# CURRICULUM VITAE

**Liping Tang, Ph.D.**

College of Engineering Board of Advisors Endowed Professor

Distinguished University Professor

Bioengineering Department

University of Texas at Arlington,

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Arlington, Texas76019-0138

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**ltang@uta.edu**

## EDUCATION

B.S. Biology, 1986, TunghaiUniversity, Taichung, Taiwan

M.S. Marine Biology/Oceanography, 1988, NationalTaiwanUniversity, Taipei, Taiwan

Ph.D. Biomedical Engineering / Chemical Engineering, 1992, University of Minnesota, Minneapolis, Minnesota, USA

## EXPERIENCE

1986-1988 Research Assistant, Department of Marine Biology, Taiwan Fishery Research Institute, Keelong, Taiwan.

1988-1989 Biology Teacher, Fu-An Junior High School, Taipei, Taiwan.

1990-1992 Research Assistant, Department of Pediatrics, University of Minnesota, Minneapolis.

1992-1994 Postdoctoral Associate, Division of Experimental Pathology, Department of Pathology and Laboratory Medicine, Albany Medical College, Albany, New York.

1994-1995 Instructor, Division of Experimental Pathology, Albany Medical College, Albany, New York.

1995-1996 Assistant Professor, Division of Experimental Pathology, Albany Medical College, Albany, New York.

1996-2000 Assistant Professor, Division of Neonatology, Department of Pediatrics, Baylor College of Medicine, Houston, Texas.

2000-2007 Associate Professor, Joint Program in Biomedical Engineering, University of Texas Southwestern Medical Center at Dallas & University of Texas at Arlington, Arlington, Texas.

2005- 2013 Biomaterial & Tissue Engineering track Advisor, Department of Bioengineering, University of Texas at Arlington, Arlington, Texas.

2011- 2013 Graduate Advisor, Department of Bioengineering, University of Texas at Arlington, Arlington, Texas.

2005-2013 Member, Institute for Cancer Research, University of North Texas Health Science Center at Fort Worth, Fort Worth, Texas.

2013- 2015 Interim Chair, Department of Bioengineering, University of Texas at Arlington, Arlington, Texas.

2012 -2016 Elected Member of Steering Committee (2012-2016) of the International College of Fellows, International Union of Society of Biomaterials Science and Engineering.

2009-present Track advisor, *5-year Biochemistry (BS) and Biomedical Engineering (MS) fast track,* Bioengineering Department, University of Texas at Arlington, Arlington, Texas.

2015-present Track advisor, *Biomaterials and Tissue Engineering graduate track,* Bioengineering Department, University of Texas at Arlington, Arlington, Texas.

2007- Present Professor, Department of Bioengineering, Joint Program in Biomedical Engineering, University of Texas at Arlington, Arlington, Texas.

2000-Present Adjunct Professor, Joint Graduate Program in Biomedical Engineering, University of Texas Southwestern Medical Center at Dallas, Dallas, Texas.

2013- Present Visiting Professor, Department of Biomedical Science and Environmental Biology, Kaohsiung Medical University, Kaohsiung, Taiwan.

**COMMITTEESERVICES**

1998-2000 Member, *Patent and Intellectual Property Committee,* Baylor College of Medicine, Houston, Texas.

2002-2003 Director, *Biotechnology thrust,* Chinese Institute of Engineers Dallas/Fort Worth Chapter, Dallas, Texas.

2002-2005 Member, *College of Engineering Ethic Committee,* University of Texas at Arlington, Arlington, Texas.

2004-2005 Chair, *Tissue engineering track faculty search committee,* Biomedical Engineering Department, University of Texas at Arlington, Arlington, Texas. Dr. Kytai Nguyen was hired as a Assistant Professor of Biomedical Engineering.

2004-2005 Member, *College of Engineering Award Committee,* University of Texas at Arlington, Arlington, Texas.

2005-2006 Chair, *Tissue engineering track faculty search committee*, Bioengineering Department, University of Texas at Arlington, Arlington, Texas. Dr. Jian Yang was hired as a Assistant Professor of Bioengineering.

2006-2007 Chair, *Nano Bio cluster hiring committee*,College of Engineering,University of Texas at Arlington, Arlington, Texas. Dr. Young Tae Kim was hired as Assistant Professor of Bioengineering, Dr. Chris Ding was hired as Professor of Computer Science and Engineering, Dr. Hyejin Moon was hired as Assistant Professor of Mechanical and Aerospace Engineering, and Dr. Samir Iqbal was hired as Assistant Professor of Electrical Engineering.

2006-2008 Director, *Bioengineering Department, Ph.D. examination I committee* (BE6194),University of Texas at Arlington, Arlington, Texas.

2006-2009 Member, *College of Engineering Scholarship Committee*, University of Texas at Arlington, Arlington, Texas.

2001-2009 Member, *Radiation Safety Committee*, University of Texas at Arlington, Arlington, Texas,

2009 - 2012 Director, Fort Worth Regional Science and Engineering Fair, Texas ERC 11, Fort Worth, Texas.

2009 - 2013 Board of Trustee Member, Fort Worth Regional Science and Engineering Fair, Texas ERC 11, Fort Worth, Texas.

2009-2010 Chair, *Medical Imaging track faculty search committee*, Bioengineering Department, University of Texas at Arlington, Arlington, Texas. Dr. Baohong Yuan was hired as Assistant Professor of Bioengineering.

2010-2012 Member, *Animal Care Facility Users Committee*, University of Texas at Arlington, Arlington, Texas.

2012-2013 Member, Material Science and Engineering Department's *Tenure and Promotion Committee*, University of Texas at Arlington, Arlington, Texas.

2004-2013 Track advisors, *Biomaterials and Tissue Engineering Track*,Bioengineering Department, University of Texas at Arlington, Arlington, Texas.

2016 Member, *Graduate Student Appointment Task Force*, University of Texas at Arlington, Arlington, Texas.

2001-present Member, *Institutional Animal Care and Use Committee*, University of Texas at Arlington, Arlington, Texas.

