology, Cambridge, MA.
1997-98	Post-Doctoral Fellow- Harvard Medical School, Boston, MA
1998-01	UCSF Faculty Fellow- University of California, San Francisco, San Francisco, CA.
2001-03	Group Leader, Head of Chemical Proteomics- Celera Genomics, South San Francisco, CA.
2001-03	Adjunct Faculty Member – UCSF Department of Pharmaceutical Chemistry
2003-09	Assistant Professor - Department of Pathology, Stanford University.
2004-09	Assistant Professor - Department of Microbiology and Immunology, Stanford University.
2005-09	Assistant Professor by courtesy–Department of Chemical and Systems Biology,Stanford University
2009-13	Associate Professor - Department of Pathology, Stanford University.
2009-13	Associate Professor - Department of Microbiology and Immunology, Stanford University.
2009-13	Associate Professor by courtesy–Department of Chemical and Systems Bio. ,Stanford University
2013-	Professor - Department of Pathology, Stanford University.
2013-	Professor - Department of Microbiology and Immunology, Stanford University.
2013-	Professor by courtesy –Department of Chemical and Systems Biology, Stanford University

Other Experience and Professional Memberships

2000-01	Scientific Consultant- Rigel Pharmaceuticals, South San Francisco, CA.
2000-01	Scientific Consultant- Axys Pharmaceuticals, South San Francisco, CA.
2003-06	Scientific Consultant- Celera, South San Francisco, CA.
2003-10	Scientific Consultant- Proteolix, South San Francisco, CA.
2011-13	Scientific Consultant – Calithera Biosciences, South San Francisco, CA
2017-21	Scientific Consultant – Cortexyme, South San Francisco, CA
2016-	Scientific Consultant – Vergent Biosciences
2018-21	Scientific Advisory Board – Cortexyme, Inc.
2010-	Scientific Advisory Board – Benchfly
2008-	Co-Founder and Member, Board of Directors – Akrotome Imaging Inc.
2017-21	Co-Founder and Head of Scientific Advisory Board – Facile Therapeutics
2011-15	Academic Editor – *PLoS One*
2015-	Section Editor – *PLoS One*
2002-12	Editorial Board Member – *Biochemical Journal.*
2002-	Editorial Board Member – *Chemistry and Biology.*
2002-	Editorial Board Member – *Molecular & Cellular Proteomics.*
2005-09	Council Member – International Proteolysis Society
2005-07	Secretary - International Proteolysis Society
2007-09	President - International Proteolysis Society

2005-16	Faculty Member, Faculty of 1000
2007-09	Member, DARPA funded Defense Science Study Group
2007	Vice-Chair, Fifth International Proteolysis Society General Meeting, Petras, Greece
2011	Co-Organizer, Seventh International Proteolysis Society General Meeting, San Diego, CA
2009	Ad-Hoc Member – SBCB Study Section
2011, 2012	Ad-Hoc Member – DDR Study Section
2012, 2014	Ad-Hoc Member – EBIT study Section
2015	Ad-Hoc Member – MSFE study Section
2016- 2022	Standing Member – SBCA Study Section
2013, 2015	Member of NCI Site Visit External Review Panel
2009	NIH Peer Review – ARRA Challenge Grants
2000-	Member, American Chemical Society
2003-	Member of the American Society of Microbiologists
2014	Organizer – Keystone Meeting – "The Chemistry and Biology of Cell Death" - Santa Fe,NM
2014	Elected member - American Association of University Pathologists – Pluto Club
2016	Co Chair – Imaging in 2020 Meeting – Jackson Hole, WI
2016	Vice-chair – Gordon Research Conference – "Proteolytic Enzymes and Their Inhibitors"
2018	Chair – Gordon Research Conference – "Proteolytic Enzymes and Their Inhibitors"

AWARDS AND FELLOWSHIPS

1991	Recipient of pre-doctoral fellowship from Council on Undergraduate Research
1992	American Institute of Chemists award for outstanding performance in chemistry
1992	American Chemical Society-Division of Polymer Chemistry award for organic synthesis
1995	Recipient of MIT-Japan Science and Technology Prize
2003	Recipient of Stanford University Terman Fellowship
2004	Searle Scholar Award
2005	Burroughs Wellcome Fund – Investigators in Pathogenesis of Infectious Disease Award
2008	Strategic Program for Asthma Research – Early Excellence Award
2012	Invited to attend NAS Kavli Frontiers of Science Symposium
2014	Election to American Association of University Pathologists – Pluto Society

