

CURRICULUM VITAE

Name: Michael Cho

Address: Department of Bioengineering
University of Texas at Arlington
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Email: michael.cho@uta.edu

Education:

1983 B.S. George Washington University, Washington, DC
1986 M.S. Drexel University, Philadelphia, PA
1991 Ph.D. Drexel University (Biophysics/Physics)

Postdoctoral Training:

1991-1993 Research Fellow in Biological Chemistry and Molecular
Pharmacology, Harvard Medical School, Boston, MA
1993-1994 Senior Research Fellow in Biological Chemistry and Molecular
Pharmacology, Harvard Medical School, and in Medicine,
Brigham and Women Hospital, Boston, MA

Academic Appointment and Teaching Experience:

1986-1989 Teaching Assistant, Drexel University, Philadelphia, PA
1990 Adjunct Professor, Drexel University, Philadelphia, PA
1992 Adjunct Professor, Wentworth Institute of Technology, Boston, MA
1997-1998 Science Instructor, Wellesley College, Wellesley, MA
1994-2000 Instructor, Harvard Medical School, Boston, MA
2000-2005 Assistant Professor, Bioengineering, UIC
2001-2015 MD/Ph.D Training Faculty, UIC
2003-2015 Director, Laboratory for Biomolecular Imaging:
2003-2010 Director, Bioengineering Graduate Studies, UIC
2005-2008 Associate Professor, Bioengineering and Physics, UIC
2005-2006 Interim Department Head, Bioengineering, UIC
2006-2007 Associate Director, Center for Integrated Networks of Nanoscale Sensors
and Signal Transmission Systems for Biomedical Applications, UIC
2008-2015 Professor, Bioengineering, UIC
2009-2015 Full Member, UIC Cancer Center
2009-2015 Full Member, Center for Clinical and Translational Science, UIC
2009-2015 Professor, Department of Visual Sciences and Ophthalmology, UIC
2010-2011 Member, Vice Chancellor Research Advisory Council, UIC
2012-2015 University Scholar, University of Illinois
2012-2015 Elected BioE Department Advisory Committee Member
2013-2015 Elected Executive Committee Member, College of Engineering
2014 UIC Faculty of the Year
2014-2015 Elected all-Campus Promotion & Tenure Committee Member, UIC
2015- Professor, Department of Bioengineering, University of Texas, Arlington

2015- Chair, Department of Bioengineering, University of Texas, Arlington
 2015- Endowed Chair, Alfred R. and Janet H. Potvin Distinguished Professor
 University of Texas, Arlington

Hospital Appointment:

1996-2000 Associate Biochemist, Brigham and Women's Hospital, Boston, MA

Journal Editorial Appointment

2011 Editor, Special Issue on Stem Cell Biomechanics and Mechanobiology
 International Journal of Cell Biology
 2011- Editorial Board Member
 International Scholarly Research Network Biophysics
 2013- Editorial Board Member, American Journal of Tissue Engineering
 2013-2015 Editor in Chief, Physics and Chemistry of Stem Cells

Memberships in Professional Societies:

1988- American Physical Society
 1988- Biophysical Society
 1995- Society for Physical Regulation in Biology and Medicine
 1997- Bioelectromagnetics Society
 2000- Biomedical Engineering Society
 2002- American Association for the Advancement of Science
 2002- Institute of Electrical and Electronics Engineers (Senior Member)
 2011- Fellow, American Institute for Medical and Biological Engineering
 (AIMBE)
 2013- International Society for Advancements in Cytometry

Professional Experience:

1999-2001 Program Committee Member, Society for Physical Regulation in
 Biology and Medicine (SPRBM)
 2000-2002 Council Member, SPRBM
 2002 Program Committee Chair, and President-Elect, SPRBM
 2002-2004 President, SPRBM
 2002 Special Reviewer, Wellcome Trust Foundation, London, UK
 2002 Special Reviewer, International Science and Technology Center,
 US State Department
 2003 Session Chair, ElectroMed2003 Conference
 2004 Member, Bioelectromagnetics Journal Publication Committee
 2005 NIH Study Section (MABS), Member
 2005- Senior Member, IEEE
 2006 Think Tank Group member, National Center for Complementary
 and Alternative Medicine (NCCAM/NIH)
 2006 NIH Study Section (MDCN-K50), Member
 2007 Special Reviewer, The Canadian Research Council, Canada
 2007-2011 NIH Study Section (MTE), Permanent Member
 2009-2013 Veterans Administration Grant Review Panel, Member
 2010 Special Reviewer, Wellcome Trust Foundation, London, UK
 2011- Fellow, American Institute for Medical and Biological Engineering
 (AIMBE)
 2011- Reviewer, Nebraska Research Initiative