2001-present Chair, *Institutional Biosafety Committee*, University of Texas at Arlington, Arlington, Texas.

2016-present Member, *College of Engineering Scholarship Committee*, University of Texas at Arlington, Arlington, Texas.

2016-present Member, *College of Engineering Space Committee*, University of Texas at Arlington, Arlington, Texas.

2016-present Member, *University Tenure and Promotion Committee*, University of Texas at Arlington, Arlington, Texas.

**HONOR AND AWARD**

2001 April, recipient of the**Young Investigator Award** from the Society for Biomaterials.

2002 August, Invited plenary speaker, Biotechnology section,Annual meeting of Chinese Institute of Engineering /USA, Dallas/Fort Worth Chapter.

2002 **Established Investigator Award**, National American Heart Association.

2005 Recipient of the Research Excellent Award in the College of Engineering, University of Texas at Arlington. Arlington, Texas.

2005 August, Invited plenary speaker, Biotechnology section, Annual Meeting of Chinese Institute of Engineering /USA, Dallas/Fort Worth Chapter, Texas.

2006 Recipient of the Research Excellent Award in the College of Engineering, University of Texas at Arlington. Arlington, Texas.

2007 Recipient of the Research Excellent Award in the College of Engineering, University of Texas at Arlington. Arlington, Texas.

2008 Recipient of the**Faculty Development Leave Award**, University of Texas at Arlington.

2008 Research Excellent Award in the College of Engineering, University of Texas at Arlington, Arlington, Texas.

2009 Recipient of thePhi Kappa Phi Recognized Professor, Chapter of The Honor Society of Phi Kappa Phi, University of Texas at Arlington, Arlington, Texas.

2009 Recipient of theResearch Excellent Award in the College of Engineering, University of Texas at Arlington, Arlington, Texas.

2010 Recognized as 2009-10 Siemens Competition Mentor with Certificate of Recognition by Siemens Foundation.

2010 February, recipient of the **College of Engineering Excellence in Research Award** (one award per year), University of Texas at Arlington, Arlington, Texas.

2010 June, appointed a **Visiting Professor** via a **Teaching Excellent Grant**to the College of Life Science, Kaohsiung Medical University, Kaohsiung, Taiwan.

2011 April, recipient of the **Wayne Barcellona Award** for outstanding service as the Fair Director, Fort Worth Regional Science and Engineering Fair, 2011, Texas.

2011 July, Elected as **Fellow of the American Heart Association (FAHA)**by the Council on Basic Cardiovascular Science of National American Heart Association.

2011 Track organizer and session chair for 27th Southern Biomedical Engineering Conference, Arlington, Texas.

2012 February, Elected as **Fellow of the American Institute for Medical and Biological Engineering (AIMBE)** by the College of Fellows Selection Committee at AIMBE.

2012 April, Selected to receive an **Honorable Mention** for the 2011-2012 **Outstanding Academic Advisor award**, University of Texas at Arlington, Arlington, Texas.

2012 April, recipient of the **Outstanding Research Achievement Award at the University of Texas at Arlington**, Arlington, Texas.

2012 Elected as **Eminent Engineer of Tau Beta Pi**bythe Texas Eta Chapter, The Engineering Honor Society, Arlington, Texas.

2012 April, recipient of the **Outstanding Fair Director 2010-2012 Award** for outstanding service as the Fair Director, Fort Worth Regional Science and Engineering Fair, 2012, Texas.

2012 May 8-9th, Keynote Speaker at the Scandinavian Society for Biomaterials meeting in Uppsala, Sweden.

2012 May, Elected as **Fellow of Biomaterials Science and Engineering (FBSE)** by the International Union of Societies for Biomaterial Science and Engineering (IUS-BSE).

2012 June, Elected as a **Steering Committee Member of International College of Fellows – Biomaterials Science and Engineering (ICF-BSE)** on a 4-year term.

2012 May-June, Appointed as an **Invited Chair Professor** by the National Changhua University of Education, Changhua, Taiwan.

2013 April, recipient of the **Outstanding Academic Advisor – Graduate Faculty Advisor at the University of Texas at Arlington**, Arlington, Texas.

2014 January, **Recipient of Research Fund of International Young Scientists** (2014-2015) from the National Natural Science Foundation of China to carry out research at the China Pharmaceutical University, Nanjing, China.

2014 April, inducted into the **UT Arlington Academy of Distinguished Scholars** as **Distinguished University Professor**,the University of Texas at Arlington, Arlington, Texas.

2014 August 25-30, invited as a **Visiting Professor** by the College of Science, Kaohsiung Medical University, Kaohsiung, Taiwan.

2015 Recipient of the**Faculty Development Leave Award**(declined due to schedule conflict), University of Texas at Arlington.

2015 May 23-29, invited as a **Visiting Professor** by the College of Science, Kaohsiung Medical University, Kaohsiung, Taiwan.

2015 **Technology Inventor finalist** for 2015 Tech Titans Gala Award from Metroplex Technology Business Council, Richardson, Texas.

2015 December 7-11, invited as a **Visiting Professor** by the College of Engineering, China Pharmaceutical University, Nanjing, China.

2016 **Technology Inventor finalist** for 2016 Tech Titans Gala Award from Metroplex Technology Business Council, Richardson, Texas.