INVITED LECTURES

Claremont Colleges – Keck Sciences seminar speaker – Claremont, CA Feb 2024
11th Takeda Science Foundation Symposium – Invited speaker- Osaka Japan Jan 2024
UMass Amherst – Department of Chemistry Seminar Speaker – Amherst, MA Nov 2023
Tufts University – Department of Chemistry Seminar Speaker – Boston, MA Nov 2023
Ecole Polytechnique Federale de Lausanne – Dept of Biochemistry Seminar Lausanne Switzerland – Oct 2023
University of Edinburgh – Translational Chem. and Biomedical Imaging Seminar – Edinburgh, Scotland Oct 2023
Broad-MIT Seminar Series – Invited speaker. Boston, MA Oct 2023
Boston College – Department of Chemistry Seminar Series – Boston, MA Sept 2023
Tufts Medical School – Department of Microbiology Invited Speaker – Boston, MA Sept 2023
Activity Based Probes in Biology – Weizmann Institute, Rehovot Israel – July 2023
FASEB Meeting – The Optical Probes Conference: Discovery to Application – Speaker Palm Springs, CA May 2023
Molecular Imaging Symposium – World Molecular Imaging Society – Invited Speaker, Stanford, CA Jan 2023
EMBO Workshop – 20S Proteasome Degradation Pathway – Invited Speaker Rehovot, Israel Jan 2023
University of Florida – Department of Microbiology and Cell Science – Gainsville, FL Nov 2022
UCSF – CBI Chemical Biology Symposium – Invited Speaker San Francisco, CA Sept 2022
Imaging in 2020 Meeting – Invited Speaker – Grand Teton National Park, WY Sept. 2022
International Chemical Biology Society – West Coast Symposium – Invited speaker San Francisco, CA Sept 2022
Tri-Institutional Program in Chemical Biology Symposium – Invited Speaker – New York, NY Sept 2022
Gordon Research Conference – Proteolytic Enzymes and Their Inhibitors – Invited Speaker Italy, June 2022
World Molecular Engineering Network Meeting – Invited speaker – San Jose Del Cabo, Mexico May 2022
Texas A&M Univeristy – Department of Chemistry – Invited Speaker (virtual) April 2022
Annual Symposium of the Institute of Chemical Immunology – Keynote Speaker Leiden. Netherlands Mar 2022
Boston Protein Degradation Meeting – Invited Speaker Boston, MA Mar 2022
Norwegian Biochemical Society National Meeting - Invited Speaker Feb12, 2022 Tromso, Norway