- 2011-2015 Reviewer, University of Illinois, Chicago Campus Research Board
 2012 Research Grants Council, Hong Kong
 2014 Program Committee Member, The 2nd IEEE/ASE International Conference on Big Data Science

Awards and Honors:

- 1981-1983 Board of Trustees Scholarship, George Washington University
 1982 President of Student Physics Society, George Washington University
 1983 Student Advisory Council, George Washington University
 1983 B.S. with Distinction, George Washington University
 1988 Director, Graduate Students Seminar, Drexel University
 1992-1993 Bristol-Myers Squibb Fellowship, Harvard Medical School
 1999 Invited Speaker, Gordon Research Conference
 2002 Invited Speaker, Gordon Research Conference
 2002-2005 Leader, Interdisciplinary and Multi-institution Research Consortium
 (Sponsored by Office of Naval Research)
 2005-2008 Leader, Interdisciplinary and Multi-institution Research Consortium
 (Sponsored by Office of Naval Research)
 2006 Diamond Faculty Research Award, UIC College of Engineering
 2006 Invited Speaker, The 2006 AAAS Annual Meeting
 2006 UIC College of Engineering Research Award
 2006 Invited Speaker, The 28th Meeting of the Bioelectromagnetics Society
 2008 Invited Speaker, Gordon Research Conference
 2009 Session Chair, The 31st IEEE EMBC Annual Meeting
 2010 Track Chair, The 6th World Congress on Biomechanics
 2012 Teaching Award, UIC College of Engineering
 2012 Track Chair, The 5th Annual Symposium of Regenerative Medicine and Stem Cells
 2012 UIC College of Engineering Teaching Award
 2012-2015 University Scholar, University of Illinois
 2013 Session Co-Chair, 2013 Biomedical Engineering Society Meeting
 2014 Technical Program Committee of “Enabling Science From Big Image Data”,
 The 2nd IEEE/ASE International Conference on Big Data Science,
 Stanford, CA
 2014 UIC Faculty of the Year
 2015- The Alfred R. and Janet H. Potvin Endowed Professor
 University of Texas at Arlington (UTA)

University/Department Service:

(at University of Illinois at Chicago)

2001-2015	BioE Faculty Search Committee
2002-2015	MD/Ph.D Training Faculty
2002	Judge, Undergraduate Research Competition
2002	Evaluator, Graduate Research Competition
2002-2010	Chair, BioE Qualifying Exam Committee
2002	ABET Assessment Committee (BioE)
2002	Chair, BioE Awards Committee
2003	College of Engineering Space Allocation Committee
2003	Integrative Bioengineering Institute Steering Committee
2003	Judge, Undergraduate Research Competition
2003-2010	Director, Bioengineering Graduate Studies
2004	Reviewer, NSF Partnership for Innovation Program
2004	Fulbright Scholarship Review Committee
2005	Chair, MAL Review Committee
2005-2015	Member, NCF Advisory Committee
2005-2006	Interim Head, Bioengineering Department, UIC
2009-2015	Bioengineering Department Advisory Committee
2010-2011	Vice Chancellor Research Advisory Council
2011	Member, Search Committee for UIC Dean of Graduate College
2011-2015	UIC MD/Ph.D Admissions Committee
2012-2015	Member, UIC Conflict Review Committee
2013-2015	Executive Committee Member, UIC College of Engineering
2014-2017	All-Campus P & T Committee Member

(at University of Texas at Arlington)

2015-2016	Member, UTA Committee for Construction of Science and Engineering Innovation Research (SEIR) Building
2016	Member, Search Committee for UTA Dean of College of Engineering
2016-2017	Chair, UTA College of Engineering Strategic Planning Committee
2017	Member, UTA Task Force on Recruitment and Retention of Underrepresented Faculty and Staff

Course Development:
(at University of Illinois at Chicago)

1. Advanced Modern Imaging - graduate course
2. Introduction to Cell and Tissue Engineering - capstone course in the Cell & Tissue Engineering concentration
3. Cell and Tissue Engineering Laboratory - undergraduate laboratory course Cell & Tissue Engineering
4. Principle of Cell and Tissue Engineering - core graduate course in Cell & Tissue Engineering
5. Biotransport - core graduate course in Cell & Tissue Engineering
6. Interfacial Molecular Bioengineering - introductory graduate course
7. Regenerative Stem Cell Tissue Engineering - undergraduate/graduate course

(at University of Texas at Arlington)

1. Stem Cell Tissue Engineering - graduate course

Advisory and Supervisory Responsibilities: (at University of Illinois at Chicago)