2016 Awarded with the **College of Engineering Board of Advisors Professorship**, University of Texas at Arlington, Arlington, Texas

**MEMBERSHIPS**

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|---|---|
| 1993 - Present | Society for Biomaterials |
| 1995 - Present | Society of Chinese Bioscientists in America |
| 1993 - Present | American Heart Association |
| 2002 - Present | Chinese Institute of Engineering |
| 2010- Present | Biomedical Engineering Society |
| 2000 - 2010 | American Association for The Advance of Science |
| 2003 - 2010 | Controlled Release Society |
| 2009 - 2013 | Society of Toxicology |
| 2001 - 2012 | The Association for Research in Vision and Ophthalmology |

**CONSULTANTSHIPS**

| | |
|---|---|
| 2008 - Present | *Progenitec, Inc.,* Arlington, Texas (Serve as *Chief Technology Officer*). |
| 2000-Present | *Alcon Laboratory, Inc*., Fort Worth, Texas (Serve as *Consultant* and *Contractor*). |
| 2008 - 2012 | *Covidien, Inc.,* Mansfield, Massachusetts (Serve as *Consultant* and *Contractor*). |
| 2005- 2008 | *Boston Scientific, Urology,* Boston, Massachusetts (Serve as *Consultant* and *Contractor*). |
| 2001-2003 | *Infimed Therapeutics, Inc*., Cambridge, Massachusetts (Serve as *Consultant* and *Contractor*). |
| 1999-2002 | *Globe Medical Products, Inc*., Houston, Texas (Serve as *Consultant*). |
| 1996 - 1999 | *Sherwood Devis&Geck*, Hazelwood, Missouri (Serve as *Consultant* and *Contractor*). |
| 1995- 2002 | *Advanced Surface Technology, Inc*., Billerica, Massachusetts (Serve as *Consultant* and *Contractor*). |
| 1995-1998 | *Bard Urological Division, C. R. Bard, Inc*., Covington, Georgia (Serve as *Consultant* and *Contractor*). |

**GRANT REVIEW ASSIGNMENTS AND PROFESSIONAL SERVICE**

2003 October, **National Institute of Health**, *Surgery and Bioengineering study section,* ad hoc 0000study section member.

2003 April, **National American Heart Association**, *Biotechnology and Bioengineering study section,* regular study section member.

2004 June, **National Institute of Health**, *Biomaterials and Bio-interface study section*, ad hoc study section member.

2004 August, **National Institute of Health**, *Innate Immunity and Inflammation study section*, ad hoc study section member.

2004 April and October, **National American Heart Association**, *Biotechnology and Bioengineering study section*, regular study section member.

2005 February, June and October, **National Institute of Health**, *Biomaterials and Bio-interface study section*, ad hoc study section member.

2005 November, **National Institute of Health**, *Innate Immunity and Inflammation study section*, ad hoc study section member.

2005 April, **National American Heart Association**, *Biotechnology and Bioengineering study section*, regular study section member.

2006 April, **American Heart Association**, *Western 1B, Lung, Respiration, Resuscitation, Immunology& Microbiology, Surgery*, regular study section member.

2006 February and June, **National Institute of Health**, *Biomaterials and Bio-interface study section*, ad hoc study section member.

2006 March, **Collaborative UNTHSC-UTA Joint Institutional Seed Research Program**, grant review committee member.

2007 April, **National American Heart Association**, *Bioengineering and Biotechnology III study section*, regular study section member.

2007 May, **University of California**,*Tobacco-Related Disease Research Program*,ad hoc study section member.

2007 October, **National Institute of Health**, *Nanotechnology study section*, ad hoc study section member.

2008 January, September, **National Institute of Health**, *Nanotechnology study section*, ad hoc study section member.

2008 April, **National American Heart Association**, *Bioengineering and Biotechnology I study section*, regular study section member.

2008 July, October,**National Institute of Health**, *Biomedical Information Science and Technology Initiative (BISTI)-related Small Business Innovative Research study section*, ad hoc study section member.

2008 September, **National Institute of Health**, *Biomaterials and Bio-interface study section*, ad hoc study section member.

2008 September, **National Institute of Health**, *Biomaterials for Tissue Engineering and Gene Delivery*, ad hoc study section member.

2009 January, **National Institute of Health**, *Nanotechnology study section*, ad hoc study section member.

2009 June, October,**National Institute of Health**, *Biomedical Information Science and Technology Initiative (BISTI)-related Small Business Innovative Research study section*, ad hoc study section member.

2010 February, November,**National Institute of Health**, *Biomedical Information Science and Technology Initiative (BISTI)-related Small Business Innovative Research study section*, ad hoc study section member.

2010 April, **University of California**,*Tobacco-Related Disease Research Program*,ad hoc study section member.

2010 November,**National Institute of Health**, *Biomedical Information Science and Technology Initiative (BISTI)-related Small Business Innovative Research study section*, ad hoc study section member.

2010 December,Chemical Sciences (CW) of the **Netherlands Organisation for Scientific Research** (NWO), *ECHO-Project grant*, Invited Grant Reviewer.

2011 February,**National Institute of Health**, *Topic in Biomedical Engineering, BST-M(2)Mstudy section*, ad hoc study section member.

2011 June, November, **National Institute of Health**, *Biomedical Information Science and Technology Initiative (SSMI-Q 11)-related Small Business Innovative Research study section*, ad hoc study section member.

2012 January, **Kentucky Lung Cancer Research Program**, University of Louisville, external reviewer.

2012 March, the **Research Grant Council of Hong Kong** (http://www.ugc.edu.hk/rgc/), Biology & Medicine panel, oversea reviewer.

2012 May, **National Institute of Health**, 2012/08 ZRG1 BCMB-A (51) Rmeeting **(**05/31/2012-05/31/2012),ad hoc study section member.

2012 June, November, **National Institute of Health**, *Biomedical Information Science and Technology Initiative (SSMI-Q 11)-related Small Business Innovative Research study section*, ad hoc study section member.

2012 July, **Portuguese Foundation for Science and Technology**, international peer review member.

2013 January, **Kentucky Lung Cancer Research Program**, University of Louisville, external reviewer.

2013 February, **National Institute of Health**,**National Cancer Institute** Special Emphasis Panel, Research Answers to NCIs Provocative Questions - Group B (RO1/R21), study section member.

2013 March, **National Institute of Health**, *Bioengineering Science and Technologies (BST-B(02))*, ad hoc study section member.

2013 December, **Agency for Science, Research & Technology (A*STAR) in Singapore**. A*STAR, proposal reviewer.

2013 December, **Natural Sciences and Engineering Research Council of Canada**, Discovery Grant proposal, external reviewer.

2014 January, **Kentucky Lung Cancer Research Program**, University of Louisville, external reviewer.

2014 February, **National Institute of Health**, *Transformative Research Award(ZRG1 BCMB-A 51),* mail-in study section member.