SPIE Photonics West National Meeting – Invited Speaker Jan. 22, 2022 San Francisco, CA
16th Annual Peptide Therapeutics Foundation Symposium – Invited Speaker Oct. 22, 2021 San Diego, CA
University of Wisconsin-Madison– Department of Biochemistry – Invited Speaker Oct. 11, 2021 Madison, WI
RAS Targeted Drug Development Summit – Virtual Meeting – Invited Speaker – Sept. 21, 2021
University of Southern California – Department of Chemistry – Invited Speaker – Aug. 9, 2021 Los Angeles, CA
University of Edinburgh - UoE Centre for Inflammation Research – Invited speaker-Virtual-May 18, 2021
Washington University – Radiology Seminar Series – Invited Speaker – Virtual – Feb. 23, 2021
Wayne State University – Dept. of Biochemistry, Microbio and Immunology – Invited lecture – virtual Oct 20, 2020
Nature Conferences – Translational Chemical Biology – virtual conference – invited speaker Oct. 5, 2020
Merck Research Labs – Invited Speaker – Zoom Lecture – March 28, 2020
North American Protein Degradation Congress – Invited speaker. San Diego, CA Feb 2020.
University of Florida – Department of Medicinal Chemistry – CNPD3 Seminar Speaker, Gainsville, FL Nov 2019.
The Scripps Research Institute – Invited speaker – Jupiter, FL Nov. 2019.
University of California, Irvine – Department of Chemistry Invited speaker. Irvine, CA Nov. 2019
11th General Meeting of the International Proteolysis Society – Invited Speaker, Prague, Czechia Oct. 2019
7th Modern Solid Phase Peptide Synthesis & Its Applications Symposium – Invited Speaker – Palm Cove, Australia – Sept 2019.
FASEB – Protein Lipidation Conference – Keynote – Richard Gibbs Lecture, Olean, NY – July 2019
World Molecular Engineering Network Meeting – Invited speaker, San Jose del Cabo Mexico May 2019
Baylor University – Department of Chemistry and Biochemistry - Invited Speaker May 2019
HHMI, Janelia Research Campus – "Chemical Tools in Biology" – Invited speaker – May 2019
ABPP 2019 Target Discovery and Visualization – Keynote lecture – Leuven Belgium March 2019
Columbia University – Department of Microbiology – Invited speaker – Feb 2019
University of Pennsylvania – Department of Microbiology and Immunology – Invited speaker Feb 2019
Ben-Gurion University – Chemical Biology Symposium – Invited Speaker, Israel Jan 2019
University of Chicago – Department of Chemistry Seminar Series, Chicago, IL Nov 2018
University of Virginia – Department of Chemistry Seminar Series, Charlottesville, VA Nov 2018
HHMI Janelia Research Seminars – "Probe Fest 2018", Janelia Campus, VA Oct 2018
World Molecular Imaging Society Conference – Invited Speaker Seattle, WA Sept 2018
Queenstown Molecular Biology Meeting – Invited Speaker – Queenstown, New Zealand Aug 2018
University at Buffalo – Department of Chemistry Seminar Speaker – Buffalo, NY Apr 2018
University of Michigan – Department of Medicinal Chemistry Seminar Speaker – Ann Arbor MI Apr 2018
Chemical Probes in Biology Symposium – Invited Keynote Speaker – Oxford UK Mar 2018
Academy of Science of the Czech Republic – Invited Speaker, Prague Czech Republic Mar 2018
GTCBio – Protease Inhibitors in Drug Discovery – Keynote Lecture, San Diego, CA Feb 2018
University of Texas Southwestern – Dept of Biochemistry Seminar Series Speaker – Dallas TX Jan 2018
Oregon Health and Sciences University – Chemical Biology Symposium – Speaker – Portland OR Dec 2017
Memorial Sloane Kettering Cancer Institute – Invited speaker "Intraoperative Imaging Technologies"– Dec 2017
University of Illinois – Department of Chemistry Seminar Series Speaker – Urbana IL Dec 2017
Genomics Institute of the Novartis Research Foundation – Invited Speaker – San Diego CA Nov 2017
Hans Fischer Symposium – Invited Speaker, Munich Germany Nov 2017
University of Pittsburgh – Department of Chemistry Seminar Series Speaker – Pittsburgh PA Oct 2017
IUPAC International Symposium on Bioorganic Chemistry – Invited Speaker, Konstanz Germany, Sept 2017
University of Missouri – Department of Chemistry Seminar Series Speaker – Columbia MO Sept 2017
World Molecular Imaging Conference – Invited speaker – Philadelphia PA Sept 2017
Georgia State University – Dept. of Chemistry- seminar series speaker – Atlanta GA Aug 2017
HHMI, Janelia Research Campus – "Chemical Tools in Biology" – Invited speaker – Ashburn, VA April 2017
Vanderbilt University – Vanderbilt Institute for Chemical Biology Seminar Series – Nashville, TN Feb 2017
SPIE Photonics West– Molecular Guided Surgery Session – Invited speaker- San Francisco – Jan 2017
Duke Cancer Center - Radiation Oncology & Imaging Program – Invited Speaker – Jan 2017
1st international PSL* Chemical Biology Symposium – Invited Speaker – Paris France –Dec 2017
UC Berkeley – Structural & Quantitative Biology Seminar Series Speaker – Berkeley, CA – Nov 2017
B-DEBATE Workshop – Biomedical Imaging – Invited Speaker – Barcelona, Spain – Nov 2016
H3D Symposium 2016 – Invited Speaker – Malaria and Tb drug discovery– South Africa – Nov 2016
Memorial Sloane Kettering Cancer Institute – Invited speaker –"Intraoperative Imaging Technologies"– Oct 2016
Johnson Symposium – Invited Speaker – Department of Chemistry, Stanford University Oct 2016
UMass Amherst – Department of Chemistry – Invited speaker- Amherst, MA Oct 2016
Imaging in 2020 – "Molecular Imaging for Diagnosis and Surgery/Therapy" – Jackson Hole, WY Sept 2016
2nd International Symposium – 'Protease World in Health and Disease´ – Kiel Germany Sept 2016
World Molecular Imaging Conference – Optical Surgical Navigation Symposium – New York,NY Sept 2016
Janssen Pharmaceuticals – Invited speaker – San Diego, CA Aug 2016