1994	Todd Brenner, Brandeis University student Kerry Wong, Harvard Medical School student
1995	Alyssa Earle, Amherst College student
1996	Tazeen Ahmad, Harvard University student Sheldon Park, Harvard University graduate student
1997	Stephanie Sharps, Hampton College student Mary Silvia, Harvard Medical School student Zelime Ward, Harvard University student
1998	Alexis Sauer, Harvard University graduate student
1998	Vivian Gonzales, Harvard University student Joan Marler, Wellesley College student, Senior Honor Thesis
1999	Milan Bajmocchi, Harvard Medical School student Timothy Harris, Morehouse College student
2001- 2007	Ayman Hamed, Ph.D <i>granted 9/07</i>
2001- 2003	Layla Khatib, MS <i>granted 5/03</i> Kywon Park, UIC graduate student
2001	Clint Chung, UIC undergraduate summer student Paul Kim, UIC undergraduate summer student
2002	Madiha Querish, Mount Holyoke College summer student
2002- 2006	Dr. Shan Sun, Postdoctoral Fellow
2002- 2007	Vidya Kudva, Ph.D <i>granted 5/07</i>
2003- 2008	Joel Wise, UIC graduate student <i>granted 6/08</i>
2003- 2007	Hongfeng Chen, Ph.D <i>granted 3/07</i>
2003- 2006	Dr. Igor Titushkin, Postdoctoral Fellow
2003- 2005	Prof. Yaoming Liu, Visiting Scientist
2004- 2005	Stephanie Chua, MS <i>granted 5/05</i>
2005- 2008	Samantha Lipsky, Ph.D <i>granted 8/08</i>
2005- 2008	Arpita Kadakia, UIC MD/PhD <i>granted 6/08</i>
2005	Nicole Greene, Northwestern University NSF-REU student
2006	Winnie Kuo, UC Berkeley NSF-REU student
2008- 2009	Hulda Haraldsdottir, UIC PhD student
2008	Alexander Park, UIC undergraduate summer student
2008	Denise Taylor, NSF RET summer teacher trainee
2008	Vibhooti Dev, UIC undergraduate student
2008- 2010	Victor Nekrasov, UIC MD student, co-advisor with S. Glover
2009	Hannah Wirtshafter, Carnegie Mellon University summer student
2009- 2011	Brandon Lutz, UIC BS/MS student
2009- 2012	Hamed Naimipour, UIC MS student
2009- 2013	Amelia Zellander, UIC URM PhD student
2010- 2015	Amit Paul, UIC PhD student
2010- 2011	Sumaira Yahya, UIC BS student/NSF REU student
2010	Hannah Wirtshafter, NSF REU student (Carnegie Mellon University)
2010	Elizabeth Smith, NSF RET high school science teacher
2011	Elizabeth Smith, NSF RET high school science teacher
2011- 2015	Farah Shareef, UIC MD/PhD <i>granted 5/15</i>
2011- 2015	T. Denise Taylor, UIC URM PhD student
2012- 2015	Marisa Doria, UIC URM MS <i>granted 5/15</i>
2012- 2013	Melissa Wardlow, UIC URM undergraduate student
2012- 2014	David Franz, UIC MS student
2013- 2015	Johnwesly Kanagaraj, UIC MS <i>granted 1/16</i>

Advisory and Supervisory Responsibilities: (at University of Texas at Arlington)

2015- D. Bo Chen (Faculty Associate Researcher)
2015- Caleb Liebman, UTA PhD student
2015- Parisa Rabbani, UTA PhD student
2016- Somdutta Chakraborty, UTA PhD student
2016- Edidiong Inwang, UTA PhD student
2016- Andrew McColloch, UTA PhD student

Thesis Committee: (at University of Illinois at Chicago)

2001	Andrew Myrick, M.S. Candidates, UIC Bioengineering Michael Poirier, Ph.D. Candidate, UIC Physics
2002	Priya Radhakrishnan, M.S., UIC Bioengineering Jia Cheng, M.S., UIC Bioengineering Toby Gwak, M.S., UIC Bioengineering Daniel Irimia, Ph.D., UIC Bioengineering Ross Kopher, M.S., UIC Bioengineering Lara Leoni, Ph.D., UIC Bioengineering Arti Patel, M.S., UIC Bioengineering Ketul Papat, Ph.D., UIC Bioengineering Sadhana Sharma, Ph.D., UIC Bioengineering Wei Tan, Ph.D., UIC Bioengineering Jia Wang, M.S., UIC Bioengineering
2003	Robert Washington, Ph.D., UIC Bioengineering Sara Tomkoria, M.S., UIC Bioengineering Sabir Taj, M.S., UIC Bioengineering Katherine Rojahn, M.S., UIC Bioengineering
2004	Hasan Othman, Ph.D., UIC Bioengineering Sona Sundaramurthy, M.S., UIC Bioengineering Peng Shi, M.S., UIC Bioengineering
2005	Sowmya Parthan, M.S., UIC Bioengineering Barbara Bastian, M.S., UIC Bioengineering Shaunak Parikh, M.S., UIC Bioengineering Chee Xiong, M.S., UIC Bioengineering Lula Al-Turki, Ph.D., UIC Bioengineering Somali Chaterji, M.S., UIC Bioengineering Paul Clark, Ph.D., UIC Bioengineering Eduardo Moioli, Ph.D., UIC Bioengineering
2006	Ross Kopher, Ph.D., UIC Bioengineering Nick Marion, Ph.D., UIC Bioengineering Steven Buck, M.S., UIC Bioengineering Tomas Ban, Ph.D., UIC Bioengineering Naama Lewis, M.S., UIC Bioengineering
2007	Tanvi Muni, Ph.D., UIC Bioengineering Niraj Muni, Ph.D., UIC Bioengineering Antonio Olivo, M.S., UIC Bioengineering Xiaoyan Li, Ph.D., UIC Bioengineering
2008	Shentu, Tzu Pin, Ph.D., UIC Bioengineering Rebecca Mecum, M.S., UIC Bioengineering Sam Senyo, Ph.D., UIC Bioengineering Jesse Biehl, Ph.D., UIC Bioengineering John Collins, Ph.D., UIC Bioengineering Ramana Vishnubhotla, Ph.D., UIC Bioengineering