2014 February, June**National Institute of Health**, *Small Business: Biomedical sensing, measurement and instrumentation (SBI-Q11),* study section member.

2014 August 27, serve as a Chair of "Tissue Engineering II" section Mentor during **the 3rd International Symposium of Materials on Regenerative Medicine**, Chang Gung University, Tao-Yuan, Taiwan.

2014 October 22, serve as a Mentor during the **BMES Mentoring Program,**Assigned topic – Starting a Lab, taking place at BMES 2014 annual meeting in San Antonio, TX.

2014 October 25, serve as a **Platform Session Chair** of "Adult Stem Cells in Tissue Engineering", BMES 2014 annual meeting in San Antonio, TX .

2015 January, **Kentucky Lung Cancer Research Program**, University of Louisville, external reviewer.

2015 March, **Medical Research Council, United Kingdom**, external grant reviewer.

2015 June, November**National Institute of Health**, *Small Business: Biomedical sensing, measurement and instrumentation (SBI-Q11),* study section member.

2016 January, **Kentucky Lung Cancer Research Program**, University of Louisville, external reviewer.

2016 October, **National American Heart Association**, IRG Basic 1 study section, Grant Reviewer.

2016 November, **Research Councils UK (RCUK)**, external grant reviewer.

2016 October - November, **The Romanian Executive Agency for Higher Education**, Research, Development and Innovation Funding, exploratory Research Project, external grant reviewer.

2016 December, **Natural Sciences and Engineering Research Council of Canada (NSERC**), Discovery Grant proposal, external reviewer.

2017 January, **Kentucky Lung Cancer Research Program**, University of Louisville, external reviewer.

2017 January, **Natural Sciences and Engineering Research Council of Canada**, Discovery Grants program, external reviewer.

2017 February, BUILD EXITO at Portland State University (Portland, Oregon) NIH-funded Building University Infrastructure Leading to Diversity Initiative (BUILD) program, external reviewer.

2017 March,**National Institute of Health**, Special Emphasis Panel/Scientific Review Group *2017/05 ZRG1 DKUS-R (12) B* meeting, study section member.

## EDITORIAL BOARD ASSIGNMENT

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|---|---|
| 2010 - 2014 | Editorial Board, *Journal of Bioterrorism & Biodefense* (OMICS publishing group) |
| 2012 – Present | Associate Editor, *Reviews in Nanoscience and Nanotechnology* (American Scientific Publishers) |
| 2012 – Present | Editorial Board, *Journal of Biochips & Tissue Chips* (OMICS publishing group) |
| 2013 – Present | Editorial Board, *International Journal of Cancer Studies & Research* (Sci Doc Publishers) |
| 2013 – Present | Editorial Board, *Journal of Developmental Biology and Tissue Engineering*(Academic Journals) |
| 2013 – Present | Editorial Board, *TheScientificWorldJOURNAL* (Hindawi Publishing Corp.) |
| 2014 – Present | Editorial Board, *Frontiers in Biomaterials*, a specialty section of Frontiers in Bioengineering and Biotechnology and Materials (Frontiers Open Assess Publisher) |
| 2015 – Present | Editorial Board, *SM Journal of Biomedical Engineering* (SM Online Publishers) |
| 2015 – Present | Editorial Board, *Heliyon* (Elsevier's open access journal covering all scientific disciplines). |
| 2015 – Present | Editorial Board, *Bioactive Materials* (Ke Ai Publishing). |

## PAPER AND ABSTRACT REVIEW ASSIGNMENTS

### Paper reviewer

*ACS Applied Materials & Interfaces, ACS Nano, ActaBiomaterialia, Advanced Materials, Advanced Healthcare Materials, Amino Acids, Analytical Chemistry, Annals of Biomedical Engineering, Annals of Vascular Surgery, Biomaterials*, *Biomacromolecules*, *Biomedical microdevices*, *Biotechnology and Bioengineering*, *Biotechnology Progress*, *Case Reports in Pulmonology, Cells and Materials*, *Cellulose,Chemical Communications, Chemical Research in Toxicology*, *Colloid and Surfaces, B: Biointerfaces*, *Current Drug Delivery*, *Current Medicinal Chemistry*, *Dalton Transactions*, *Drug Discovery Today*, *Frontier in Genetics of Aging*, *Future Medicine*, *International Journal of Biomaterials*, *International Journal of Molecular Sciences, Journal of Biomaterial Science, Polymer Edition*, *Journal of Biomedical Material Research*, *Journal of Biomedical Nanotechnology*, *Journal of Cancer, Journal of Cancer Research and Clinical Oncology,Journal of Chromatography & Separation Techniques*, *Journal of Controlled Release*, *Journal of Developmental Biology and Tissue Engineering*, *Journal of Diabetes Science and Technology*, *Journal of Immunological Methods*, *Journal of Inorganic Biochemistry*, *Journal of Laboratory and Clinical Medicine*, *Journal of Materials Science: Materials in Medicine*, *Journal of Nanomedicine & Nanotechnology*, *Journal of Proteome Research*, *Journal of the Royal Society Interface*, *Langmuir*, *Lasers in Surgery and Medicine*, *Material Science and*

*Engineering C*, *Microscopy Research and Technique*, *Molecular Cancer Therapeutics,Molecular and Cellular Biochemistry*, *Molecular Pharmaceutics,Nanomedicine*, *Nanoscale*, *Nanotoxicology*, *Oncotarget*, *Proteomic Research*, *Pharmaceutical Biology*, *Pharmacology Research*, *PLOS ONE*, *Regenerative Engineering and Translational Medicine,Regenerative Medicine*, *Tissue engineering, Toxicological Sciences, Toxicology and Applied Pharmacology*.

**Book chapter reviewer**

*IConcept Press*,

**Annual meeting abstract reviewer**

*Biomedical Engineering Society, Society for Biomaterials*

**CURRENT LABORATORY TRAINEES (Not including short term interns and trainees)**

**Post-Graduate Researcher**

**Jun Zhou, Ph.D.,**2009 -present, Postdoctoral Research Associate, Research topic: *"Nanosensor for detecting inflammation in vivo"*.