Gordon Conference – Proteolytic Enzymes and Their Inhibitors – invited speaker June 2016
Memorial Sloane Kettering Cancer Institute – Invited speaker – Department of Radiology – May 2016
Hamline University – 17th 3M/Ronald A. Mitstch Lecture – April 2016
University of Bristish Columbia – Center for Blood Research – Vancouver, Canada Mar 2016
University of Rochester – Department of Chemistry Seminar series – Mar 2016
Keystone Meeting – Drug Discovery for Parasitic Diseases – Lake Tahoe, CA Jan 2016
Pacifichem 2015 – National Meeting – Symposium Organizer and speaker, Hawaii, Dec 2015
Eli Lilly Inc. – Invited Speaker – Indianapolis, ID Nov 2015
University of Kansas – Training grant symposium – Keynote Speaker – Nov 2015
The Beijing Symposium 2015 - "Frontiers at the Chemistry and Biology Interface" Beijing China Oct 2015
14th International Conference on the Chemistry of Antibiotics and Other Biooactive Substances – Keynote Speaker – Galveston, TX Oct 2015
International Proteolysis Society – 9th General Meeting – Penang Malaysia Oct 2015
Agensys Inc. – Invited Lecture – Santa Monica, CA Sept 2015
Harvard University – Department of Microbiology and Immunology Seminar Series – Boston, MA Sept 2015
Genentech – Invited Lecture – South San Francisco, CA Sept 2015
World Molecular Imaging Conference – Optical Surgical Navigation Symposium – Hawaii Sept 2015
American Chemical Society – National Meeting – Symposium Organizer and speaker, Boston, MA Aug 2015
20th American Peptide Symposium – Invited Lecture – Orlando, FL June 2015
Gordon Conference – High Throughput Chemistry and Chemical Biology – New London, NH June 2015
Gordon Conference – Bioorganic Chemistry – Andover, NH June 2015
University of Minnesota - 15th Annual NIH Chemistry-Biology Interface Symposium – May 2015
University of Georgia – Department of Cellular Biology – Seminar series, Athens, GA April 2015
Pluto Club Meeting – New Member Induction Lecture – Playa del Carmen, Mexico March 2015
GTCBio – Protease Inhibitors in Drug Discovery – Keynote Lecture, San Diego, CA Feb 2015
University Washington – Department of Global Health, Pathobiology Seminar Series – Seattle, WA Feb 2015
Washington University – Department of Biochemistry and Molecular Biophysics, St. Louis, MO Dec 2014
University of Wroclaw – Department of Chemistry, Invited Speaker, Wroclaw Poland Oct 2014
Brazilian Symposium on Chemistry and Physiology of Proteases and their Inhibitors – Invited speaker. Sao Carlos Brazil, Sept 2014
University of Montpellier – Invited Speaker, Montpellier France Sept 2014
28th Protein Society annual Symposium – Invited speaker, San Diego, CA July 2014
Gordon Conference – Proteolytic Enzymes and Their Inhibitors – invited speaker June 2014
National ACS of Medicinal Chemistry Meeting – "Novel Chemistries Keynote" Invited Speaker May 2012
24nd World Molecular Engineering Network Conference – Cabo San Lucas Invited Speaker May 2014
Northeastern University – Department of Chemistry Spring colloquium Series – Invited Speaker – April 2014
University of Southern California – Cellular Homeostasis Lecture Series – Invited Speaker- March 2014
Chemprobe: COST meeting – Cambridge, UK – Keynote speaker. March 2014
Keystone Meeting – "The Chemistry and Biology of Cell Death" – Invited Speaker and Organizer – Feb 2014
University of California, Berkeley – Infectious Diseases & Immunity/CEND – Invited speaker – Nov. 2013
University of California, San Francisco – Division of Experimental Medicine – Invited Speaker – Nov 2013
8th General Meeting of the International Proteolysis Society – Invited Speaker- Cape Town S. Africa – Oct 2013
University of Utah – Department of Biochemistry – Invited speaker – Oct 2013
University of Vermont – Department of Microbiology Retreat – Keynote speaker – Aug 2013
12th International Congress on Toxoplasmosis - Invited speaker, Oxford UK.
Genentech- Seminar and consulting trip – protein science group – June 2013
Biogen/Idec – Seminar and site visit – April 2013
245th American Chemical Society National Meeting– "Chemical Biology of Infectious Diseases" symposium - New Orleans - April 2013
University of South Florida – Department of Chemistry Seminar – March 2013
University of Wisconsin – Department of Chemistry Seminar – March 2013
University of Washington – Department of Chemistry Seminar – Feb 2013
Oregon Health and Science University – Department of Cell & Developmental Biology seminar – Feb 2013
Bowdoin College – Department of Chemistry Seminar – Feb 2013
Bates College – Department of Chemistry Seminar – Feb 2013
AKIRA Project –symposium "Towards Understanding of Immune Dynamism" Osaka, Japan Oct 2012
Gordon Conference – Biology of Host-Parasite Interactions – invited speaker June 2012
Gordon Conference – Proteolytic Enzymes and Their Inhibitors – invited speaker June 2012
Korean Society for Biochemistry and Molecular Biology – General Meeting – invited speaker May 2012
22nd World Molecular Engineering Network Conference – Cabo San Lucas Invited Speaker May 2012
University of Minnesota – Department of Chemistry Seminar Series – invited speaker April 2012