- 2009 Peter Aiyttay, Ph.D., UIC Bioengineering
- 2010 Ki Wan Nam, Ph.D., UIC Bioengineering
Sid Angle, Ph.D., UIC Bioengineering
Dongyoung Lee, Ph.D., UIC Bioengineering
Shruti Bharadwaj, M.S, UIC Bioengineering
Mentor Thaqi, M.S, UIC Bioengineering
- 2012 Marie Brett, Ph.D., UIC Bioengineering
Ece Gulcer, M.S, UIC Biopharmaceutical Sciences
Kasun Punchihewa, Ph.D, UIC Electrical and Computer Engineering
Suhair Sunoqrot, Ph.D., UIC Biopharmaceutical Sciences
Hongyu Ying, Ph.D., UIC Bioengineering
Ja Hye Myung, Ph.D., UIC Biopharmaceutical Sciences
Mary Leonard, Ph.D., UIC Bioengineering
Ying Hsu, M.S, UIC Bioengineering
- 2013 Chun-Chieh Huang, Ph.D., UIC Bioengineering
Chi Bang, Ph.D., UIC Bioengineering
Hugo Caicedo, Ph.D., UIC Bioengineering
Melanie Kollmer, Ph.D., UIC Biopharmaceutical Sciences
Diana Gutierrez, Ph.D., UIC Bioengineering
- 2014 Taneka Taylor-Jones, MS, UIC Bioengineering
Jenny Lau, Ph.D., UIC Bioengineering
Khodr Maamari, Ph.D., UIC Electrical and Computer Engineering
Kati Trella, Ph.D., UIC Bioengineering
- 2015 Jenny Lau, Ph.D., UIC Bioengineering
Khodr Maamari, Ph.D., UIC Electrical and Computer Engineering
Chi Bang, Ph.D., UIC Bioengineering

Thesis Committee:
(at University of Texas at Arlington)

2016
2016

Mohammed Sayed, Ph.D., UTA Bioengineering
Maida Ranjbar, M.S., UTA Bioengineering

Invited Presentations:

- 1992 Department of Biological Sciences, University of Houston, Houston, TX
- 1994 Department of Biological Chemistry and Molecular Pharmacology,
Harvard Medical School, Boston, MA
- 1998 Hematology Division, Harvard Medical School, Boston, MA
- 1998 Department of Physics, Wellesley College, Wellesley, MA
- 1999 Gordon Research Conference, Henniker, NH
- 2000 Department of Pharmacology, University of Illinois, Chicago, IL
- 2001 Symposium on "Regenerative Medicine", University of Illinois, Chicago, IL
- 2001 The 2nd International Symposium on "Nonthermal medical/biological
treatments using electromagnetic fields and ionized gases", Portsmouth, VA
- 2002 Department of Physics, University of Illinois, Chicago, IL
- 2002 Gordon Research Conference, South Hadley, MA
- 2002 Department of Physics, Whittier College, Whittier, CA
- 2002 Bioscience Division, Argonne National Laboratory, Argonne, IL
- 2002 Symposium on "Biomechanics", University of Illinois, Chicago, IL
- 2003 Department of Electrical Engineering, Old Dominion University, Norfolk, VA
- 2003 The 3rd International Symposium on "Nonthermal medical/biological
treatments using electromagnetic fields and ionized gases", San Antonio, TX
- 2004 Department of Mechanical Engineering, Drexel University, Philadelphia, PA
- 2004 Biomedical Engineering Seminar Series, University of Chicago, Chicago, IL
- 2005 The 4th International Symposium on "Nonthermal medical/biological
treatments using electromagnetic fields and ionized gases", Portland, OR
- 2006 The 2006 Annual Meeting of the American Association for the
Advancement of Science (AAAS), St. Louis, MO.
- 2006 The 28th Annual Meeting of the Bioelectromagnetics Society, Cancun, MX
- 2007 Department of Pharmacology, University of Illinois, Chicago, IL
- 2007 Department of Mechanical Engineering, Korean Advanced Institute of Science
and Technology, Daejeon, Korea.
- 2007 IDGA 3rd Conference on "Non-lethal and Directed Energy Weapons",
Washington, DC
- 2008 The 40th Annual Meeting of American Burn Association, Chicago, IL
- 2008 Gordon Research Conference, Biddeford, ME
- 2008 The UIC MD/PhD Program Seminars, Chicago, IL
- 2010 Big 10 Bioengineering Seminar, U. Michigan, Ann Arbor, MI
- 2010 Department of Ophthalmology, University of Illinois, Chicago, IL
- 2010 Department of Mathematics and Computational Biology, University of California,
Irvine, CA
- 2011 The 43rd Annual Meeting of American Burn Association, Chicago, IL
- 2011 School of Chemical and Biomolecular Engineering, Cornell University
Ithaca, NY
- 2011 The 2011 American Society of Mechanical Engineering: Applied Mechanics and
Materials Conference, Chicago, IL
- 2011 Department of Mechanical Engineering, Korean Advanced Institute of Science
and Technology, Daejeon, Korea
- 2011 Department of Mechanical Engineering, Pohang University of Science and
Technology, Pohang, Korea
- 2011 Institute for Personalized Respiratory Medicine, University of Illinois,
Chicago, IL
- 2011 Department of Cell Biology and Anatomy, Rush University, Chicago, IL
- 2012 Department of Oral Biology, University of Illinois, Chicago, IL

- 2012 IDGA 8th Conference on "Non-lethal and Directed Energy Weapons",
Washington, DC
- 2012 The 5th Annual Symposium of Regenerative Medicine and Stem Cell,
Guangzhou, China
- 2013 Department of Oral Biology, University of Illinois, Chicago, IL
The 100th year Anniversary Celebration
- 2013 Department of Orthopedics, University of Chicago Medical School, Chicago, IL
- 2014 Department of Visual Sciences and Ophthalmology, University of Illinois,
Chicago, IL
- 2014 Panel Discussion Member, The 2014 Workshop on "Big Image Data Applied to
Cell Biology", Stanford, CA
- 2014 The 2nd Biomedical Engineering Society Korea-US Workshop, San Antonio, TX.
- 2015 The Annual Big 10 Exchange Seminar Series, University of Nebraska at Lincoln,
Lincoln, NE
- 2015 The 47th Annual Meeting of American Burn Association, Chicago, IL
- 2015 Department of Kinesiology, University of Texas at Arlington
- 2015 The Center for Bioelectrics, Old Dominion University, Norfolk, VA.
- 2016 Department of Bioengineering, University of Texas at Dallas, Richardson, TX
- 2016 Department of Biomedical Engineering, Columbia University, New York, NY
- 2016 Department of Mechanical Engineering, Southern Methodist University,
Dallas, TX
- 2016 Department of Electrical & Computer Engineering, Texas Tech University,
Lubbock, TX

Research Interests:

1. Stem cells and regenerative medicine
2. Advanced cellular and molecular imaging
3. Cellular biomechanics and mechanobiology
4. Brain trauma injury models
5. Regulation of 3D cell adhesion and motility
6. Nano- and micro-fabrication of biomimetic polymers for tissue regeneration
7. RF-based biosensors; RF-mediated bioeffects
8. Biophysical (mechanical and electrical) control of cellular processes and proliferation in enhanced wound healing
9. Electromechanical regulation of calcium homeostasis
10. Electrochemical signal transduction in cell membrane

Theoretical Interests:

1. Membrane protein dynamics
2. Modeling of biophysical theories and nonlinear dynamics
3. Electrocoupling mechanisms of voltage-sensitive ion channels
4. Prediction of stem cell differentiation and signaling networks

Techniques and Experimental Expertise:

1. Single particle tracking and laser optical tweezer
2. Two-photon and confocal microscopy
3. Real-time monitor techniques of RF-induced responses
4. Nano-newton mechanobiological responses (AFM)
5. Femtosecond photoablation
6. Fluorescence photobleaching recovery (μm -scale lateral kinetics)
7. Polarized fluorescence depletion (nm-scale rotational kinetics)
8. Video, fluorescence, differential interference contrast microscopy
9. Laser light scattering and microphotolysis
10. Absorption spectroscopy and linear dichroism
11. Co-electrospinning for nanofabrication
12. Electronic instrumentation;
 - Spatially resolved pseudokinetic laser microscopy; Time resolved photon counting laser microscopy; Meridian ACAS 570 Confocal Interactive Laser Cytometer; Custom-built single particle tracking and laser optical tweezer; BioRad two-photon microscope; Novascan atomic force microscopy