**Cong, Wei, DDS, Ph.D.,**2016 -present, Postdoctoral Research Associate, Research topic: *"Stem cells and tissue regeneration"*.

**PhD students**

**Steve van Noy**, 2013-present, *Research subject: "Mechanism of Intraocular Lens-associated infection."*

**Yi-Hui Huang**, 2014 -present, Biomedical Engineering Doctoral student, Research topic: "*Novel diagnosis and treatment for cartilage injury*".

**Amir Hakamivala**, 2014 -present, Biomedical Engineering Doctoral student, Research topic: "*Fabrication of lymph node construct for studying prostate cancer metastasis*.".

**Ashley Dacy,** 2014 -present, Biomedical Engineering Doctoralstudent, Research project: "*Development of portable imager*".

**Shuxin Li**, 2015 - present, Biomedical Engineering Doctoral student, Research project: "*Development of microscaffold for treating post-traumatic osteoarthritis*.".

**Min-Syuan Huang**, 2016 -present, Biomedical Engineering Doctoralstudent, Research project: to be determined.

**RohiniTheviGuntnurVishwanath,** 2016 -present, Biomedical Engineering Doctoralstudent, Research project: to be determined.

**Paul Renick,** 2016 -present, Biology Doctoralstudent, Research project: "*Development of near infrared imaging probe to detect bacterial infection*" .

**Master students**

**ChukaOkpokwasili**, 2016 -present, Biomedical Engineering Masterstudent, Research project: to be determined.

**ArthiGopalakrishnan**, 2016 -present, Biomedical Engineering MasterStudent, Research project: to be determined.

**Kallur, NamitaManoj Kumar**, 2016 -present, Biomedical Engineering MasterStudent, Research project: "*Development of a Portable Imager*".

**Undergraduate Students**

**Jennifer Dela Pena** 2014 -present, Biochemistry and Biological Chemistry undergraduate student, Member of AURAS (Arlington Undergraduate Research-Based Achievement for STEM) program, Research project: "*Hyaluronic acid microparticle fabrication and characterization*".

**Thao-Mi Vu**, 2015 -2016, UTA undergraduate student – Bioengineering, Member of AURAS (Arlington Undergraduate Research-Based Achievement for STEM) program, Research project: "Study of tissue responses to cancer traps".

**Daisy Alvarado**, 2016 summer, University of Texas El Paso (UTEP) BUILDing SCHOLAR, Youth Activism Fellow-Truth Initiative, Peer Mentor- University Honors Program, B.S. Cellular & Molecular Biochemistry, The University of Texas at El Paso, 2018, Summer Research Program, Research project: "Development of bacteria trap for treating infected wounds".

**Hong-hoa T Vu**, 2016 -present, laboratory volunteer, UTA undergraduate student – Biological Chemistry, Research project: to be determined.

**Mohammad Rashik**, 2016 - present, laboratory volunteer, UTA undergraduate student – Biology and Biochemistry, Research project: to be determined.

**Ali Mohamedi**, 2016 - present, laboratory volunteer, UTA undergraduate student – Biomedical Engineering, Research project: to be determined.

**MENTORED POSTDOCTORAL ASSOCIATES AND VISITING SCIENTISTS**

**Yixin Yao M.D**., 1997-1998, Research topic: "*Influence of protein coatings on cellular responses*", currently employed as Research Associate at Baylor College of Medicine, Houston, Texas.

**Wei-Wu Jiang M.D**., 1997-2000, Research topic: "*Foreign body reactions and device-centered infection"*, currently employed as Research Associate at Baylor College of Medicine, Houston, Texas.

**SuchetaTelang M.D**., 1998-2000, Research topic: "*Effect of NO treatment in neonates with hypoxia"*, currently employed as Assistant Professor at BrownCancerCenter, University of Louisville, Louisville, Kentucky.

**Wei-Bore Tsai Ph.D**., 1998-1999, Research topic: "*Development of controlled release particles for vaccination*", currently employed as Professor at Chemical Engineering Department, NationalTaiwanUniversity, Taipei, Taiwan.

**XianyiCao Ph.D.,** 1999-2000, Research topic: "*Albumin-affinity biomimetic surface*", currently employed as Research Associate at MD Anderson Cancer Center, Houston, Texas.

**Wen-Jing Hu Ph.D**., 1997-1999, Research topic: "*Molecular mechanism of foreign body reactions*", currently employed asthe President of ProgenitecInc, Arlington, Texas.

**Xiu-Hwa GaoM.D**., 2000, Research topic: "*Molecular mechanisms of device-centered infection"*, currently employed as Research Associate at Baylor College of Medicine, Houston, Texas.

**Tian Lin Xiao M.D. Ph.D**., 2000-2001, Research topic: "*Mechanism of posterior capsular opacification to Intraocular lens"*, currently employed as Associate Professor at Sheng Yao Medical School, China.

**Shih-Horng Su Ph.D**., 2000-2001, Research topic: "*Immune responses to degradable polymers*", currently employed asthe President of DuNingIncorp., Irvine, California.

**ShutongCao M.D**., 2000-2001, Research topic: "*Tissue responses to biomaterial implants"*, currently employed as Research Scientist at Alcon Laboratory Inc, Fort Worth, Texas.

**Kytai Nguyen Ph.D**., 2002-2003, Research topic: "*Hydrogel nanoparticles drug delivery*", currently employed as Associate Professor at Bioengineering Department, Arlington, Texas.

**Hong Weng M.D.,** 2002-2004& 2009-2014, Research topic: "*Tissue responses to hydrogel particles"*, currently employed asResearch Associate at University of Texas at Arlington, Arlington, Texas

**Sheng Zhang M.D., Ph.D**., 2002-2004, Research topic: "*Novel stem cell therapy and differentiation cocktails*", currently employed as Research Associate at Baylor College of Medicine, Houston, Texas.

**Lanxiao Wu M.D., Ph.D**., 2005-2008, Research topic: "*Development of animal model to study molecular mechanism of cancer metastasis"*, currently leading a startup clinical diagnosis company at Beijing, China.