American Chemical Society National Meeting – "Proteases: from Mechanism to Drug Development" Mar 2012
Harvard School of Public Health - "Cellular and Molecular Biology of Parasites" course lecturer – Mar 2012
Harvard University – Department of Chemistry – Invited Speaker Mar 2012
University of Vermont – Department of Microbiology and Molecular Genetics Seminar Series – Mar 2012
Case Western University – Cancer Center Seminar Series – Invited Speaker Mar 2012
Gordon Conference – Plasminogen Activation and Extracellular Proteolysis – invited speaker Feb 2012
University of Michigan – Department of Microbiology and Immunology Seminar Series – Feb 2012
Hoffmann La Roche, Basel Switzerland – Chemistry Frontier Forum – invited lecturer – Jan 2012
National Cancer Institute – Molecular Discovery Program Seminar series – invited lecturer – Nov 2011
University of Lausanne – Lecturer for "Proteases in Health and Disease" course – Nov. 2011
University of California, Berkeley – Infectious Diseases & Microbial Pathogenesis Seminar Series – Sept. 2011
University of Queensland – Institute for Molecular Biosciences – Invited Speaker – Sept. 2011
Queensland University of Technology – Inst. of Health and Biomed. Innovation – Invited Speaker – Sept 2011
Nankai University – College of Life Science, Invited Speaker, Tianjin, China June, 2011
Canadian National Proteomics Network Symposium – Keynote Speaker, Banff, Canada, May 2011
Frontiers in Chemical Biology Symposium – Invited speaker, Shenzhen, China, April 2011
SRI international – Biosciences Division, Invited Speaker, March, 2011
Tel Aviv University – Imaging workshop, Invited Speaker, March, 2011
Hebrew University – Department of Pharmacology Seminar Series, March 2011
Yale University – Chemical Biology Seminar Series, Invited Speaker, March 2011
Boston College – Department of Chemistry Seminar Series, Invited Speaker, Feb, 2010
PacifiChem 2010 - Molecular Probes and Fluorophores for Cellular Imaging. Invited speaker, Hawaii Dec. 2010
Laboratory Medicine Day Theme: Malaria - University of Lund, Lund Sweden, Nov. 2010
EMBO Conference Series – Chemical Biology 2010 – Invited Speaker, Sept. 2010
XIIth Symposium on Proteases, Inhibitors and Biological Control – Portoroz Slovenia Sept, 2010
EFMC-ISMC Symposium on Medicinal Chemistry – Invited Speaker, Brussels, Belgium, Sept. 2010
University of California Santa Cruz – Dept. of Chemistry retreat – Keynote Speaker, Sept. 2010
American Chemical Society - Division of Biological Chemistry meeting Boston, MA Aug 2010
Gordon Conference – Cell Death, Invited Speaker Newport RI, Aug 2010
Netherlands Cancer Institute – Invited Speaker – Amsterndam, Holland July 2010.
IMP Symposium - Seeing more: Emerging Technologies in Microscopy – Vienna Austria May 2010
US HUPO Annual Conference – Invited Speaker Denver, CO March 2010.
Scripps Research Institute – Structure & Chemistry Affinity Group lecture series – Feb 2010
Johns Hopkins University – School of Public Health Lecture series – Feb 2010
Vanderbilt University – Institute of Chemical Biology seminar series – Dec 2009
Novartis Lecture Series – Invited Speaker, Basel Switzerland Nov 2009
Ubiquitin Drug Discovery Meeting – Invited Speaker, Philadelphia, PA Oct 2009
MalERA Meeting – 1 of 25 Invited participants, Harvard Medical School Oct 2009
Nature Publishing Group SciCafe – Invited Speaker, San Francisco, CA Sept 2009
Imaging in 2020 – Molecular imaing meeting – invited speaker, Jackson, WY Sept 2009
Korean Society for Microbology – International Symposium, Daejeon, Korea, June 2009.
FASEB Meetings - Proteases in Hemostasis and Vascular Biology, Carefree, Az, June 2009.
Abbott Research Labs – Seminar series, Abbott Park, IL – April 2009
University of Kentucky – College of Pharmacy Seminar Series – April 2009.
Northwestern University School Medicine –Gastroenterology Division Lecture Series – March 2009.
Mt. Sinai School of Medicine – Department of Microbiology and Immunology Seminar Series – Dec 2008.
National Institutes of Health – Chemistry seminar series Bethesda, MD November 2008
Gordon Conference – Proteolytic enzymes and their inhibitors **-** New Hampshire – July 2008
Gordon Conference – Bioorganic Chemistry **-** New Hampshire – June 2008
Department of Molecular Biology – University of Texas Southwestern Medical Center – Dallas Texas April 2008
Max-Planck-Institut für Züchtungsforschung – Department Seminar – Cologne, Germany – March 2007.
Genomes to Systems Conference - Chemical Genomics: Small molecules with large effects – Manchester, UK March 2007.
Lorne Conference on Protein Structure and Function – Lorne, Victoria, Australia February 2008
Department of Microbiology & Immunology – Albert Einstein College of Medicine – seminar series – Dec 2007
Cambridge Healthtech Institute – in vitro molecular imaging meeting – San Diego November 2008
International Proteolysis Society – General meeting – invited speaker – Petras, Greece Oct. 2007
Human Proteome Organization (HUPO) – 6th Annual World Congress – Seoul, Korea Oct. 2007
Drug Action and Chemical Biology in the Post-Genomic Era – Invited speaker – Vienna, Austria Aug 2007
Societat Catalana de Biologia - Perspectives in Genomics and Proteomics – Barcelona, Spain Jul. 2007
American Peptide Syposium – 20th National Symposium – Montreal, Canada June 2007