Patents and Disclosures:

1. Facilitated and enhanced stem cell differentiation and proliferation by non-invasive electrical stimulation (US provisional patent application granted)
2. Use of non-invasive, optimal electrical stimulation to synthesize nitric oxide for increase in bone density, bone remodeling, and for non-systemic vasodilation: an alternative to hormone therapy (US provisional patent application granted)
3. A suturable hybrid superporous hydrogel keratoprosthesis for cornea (13/284,301; US regular patent application under review)
4. Development of a computational model to predict and simulate stem cell differentiation based on biomechanical cellular remodeling (US provisional patent filed)
5. Biomechanical remodeling of adipose tissue for obesity-induced metabolic disorders (US provisional patent filed)
6. Wearable artificial iris (US provisional patent filed)
7. Implantable artificial iris with dynamic response to incident light (US provisional patent filed)
8. Ultra low-cost/portable high-content microscopy system (US provisional patent filed)

Media Exposure:

Shockwave injury to the brain

- CBS 11 in Dallas (Jan 8th, 2016)
- Office of Naval Research (<http://www.onr.navy.mil/Media-Center/Press-Releases/2016/Explosive-Shock-Waves-Brain-Injury.aspx>)
- Daily Beast (<http://www.thedailybeast.com/articles/2016/03/01/how-bomb-blasts-change-soldiers-brains.html>)
- KCBS News Radio, San Francisco (Mar 1st, 2016)

*Research Funding Information:*Expired

- 1) 7/92 to 6/93 Bristol-Myers Squibb Research Fellowship, Harvard Medical School
(\$ 24,000)
- 2) 9/96 to 8/99 The Whitaker Foundation Biomedical Engineering Research Grant
Role: Principal Investigator
"Prediction of optimal parameters for electrotherapy of wound healing"
(\$ 210,000)
- 3) 9/99 to 6/01 The Whitaker Foundation Biomedical Engineering Research Grant
Transitional Funding
Role: Principal Investigator
"Prediction of optimal parameters for electrotherapy of wound healing"
(\$ 69,952)
- 4) 2001 The Whitaker Foundation Conference Award
Role: Principal Investigator (\$ 8,500)
- 5) 2002 The NASA Workshop Award
Role: Principal Investigator (\$ 10,000)
- 6) 2002 The Whitaker Foundation Conference Award
Role: Principal Investigator (\$ 5,000)
- 7) 2003 The Air Force Office of Scientific Research Conference Award
Role: Co-Principal Investigator (\$ 5,000)
- 8) 2003 The Whitaker Foundation Conference Award
Role: Co-Principal Investigator (\$ 4,000)
- 9) 9/03 to 8/04 UIC Campus Research Board
Role: Co-Investigator (PI: Robert Gordon)
"Ultrafast pulsed laser in microsurgery and engineered tissue scaffolds"
(\$ 9,300)
- 10) 9/03 to 8/04 Department of Energy Office of Science
Role: Principal Investigator, with Dean Lawrence Kennedy
"The University of Illinois at Chicago Integrative Bioengineering Institute:
Establishment of the Laboratory for Biomolecular Imaging"
(\$ 481,000)
- 11) 3/02 to 2/05 Inter-campus Research Initiative in Biotechnology, University of Illinois
Role: Co-Investigator (PI: Jeremy Mao)
"Rational design and microfabrication of biomimetic polymers for tissue
engineered skeletal regeneration"
(\$ 450,000)
- 12) 10/04 to 9/05 Defense University Research Instrument Program (DURIP)
Office of Naval Research (N00014-04-1-0805)

- Role: Principal Investigator
"Nanonewton characterization of mechanobiological responses"
(\$ 224,638)
- 13) 1/03 to 12/05 Office of Naval Research Grant (N00014-03-1-0329)
Role: Principal Investigator
"Integrated approaches to determine molecular and subcellular effects in response to non-lethal EM radiation exposure"
(\$ 1,199,637)
- 14) 9/01 to 8/07 National Institutes of Health RO1 Grant (GM060741)
Role: Principal Investigator
"Electromechanical control of cell adhesion and motility"
(\$ 1,167,897)
- 15) 5/07 to 6/08 Eye Bank Association of America
Role: Thesis Advisor (PI: Arpita Kadakia, MD/PhD Student)
"Novel hybrid artificial cornea optimized for 3D cell adhesion"
(\$ 6,087)
- 16) 2008 Office of Naval Research Conference Grant (Gordon Research Conference)
Role: Principal Investigator (\$ 10,000)
- 17) 10/05 to 12/08 Office of Naval Research Grant (N00014-06-1-0100)
Role: Principal Investigator
"Determination of nociceptive molecular effects in engineered tissues in response to active denial type 94-GHz irradiation"
(\$ 1,197,742)
- 18) 7/06 to 6/09 National Institutes of Health R21 Grant (EB006067)
Role: Principal Investigator
"Manipulation of stem cell differentiation by noninvasive electrical stimulus"
(\$ 414,571)
- 19) 4/07 to 5/11 National Institutes of Health RO1 Grant
Role: co-Investigator (PI: Raphael Lee, U. of Chicago)
"Biopolymers for tissue electroporation: The mechanism of membrane sealing"
(\$ 162,652)
- 20) 10/08 to 9/12 Office of Naval Research Grant (N00014-06-1-0100)
Role: Principal Investigator
"Determination of nociceptive molecular effects in engineered tissues in response to active denial type 94-GHz irradiation"
(\$ 1,199,954)