**Ling Zou M.D.,** 2004-2009, Research topic: "*Development of controlled release devices for treating eye diseases"*, currently employed as Attending Physician and Associate Professor at ShenZhenEyeHospital, ShenZhen, China.

**Jinghui Shen M.D.,** 2004-2013, Postdoctoral Research Associate, Research topic: "Isolation and characterization of peritoneal stem cells",currently employed as a Laboratory Manager at the University of Texas Southwestern Medical Center at Dallas, Texas.

**Ashwin NairPh.D.**, 2011-2013, Postdoctoral Research Associate, *Research subject: "Functionalized scaffold for stem cell tissue engineering."*currently employed as a Senior Lecturer at the Bioengineering Department of UTA, Arlington, Texas.

**MENTOR/MENTORED Ph.D. STUDENTS**

**Brett Thomes Ph.D**., October 2006, graduated with Ph.D. in Biomedical Engineering,*Thesis title: "Novel intraocular drug delivery system for the prevention of posterior capsule opacification"***,** currently working as a Director at Alcon Laboratory, Inc, Fort Worth, Texas.

**Paul ThevenotPh.D.** in Biomedical Engineering, 2010, *Thesis title: "Mechanisms of biomaterial mediated fibrotic reactions and strategies to improve tissue reactions to biomaterial implants."*currently a Postdoctoral Associate at LouisianaStateUniversityMedical School, New Orleans, Louisiana.

**Cheng-Yu KoPh.D.** in Biomedical Engineering, 2010, *Thesis title*: *"Novel animal model and in vivo imaging system to study inflammatory responses-mediated cancer metastasis"*,currently working atAnaSpec, Eurogentec Group, San Jose, California.

**Ashwin Nair Ph.D**. in Biomedical Engineering, 2010, *Thesis title "Strategies to recruit and differentiate autologous stem cells for regenerative tissue engineering*",currently is a Senior Lecturer at the Bioengineering Department of UTA, Arlington, Texas.

**Yi-Ting TsaiPh.D**. in Biomedical Engineering, 2013, *Thesis title "Development of non-invasive methods for imaging inflammatory responses*",currentlyworking atAltek Corp., HsinTsu, Taiwan.

**David BakerPh.D**. in Biomedical Engineering, 2013, *Thesis title "The pivotal role of fibrocytes on foreign body reactions",* currently working as R&D Engineering Consultant at Enhanced Compliance Inc., Boston, Massachusetts.

**Vasant Patrick Kearney Ph.D.** in Biomedical Engineering, 2016, *Thesis title "Computer vision algorithm development and biomedical application",* currently as Medical Physicists at the University of California at San Francisco, SanFrancisco, CA.

**MENTORED MASTER STUDENTS**

**Jasmine Saba M.S., P.E.** in Biomedical Engineering, 2002, *Project title: "Production of fibrin gel tissue scaffold*", currently working at MedTrials, Inc., Dallas, Texas.

**Ammar Adam M.S**. in Biomedical Engineering, 2002, *Project title: "Histological evaluation of foreign body reactions"*, currently working at University of Texas Southwestern Medical Center, Dallas, Texas.

**Miriam Moctezuma M.S**. in Biomedical Engineering, 2003, *Project title: "Influence of flow rates on cellular particle uptake",* currently working at LifeCell Corporation, Branchburg, New Jersey.

**DharaPurohit M.S.,** in Biomedical Engineering, 2004, *Project title: "Wireless system to monitor tissue responses to medical devices"*, currently working at the Department of Biomedical Engineering, University of Washington, Seattle, Washington.

**Kajal Shukla M.S**. in Biomedical Engineering, 2004, *Project title: "Hydrogel nanoparticles for targeting drug delivery"*, currently working at the Retina Foundation of the Southwest, Dallas, Texas.

**Aravindha Lakshmi Krishnaswamy M.S.** in Biomedical Engineering, 2004, *Project title: "Production and modifications of hydrogel nanoparticles"*, currently working at a research laboratory, Seattle, Washington.

**Dhyani K Jayasundara M.S**. in Chemistry, 2004, *Project title: "Surface modification and protein conjugation of nanoparticles"*, current working at the University of Rochester, Rochester, New York.

**Nishat Mohammed Shaikh M.S.** in Biomedical Engineering, 2004, *Project title: "Microarray analyses of tissue responses to biomaterial implants"*, currently working in a biomedical company in California.

**Deena Thomas M.S**. in Biomedical Engineering, 2004, *Project title: "Cryopreservation of stem cells"*, currently working at University of Texas Southwestern Medical Center, Dallas, Texas.

**Anju Koshy M.S**. in Biomedical Engineering, 2005. *Thesis title "Foreign body reactions-mediated stem cell recruitment"*, currently working at Kuwait Cancer Institute, Kuwait.

**Swaroopa S. Vaidya M.S**. in Biomedical Engineering, 2005, *Project title: "Novel method to manufacture degradable scaffold"*, currently working as Research Coordinator at the University of Medicine and Dentistry of New Jersey, New Jersey.

**GeethaMerkala M.S**. in Biomedical Engineering, 2006, *Project title: "Cell culture condition and growth rate"*, currently working at Caliper Life Science, Hopkinton, Maryland.

**Vijay Rajaram M.S**. in Biomedical Engineering, 2006, *Project title: "3D animation of drug delivery in eye"*, currently working as Programmer Analyst at ISR at Minneapolis, Minnesota.

**Shwetha Kamath M.S**. in Biomedical Engineering, 2006,*Thesis title "Influence of polymer surface chemistry on the recruitment of stem cells in mice"***,** currently is working as Laboratory Manager at Center for Developmental Biology, University of Texas Southwestern Medical Center, Dallas, Texas.

**Harikrishnan Balachandran M.S.** in Biomedical Engineering, 2006,*Thesis title: "Optimization of methods for in-vitro expansion and cryopreservation of mammalian stem cells"***,** currently working as Senior Research Associate at Beth Israel Deaconess Medical Center, Boston, Massachusetts.