Advances in Optics for Biotechnology, Medicine, and Surgery – Invited Speaker – Naples, FL June 2007
Seattle Biomedical Research Institute - Seattle Parasitology Conference - Seattle, WA – May 2007
University of California Riverside – Dept. of Cell Biology and Neuroscience seminar – Riverside, CA – May 2007
Searle Scholars – Lecture at annual meeting – Chicago, Il April 2007
Molecular Cell Biology and Biotechnology seminar series – Virginia Tech – Feb 2007
Department of Pharmacology Seminar – Yale University – Feb 2007
Biochemcial Society – Proteomics and Proteolysis – London England Jan 2007
Department of Chemistry Seminar - University of California, Berkeley – Nov 2006.
Department of Microbiology Seminar – University of Vermont – Oct 2006
American Chemical Society Southwest Regional Meeting – Invited lecture – Oct 2006
5th International Conference on Cysteine Proteinases and Their Inhibitors: From structure to regulation and biology – Portoroz, Slovenia Sept. 2006
18th International Congress on Fibrinolysis and Proteolysis – San Diego, CA Aug 2006
Gordon Research Conference – Proprotein Processing, Trafficking & Secretion- July 2006
Novartis Institutes for Biomedical Research – Weekly seminar – Cambridge, MA May 2006
University of Iowa – Bioinformatics lecture series – April 2006
Association of Biomolecular Resource Facilities – Annual Meeting – Long Beach, CA Feb 2006
Toxoplasma Infections in the Immune Competent Host-Possible Application to Human Neuropsychiatric Diseases – Annapolis, MD November 2005
University of Southern California – Chemical Biology Seminar Series – November 2005
University of California San Francisco, Chemistry and Chemical Biology seminar series – Oct 2005
International Proteolysis Society – 4th general meeting – Quebec, Canada Oct 2005
Society for Molecular Imaging – 4th Annual Meeting – Cologne, Germany Sept 2005
University of California San Francisco –Biophysics/Chemistry & Chemical Biology Seminar Series– Oct 2005
IXth International Symposium on Proteinase Inhibitors and Biological Control – Brdo, Slovenia June 2005
Celera Genomics – Chemistry Department Seminar Series – June 2005
American Association for the Study of Liver Diseases - Functional Genomics and Proteomics of Liver in Health and Diseases – June 2005
Genentech – Invited by Dr. Robert Lazarus Department of Protein Engineering - March 2005
Washington University School of Medicine - Department of Molecular Microbiology Seminar - March 2005
Scripps Research Institute – Molecular and Cell Biology Affinity Group seminar series – November 29, 2004
American Society of Microbiologists - Conference on Functional Genomics and Bioinformatics Approaches to Infectious Disease Research – October 2004
Molecular Parasitology Meeting XV – Woods Hole, MA – September 2004.
American Chemical Society – National Meeting. "Genomic Approaches to Enzymology" – August 2004
Gordon Research Conference – Proteolytic Enzymes and Their Inhibitors - July 2004
McGill University - Chemical Biology/Archibald Macallum Seminar Series – June 2004
University of Washington School of Medicine–Department of Genome Sciences Lecture Series – June 2004
Lorne Conference on Protein Structure and Function – Lorne, Victoria, Australia February 2004
Molecular Approaches to Malaria - Lorne, Victoria, Australia February 2004
American Society for Cell Biology National Meeting – Special Session "The interface Between Small Molecule Chemistry and Cell Biology"– December 2003
International Proteolysis Society - 3rd general meeting - Nagoya, Japan November 2003
Oregon Health & Sciences University - Keynote Lecture for Department of Microbiology and Immunology Retreat. November 2003
Horizon Symposium - Third Symposium on Proteolysis - Verona, Italy October, 2003
Genomics on Target - IBC conference Boston, MA October , 2003
Proteomics: The Chemical Tools and Challenges - Churchill College, Cambridge, UK July 2003
University of Leiden - Department of Chemistry Seminar Series - May 2003
University of Pennsylvania Medical School - George Raizzis seminar series November 2002
American Association for Cancer Research – "Ubiquitination in Normal and Cancer Cells" Vancouver, British Columbia. November 2002
American Association for Cancer Research – "Proteases, Extracellular Matrix, and Cancer" Hilton Head, South Carolina October 2002
International Society for Fibrinolysis and Proteolysis –Munich, Germany September 2002
American Chemical Society- National Meeting Boston, Massachusetts August 2002
Gordon Research Conference- "Proteolytic enzymes and their inhibitors" July 2002
ASBMB Annual Meeting- Experimental Biology 2002, Proteomics section April 2002
University of British Columbia - Protein Engineering Network Symposium - March 2002
Gordon Research Conference- "Chemistry and Biology of Peptides" February 2002
International Proteolysis Society - 2rd general meeting - Munich, Germany November 2001