- 21) 9/08 to 8/13 National Institutes of Health R01 Grant (CA113975)
Role: co-Investigator (PI: Sarah Glover, UIC)
"Role of surface roughness in regulating tumor cell behavior"
(\$ 215,875)
- 22) 1/13 to 12/15 Office of Naval Research (N00014-13-1-0404)
Role: PI
"Investigation of microcavitation-induced effects using in vitro models for traumatic brain injury"
(\$ 1,031,000)
- 23) 7/13 to 6/16 Hong Kong Research Grants Council
Role: co-Investigator (PI: Dr. Arthur Mak)
"Mechanics of cell damage and repair in oxidative environments: In-vitro studies"
(HK\$ 500,000)
- 24) 7/11 to 6/16 National Institutes of Health K08 Grant (DE019514)
Role: Mentor (PI: Satish Alapati)
"A novel approach for biomaterials assisted regeneration of pulp-dentin complex"
(\$ 750,000)
- Active
7/12 to 6/17 National Institute of Health R01 grant (HL083298)
Role: co-PI (PI: Dr. Irena Levitan)
"Impact of dyslipidemia on endothelial biomechanics"
(\$ 370,281)
- 1/16 to 12/18 Office of Naval Research (N00014-16-1-2140)
Role: PI
"Identification of physiological mechanisms mediating blast-induced trauma brain injury using tissue engineered biomimetics"
(\$ 1,242,115)

Original Manuscripts:

1. Ferrone FA, Cho MR, Bishop MF. Can a successful mechanism for hemoglobin S gelation predict sickle cell crises? In: Approaches to the therapy of sickle cell anemia. Beuzard Y, Charache S, Galacteros F, Eds. Paris: INSERM, 1986; pp. 53-65.
2. Cho MR. Monomer diffusion and polymer alignment in domains of sickle hemoglobin [Ph.D. dissertation]. Philadelphia, PA: Drexel University, 1990. 225 pp.
3. Cho MR, Ferrone FA. Monomer diffusion into polymer domains in sickle hemoglobin. **Biophys. J.** 1990; 58:1067-1073.
4. Cho MR, Ferrone FA. Monomer diffusion and polymer alignment in domains of sickle hemoglobin. **Biophys. J.** 1992; 63:205-214.
5. Jarolim P, Rubin HL, Liu SC, Cho MR, Brabec V, Derick LH, Yi SJ, Saad ST, Alper S, Brugnara C, Golan DE, Palek J. Duplication of 10 nucleotides in the erythroid band 3 gene in a kindred with hereditary spherocytosis and band 3 protein deficiency (Band 3-Prague). **J. Clin. Invest.** 1994; 93:121-130.
6. Corbett JD, Cho MR, Golan DE. Deoxygenation affects fluorescence photobleaching recovery measurements of red cell membrane protein lateral mobility. **Biophys. J.** 1994; 66:25-30.
7. Cho MR, Thatte HS, Lee RC, Golan DE. Induced redistribution of cell surface receptors by alternating current electric fields. **FASEB J.** 1994; 8:771-776.
8. Liu SC, Palek J, Yi SJ, Nichols PE, Derick LH, Chiou SS, Amato D, Corbett JD, Cho MR, Golan DE. Molecular basis of altered red cell membrane properties in Southeastern Asian Ovalocytosis: Role of the mutant band 3 protein in band 3 oligomerization and retention by the membrane skeleton. **Blood** 1995; 86:349-358.
9. Bridges KR, Barabino GD, Brugnara C, Cho MR, Christoph GW, Dover G, Ewenstein BM, Golan DE, Guttman CRG, Hofrichter J, Mulkern RV, Zhang B, Eaton WA. A multiparameter analysis of sickle erythrocytes in patients undergoing hydroxyurea therapy. **Blood** 1996; 88:4701-4710.
10. Cho MR, Thatte HS, Lee RC, Golan DE. Reorganization of microfilament structure induced by ac electric fields. **FASEB J.** 1996; 10:1552-1558.
11. Yi SY, Liu SC, Derick LH, Murray J, Barker JE, Cho MR, Palek J, Golan DE. Red cell membranes of ankyrin-deficient mice are depleted of band 3 tetramers but contains normal membrane skeletons. **Biochemistry** 1997; 36:9596-9604.
12. Hanspal M, Golan DE, Smockova Y, Yi SJ, Cho MR, Liu SC, Palek J. Temporal synthesis of band 3 oligomers during terminal maturation of mouse erythroblasts. Dimer and tetramers exist in the membrane as preformed stable species. **Blood** 1998; 92:329-338.
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- *106. Paul A, Franz D, Yahya S, Sun S, Cho M. Predictive modeling and biomechanical microengineering of mesenchymal stem cells: A high content screening platform to enhance lineage-specific differentiation. ASME 2013 Summer Bioengineering Conference. Sunriver, OR. (*selected best paper)
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124. Paul A, Danielson KK, Cho M. Mutli-content analysis of 3D image reconstruction to predict the fate of stem cells. The 2014 World Molecular Imaging Congress. Seoul, Korea.
125. Shareef F, Sun S, Kotecha M, Azar D, Cho M. Reversible and photo-activated artificial iris. The 2014 Annual Fall Meeting of the Biomedical Engineering Society. San Antonio, TX.
- *126. Sun S, Kanagaraj J, Cho L, Kang D, Xiao S, Cho M. Engineering in vitro models to elucidate the effect of microcavitation in astrocytes. The 2014 Annual Fall Meeting of the Biomedical Engineering Society. San Antonio, TX. (selected for the Reviewer Choice Award)