**Ashwin Nair M.S**. in Biomedical Engineering, 2006, *Thesis title "Novel preparation of polymeric scaffolds for tissue engineering uses phase separation with protein microbubble*",currently as Senior Lecturer at UTA, Arlington, Texas

**Paul ThevenotM.S**. in Biomedical Engineering, 2007, *Thesis title: "Functionalized nanoparticles for selective killing of cancer cells*", currently a Postdoctoral Associate at LouisianaStateUniversityMedical School, New Orleans, Louisiana.

**ParisaLotfiM.S**. in Biomedical Engineering, 2007, *Thesis title: "Foreign body reactions to neural implants in brain*", currently is a Postdoctoral Research Associate at Texas Children's Hospital, Houston, Texas.

**Hironori TakaiM.S**. in Biomedical Engineering, 2008, *Project title:"Novel 3D model for studying nanoparticle distribution in eyes*.", currently working as R&D Engineer at Microvention, Tustin, California.

**Syed SohaebuddinM.S**. in Biomedical Engineering, 2009, *Thesistitle:"Mechanism of nanoparticle-mediated cell death*."currently working as Consultant RF Engineer, Ericsson, Dallas, Texas.

**Manwu SunM.S**. in Biomedical Engineering, 2010, *Thesis title: "In vivo tracking of mesenchymal stem cell recruitment to tissue scaffolds."* currently working as a Research Assistant at National Health Institute at Taiwan.

**Shiuli Pujari M.S**., in Biomedical Engineering,2011, *Project title*: *"Effect of surface topography on stem cell differentiation"*current a Ph.D. student at the University of Uppsala, Uppsala, Sweden.

**Farhana Hussain M.S**., in Biomedical Engineering, 2011, *Project title:"Quantitative analysis of drug release from PLLA scaffolds"*, currently working as a NOC/TAC Engineer at Samsung, Richardson, Texas.

**RohitKode M.S**., in Biomedical Engineering, 2011, *Project title:"Protein microbubbles based tissue engineering scaffold fabrication technique for release of multiple agents"*, currently looking for an industrial position.

**Krishna Shah M.S.** in Biomedical Engineering, 2012*Thesis title: "Development of gelatin microbubble based PLGA scaffold for tissue engineering."*,currently working as a Research Assistant at MD Anderson Cancer Research Center, Houston, Texas.

**Steve van Noy M.B.A.**, M.S. in Biomedical Engineering, 2013, *Research subject: "Surface modification to improve the biocompatibility of intraocular lens."*, currently working as the Vice President of Surgical IOL Development at Alcon Laboratory, Fort Worth, Texas.

**Irsalan Cockerill** 2015 summer, Biochemistry and Biological Chemistry undergraduate student, Research project: "*Hyaluronic acid miscroparticle fabrication and characterization*".

**RohitWarrier,** 2014 - 2015, Biomedical Engineering master student, Research project: "*Nanoparticle toxicity*".

**Alexander Terry,** 2015, Biomedical Engineering Masterstudent, Research project: "*Evaluation of the nanoparticle toxicity and cell compatibility*".

**Qinglan Yang**, 2015-2016, Biomedical Engineering Graduate student, Research project: "*Development of lymph node-mimetic cancer trap*".

**Charles Heath Wallace**, 2016, Biomedical Engineering MasterStudent, Research project: "Development of cancer trap for metastatic prostate cancer".

**MENTORED UNDERGRADUATE STUDENTS**

**Kaitlen Patty** was supervised byDavid Baker via **I Engage Program**, 2012**,** University of Texas at Arlington, Arlington, Texas.

**Linda Dao,** McNair Research Intern,Summer 2013, **McNair Scholar Program**, University of Texas at Arlington, Arlington, Texas.

**Valene Garr,** McNair Research Intern,Summer 2014, **McNair Scholar Program**, University of Texas at Arlington, Arlington, Texas.

**Jonathan Walters,** Summer Intern 2015, Texas A&M University, College Station, Texas.

**Jennifer Wang,** Summer Intern 2015, University of California, Los Angeles, California.

**Jordan D Benavides,** 2015-2016, UTA undergraduate student – Bioengineering, Senior Design Project – Intraocular lens improvement.

**Dong Van Doan,** 2015-2016, UTA undergraduate student – Bioengineering, Senior Design Project – Intraocular lens improvement.

**Jazhiel Alvarado,** 2015-2016, UTA undergraduate student – Bioengineering, Senior Design Project – Intraocular lens improvement.

**David Troung,** 2015-2016, UTA undergraduate student – Bioengineering, Senior Design Project – Intraocular lens improvement.

**David J Aroca,** 2015-2016, UTA undergraduate student – Bioengineering, Senior Design Project – Artificial lymph node.

**Carlos Mauricio Chicas,** 2015-2016, UTA undergraduate student – Bioengineering, Senior Design Project – Artificial lymph node.

**Jose De Jesus Castro,** 2015-2016, UTA undergraduate student – Bioengineering, Senior Design Project – Artificial lymph node.

**Hong-Hoa T Vu,** 2016-presnet, UTA undergraduate student – Bioengineering, project to be determined.

**MENTORED HIGH SCHOOL STUDENTS**

**Peter Hu,** a seniorfrom Texas Academy of Mathematics and Science, 2009-2010, *Project title: "Novel thermogelling dispersions of polymer nanoparticles for controlled drug delivery",* currently an undergraduate student at Stanford University, Stanford, CA.

**Ramon Li,** a seniorfrom Texas Academy of Mathematics and Science, 2010-2011, *Project title: "Formation, characterization and release kinetics of novel protein microbubble polymeric scaffold for tissue engineering",* currently an undergraduate student at Cornell University, Ithaca, NY.

**Lauren Q Thai,** a seniorfrom Texas Academy of Mathematics and Science, 2010, *Project title: "Novel transmigration model to develop a cancer metastasis trap",* currently an undergraduate studentat University of Missouri-Kansas City School of Medicine, Kansas City, MO.

**Kristen Abram** a seniorfrom Lamar High School attending, 2014, *Project title: "Novel imaging probes for detecting cartilage tissue injury",* currently an undergraduate studentat Vanderbilt University, Nashville, TN.