Israeli Society for Combinatorial Technologies- Israeli CombiTech Symposium Rohovot, Israel October 2001
American Chemical Society- National Meeting Chicago, Illinois August 2001
5th International Symposium on Mass Spectrometry in the Health and Life Sciences- "Molecular and Cellular Proteomics" San Francisco, California August 2001
Merck Research Laboratories - Rahway, New Jersey July 2001
7th Brdo Symposium on Proteinase Inhibitors and Biological Control -Brdo Slovenia June 2001
Cold Spring Harbor Symposium- "Proteolysis and Biological Control" May 2001
University of Munich- Department of Clinical Biochemistry Munich, Germany February 2001
Albert-Ludwigs-University Freiburg- Institute for Molecular Medicine Freiburg, Germany February 2001
Surface Logix- Boston, Massachusetts February 2001
Affimax Research Institute- Santa Clara, California February 2001
The Burnham Institute- La Jolla, California January 2001
Axys Pharmaceuticals - South San Francisco, California November 2000
Rigel Pharmaceuticals - South San Francisco, California November 2000
Cysteine Proteinases and their Inhibitors: The new Millennium- Portoroz, Slovenia September 2000
Conference of the World Molecular Engineering Network- Cabo San Jose, Mexico April 2000
Axys Pharmaceuticals - South San Francisco, California March 2000
University of Utah- Department of Biochemistry March 2000
The Scripps Research Institute- November 1999
American Chemical Society- Northwest Regional Meeting June1999
University of California, San Francisco-Department of Pharmaceutical Chemistry retreat December 1998
Gordon Research Conference- "Proteolytic enzymes and their inhibitors" June 1998
Janssen-Cilag Club de la Transplantation meeting - Paris, France October 1997
American Peptide Symposium – Nashville, Tennessee June 1997
Cold Spring Harbor Symposium- "Biology of Proteolysis" April 1997
University of California, San Diego - Department of Pathology March 1997

TEACHING

Graduate Programs
Cancer Biology
Microbiology and Immunology
Chemical and Systems Biology

Training Grants
Cancer Biology
Microbiology and Immunology
Chemical and Systems Biology
Molecular Pharmacology Training Program

CSB 220 – Co-Founder of course with T. Wandless, D. Hershlag, J. Chen "Chemistry of Biological Processes". Primary Lecturer Fall 2004, Fall 2005. Fall 2007
CSB240 – Lecturer Winter 2009, 2010, 2011
CSB260 – Lecturer and discussion leader – Spring 2007, 2008
BioE222B – Lecturer Winter 2010-Current
Bio 241 – Discussion leader Winter 2004, Lecturer Winter 2006, Discussion leader Winter 2006
CBio 241 – Lecturer Fall 2003- Current Discussion leader Fall 2005
CBio 242 – Lecturer Summer 2007-Current
CBio 280 – Discussion leader Spring 2005
M&I 210 - Lecturer Winter 2005 - Current
M&I 215 – Lecturer Winter 2005 - Current
BMI234 – Lecturer Winter 2005, 2007

PATENTS

1. H. L. Ploegh, H. A. Chapman, **M. Bogyo**, and P.R. Wolf. "Suppression of Immune Responses Via Inhibition of Cathepsin S". US 7,285,525 B2 issued Oct. 23, 2007.
2. **M. Bogyo**, S.H.L. Verhelst and A.M. Sadaghiani "Design and Synthesis of Novel Cysteine Protease Inhibitors" US Utility Filing 11/762,735.
3. **M. Bogyo**, G. von Degenfeld and G. Blum 'Imaging of Protease Activity in Live Cells Using Activity Based Probes' US 8,968,700 B2. Mar 3, 2015

4. **M.Bogyo** and A. Berger "Selective inhibitors and active site probes of caspases" Utility filing US Patent 12/306,215.
5. **M.Bogyo**, M. Fonovic and S. Verhelst "Mild Chemically Cleavable Linker for Proteomic Applications" Utility filing 12/376,053.
6. **M. Bogyo**, G. Blum, A.B. Berger, Z. Chen, S.S. Gambhir "Probes for in vivo targeting of active cysteine proteases" US 8,343,458 B2 Jan 1, 2013.
7. **M. Bogyo**, K.C. Garcia, P. Lupardus, A. Shen "Inducible self-cleaving protease tag and method of purifying recombinant proteins using the same" WO 2011/034622 A3 Mar 24, 2011.
8. **M. Bogyo,** J. Lee, Yin F., L.E. Edgington. "Specific inhibitors and active site probes for legumain" WO 2011/075678 A1. June 23, 2011.
9. **M. Bogyo,** A.W. Puri, A. Shen "Small molecule inhibitors of Clostridium difficile toxin" US Provisional Application 61/415,669.
10. **Bogyo,** M. Verdoes, L.E. Edgington "Non-peptidic quenched fluorescent imaging probes" WO 2012/118715 A2 Sept. 7, 2012.
11. **M. Bogyo**, M. Verdoes "Optical Probes for imaging of tumor margins and sites of inflammation" US Patent 14/777,024, International Filings
12. **M. Bogyo,** M. Verdoes, L. Ofori, N. Withana. "Protease-activated contrast agents for in vivo imaging" Patent US 2024/0025945 A1
13. **M. Bogyo,** A. Puri, T. Oresic Bender "Non-antibiotic drugs for the treatment of Clostridium difficile infection" PCT/US2015/037242
14. Phelps, D., Johnson, G., Bartik, M.M., Bensen, E., Halverson, D.J., and **Bogyo, M**. "Cysteine protease inhibitors" WO 2017/053864 A1.
15. Shabat, D., Green, O., **Bogyo, M**. "Chemiluminescent probes for Tuberculosis" US 2023/0094870 A1. Published Mar 30, 2023.
16. **M. Bogyo**, J. Widen, J. Yim "Multi-enzyme-activated imaging probes and related compositions and methods" WO 2020/081454 A1. April 23, 2020.