127. Paul A, Danielson KK, Cho M. Cytoskeletal fingerprinting of human stem cell populations to reduce heterogeneity. The 2014 Annual Fall Meeting of the Biomedical Engineering Society. San Antonio, TX.
128. Shareef F, Cho M. Design of a photo-responsive artificial iris. The 29th National MD/PhD Student Conference. Keystone, CO. 2014.
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134. Shareef F, Szlachta D, Contreras G, Chen A, Azar D, Cho M. Designing a photo-responsive contact lens. The 2015 Annual Meeting of the Association for Research in Vision and Ophthalmology. Denver, CO.
135. Alkazal M, Zhou C, Zhu W, Cho M, Xiao S. Generating focused pressure wave with ultrasound piezotransducers. IEEE Pulsed Power Conference. Austin, TX. 2015.
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- *137. Kanagaraj J, Chen B, Paul A, Xiao S, Cho M. Preventive effects of Poloxamer P188 in astrocytes exposed to controlled microcavitation. The 2015 Annual Fall Meeting of the Biomedical Engineering Society. Tampa, FL. (selected for the Reviewer Choice Award)
138. Chen B, Sun S, Kanagaraj J, Cho M. Systematic design for prediction of shielding distance of astrocytes impacted from localized collapse of microbubbles. The 2015 Annual Fall Meeting of the Biomedical Engineering Society. Tampa, FL.

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141. Chen B, Liebman C, Cho M. Modulation of calcium dynamics in astrocytes in spatially confined microcavitation zone. The 2016 Annual Fall Meeting of the Biomedical Engineering Society. Minneapolis, MN.
142. Tjahja AJ*, Malla S*, Elias C, Abhyankar V, Cho M. Development of micropatterned cell culture models to elucidate the effect of collapsing microcavitation. The 2016 Annual Fall Meeting of the Biomedical Engineering Society. Minneapolis, MN. (*contributed equally)
143. Xiao S, Yang E, Zhou C, Cho M. Collapse of microbubbles. The 13th International Bioelectrics Symposium. 2016. Rostock, Germany.
144. Inyang E, Abhyankar V, Cho M. Validation of in vitro TBI model for blood brain barrier disruption. The 2017 Annual Fall Meeting of the Biomedical Engineering Society. Phoenix, AZ.
145. Chen B, Sharifi F, McNamara M, Hashemi N, Cho M. Synchronized calcium oscillation in astrocytes in 3D fibrous scaffold. The 2017 Annual Fall Meeting of the Biomedical Engineering Society. Phoenix, AZ.
146. Edward A*, Hoang D*, Toumeh J*, Vu TM*, Liebman C, Cho M. Differential response of β -cells to non-invasive exogenous electrical stimulation. The 2017 Annual Fall Meeting of the Biomedical Engineering Society. Phoenix, AZ. (*These authors contributed equally)
147. Rabbani P, Liebman C, Chen B, Cho M. Adipocyte maturation and nuclear reorganization. The 2017 Annual Fall Meeting of the Biomedical Engineering Society. Phoenix, AZ.