PUBLICATIONS

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294. Bennett JM, Ward KE, Muir RK, Kabeche S, Yoo E, Yeo T, Lam G, Zhang H, Almaliti J, Berger G, Faucher FF, Lin G, Gerwick WH, Yeh E, Fidock DA, **Bogyo M.** Covalent Macrocyclic Proteasome Inhibitors Mitigate Resistance in Plasmodium falciparum. ACS Infect Dis. 2023 Oct 13;9(10):2036-2047.

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Book Chapters

1. **Bogyo M**. and Wang E. (2002) Proteasome Inhibitors: Complex Tools for a Complex Enzyme. *The Proteasome-Ubiquitin Proteoin Degradation Pathway*. Springer Publishing. Eds. Zwickl P and Baumeister W. p. 185- 208.

2. Dive V, Paulick MG, McIntyre JO, Matrisian LM and **Bogyo M** (2008). Activity-Based Imaging and Biochemical Profiling Tools for Analysis of the Cancer Degradome. *The Cancer Degradome- Proteases and Cancer Biology.* Springer Publishing. Eds. Edwards DR, Hoer-Hansen G, Blasi F, Sloane BF. p. 101-135.

3. Edgington LE and **Bogyo M**. (2011) Applications for Activity-based Probes in Drug Discovery. Royal Society of Chemistry. Ed. Bunage M. P. 33-63.

4. Ward G and **Bogyo M**. (2014) Toxoplasma gondii Chemical Biology. Toxoplasma gondii, The model Apicomplexan: Perspectives and Methods. Elisver. Eds. Weiss LM and Kim K. p 707-730.

Current Funding

ACTIVE

R01 EB026285

Bogyo (PI) 04/01/2018 – 01/31/25

Generation of highly selective activity-based probes using chemically modified phage

Develop chemical probes that are highly selective for protease targets using phage screening methods. This approach uses phage that display bicyclic peptides that are chemically modified with active site labels to identify highly selective covalent probes for imaging applications.

R01 EB028628

Bogyo (PI) 10/01/2019 – 09/30/24

National Institutes of Health

Dual orthogonal fluorescent protease sensors for image guided surgery

Major Goals: The development of new fluorescent imaging probes and applications for robotic surgery of tumors. This will include synthesis and testing probes in mouse models of cancer and building of a camera

system that can be used with the surgical robot to detect dye labeled probes.

R21 AI161061 12/01/2021 – 11/30/2024
Bogyo (PI)
Covalent inhibitors of host cell entry by SARS-CoV-2 for treatment of COVID-19
Major Goals: Develop cyclic peptides that covalently bind and block function of the SARS-CoV2 spike protein using phage screening methods. This approach uses phage that display cyclic peptides that are chemically modified with active site labels to identify highly selective covalent inhibitors of SARS-CoV2 infection.

R01 DK130293-01A1
(Bogyo, PI) 09/21/2021 – 07/31/2026
National Institutes of Health
Targeting bacterial proteases involved in PAR signaling to treat inflammatory bowel diseases
Major Goals: This proposal is focused on screening culture extracts from commensal gut bacteria to identify secreted proteases that alter host cell signaling through PARs to alter the pathogenesis of inflammatory bowl diseases.

U19 AI171399
(Chodera, PI) 05/01/2022 – 04/30/2025
National Institutes of Health
AI-driven Structurally enabled Antiviral Platform (ASAP)
Major Goals: This is a multi-project grant and the goals are to: 1) help develop biological assays to validate novel anti0viral drug targets with a reduced potential to induce drug resistance and 2) to help develop small molecule covalent probes for the evaluation of target binding and selectivity of active fragments and advanced lead molecules. In addition, Dr. Bogyo will work to facilitate communication with the co-investigators and research personnel at Stanford with those at other sites.

U19 AI171421
(Glenn, PI) 05/01/2022 – 04/30/2025
National Institutes of Health
Development of outpatient antiviral cocktails against SARS-CoV-2 and other potential pandemic RNA viruses
Major Goals: Dr. Bogyo has a role as a co-investigator in project 5 to develop new classes of inhibitors of VEEV and CHIKV proteases for therapeutic applications. This will involve synthesizing inhibitors and testing them in enzyme assays against purified protease.

PR210545P1
(Bogyo, Fidock PIs) 07/01/2022 – 06/30/2024
Department of Defense
Targeting the Plasmodium proteasome for prophylaxis and treatment of drug-resistant malaria in US Military personnel
Major Goals: This multi-PI project aims to develop new classes of Plasmodium falciparum proteasome inhibitors for the treatment of malaria. The project involves collaborations with multiple research groups to develop three primary compound series and determine their efficacy at clearing both blood and liver stage parasites. It also aims to define mechanisms of resistance to this class of anti-malarial agents.

Overlap: none