**AWARDS WON BY MENTORED STUDENTS**

**2009 Ashwin Nair,**President's Award for Best Oral Presentation, The Annual Celebration of Excellence by Students, Title: "A novel porous scaffold for bioactive biomolecule delivery", University of Texas at Arlington.

**Peter Hu,** Second PlaceBest Poster Award, Fort Worth Regional Science and Engineering Fair, Advanced to International Intel Science and Engineering Fair.

**2010 Ashwin Nair,**Provost's Award for Best Poster Presentation, The Annual Celebration of Excellence by Students 2010, Title: "Biomaterial implant mediated autologous stem cell recruitment and differentiation." , University of Texas at Arlington.

**Peter Hu,** won $10,000 Scholarship, the 6$^{th}$ place winner of the National Siemens Competition in Math, Science and Technology 2010.

**Peter Hu,** Intel Science Talent Search Finalist (40 finalists in US), 2010.

**Peter Hu,** First Place Best Poster Award, Fort Worth Regional Science and Engineering Fair, Advanced to International Intel Science and Engineering Fair 2010, Saint Jose, CA.

**Peter Hu,** Third Award ($1,000) in the category of Engineering: Materials and Bioengineering in theInternational Intel Science and Engineering Fair 2010. He also won two special awards, $500 US savings bond from the AVASC Foundation for a Second Award and $1,000 from the Lemelson Foundation.

**2011 Jun Zhou**, STAR (Student Travel Achievement Recognition) with $250 check for travel and certificate of recognition from the Society for Biomaterials 2011 Annual Meeting, Orlando, FL. Presentation title "Noninvasive monitoring of implant-mediated inflammatory responses by detecting reactive oxygen species in vivo."

**Shiuli Pujari, M.S**., awarded with one-year Fulbright International Scholarship to carry out one year research at the University of Uppsala, Uppsala, Sweden.

**2013 David Baker**, STAR (Student Travel Achievement Recognition) with $250 check for travel and certificate of recognition from the Society for Biomaterials 2013 Annual Meeting, Boston, Massachusetts. Presentation title "Development of novel imaging probes for the detection of polarized macrophage subsets during foreign body reactions.".

**David Baker**, Graduate School Dissertation Fellowship Award with $6,726 stipend, Dissertation title: "Development of novel strategies to alter fibrocyte mediated tissue responses".

**David Baker**,Elected as Fellow ofGraduate Assistance in Areas of National Need (GAANN) supported by the Department of Education.

**2014-2016Vasant Kearney**, Elected as Fellow ofGraduate Assistance in Areas of National Need (GAANN) supported by the Department of Education.

**2015-2016Ashley Dacy,** Elected as Fellow ofGraduate Assistance in Areas of National Need (GAANN) supported by the Department of Education.

**2016 Vasant Kearney**, Graduate School Dissertation Fellowship Award with $9,700stipend, Dissertation title: "Development of algorism-based imaging tools for drug delivery and cancer research.".

**SERVED AS THESIS COMMITTEE MEMBER**

**Angela FayannBoreneman M.S.** in Biomedical Engineering, 2002, thesis title: *"Release kinetics: Degradation rates: mechanical properties of PLLA and PLGA wet extruded fibers."*

**Manish Dalwani M.S.** in Biomedical Engineering, 2002, thesis title: *"Automated Interpretation of functional brain images"*.

**RajeshkumarDhamodharasamy M.S.** in Biomedical Engineering, 2002, thesis title: "*Automation of peptide array"*.

**Robert Balog Ph.D**. in Biomedical Engineering, 2003, thesis title: "*Digital optical chemistry (DOC) a novel method for DNA oligonucleotide microarray fabrication*".

**Arthur Braden Ph.D.** in Biomedical Engineering, 2003, thesis title: "*Synthesis of novel gene therapy carrier*".

**MridulaVishwanath M.S.** in Biomedical Engineering, 2003, thesis title: "*Role of RHO and Rac in the mechanical response of corneal fibroblasts to changes in local matrix stress*".

**Riyaz Mehta M.S.** in Biomedical Engineering, 2004, thesis title: "*Flow cytometry based analysis of CD8+ T-cell functions in multiple sclerosis*".

**Brent Crow Ph.D**. in Biomedical Engineering, 2004, thesis title: "*Development and assay of a novel hydrogel-cored PLLA fiber for delivery of neurotrophins*".

**AnushaSricharanM.S.** in Biomedical Engineering, 2006,thesis title: "*Phenotypic difference in the behavior of immortalized human bronchial epithelial cells in three dimensional culture systems*".

**Manan Goel M.S.** in Biomedical Engineering, 2006, thesis title:"*Application of NIR CCD imager to monitor hemodynamic changes in prostate tumor and efficacy of chemotherapy*".

**AtulSathe M.S.** in Biomedical Engineering, 2006, thesis title:*"Anti-immune therapy for organ transplantation"*.

**Ebrahim BengaliM.S.** in Biomedical Engineering, 2006, thesis title: *"Design and test of a three-dimensional in-vitro assay for the segregation of nociceptive and proprioceptive sensory axons"*.

**MayurUttarwar M.S.** in Biomedical Engineering, 2006, thesis title: "*Novel techniques of fabricating porous biodegradable polymer scaffolds for sustaining drug release*".

**Asif Rizwan M.S.** in Biomedical Engineering, 2006,thesis title: "*Miniature optical coherence tomography probe*".

**Nicole L Conaway Ph.D.** inBiology, 2007, thesis topic: "*Novel mast cell membrane receptors*".

**Kim ShabiPh.D.** inBiology, 2007, thesis topic: "*Therapeutic efficacy of cancer and virus killing polymers"*.

**Dhiman Bhattacharyya Ph.D.** inChemistry and Biochemistry, 2008, thesis title: *"Material properties and host responses"*.

**Danielle Miller Ph.D.** in Biomedical Engineering, 2008, thesis topic: *"3D patterning of collagen tissue scaffold"*.

**Areum Kim, Ph.D.** inBiomedical Engineering, 2008, thesis title: "Corneal keratinocytes in responding to biomechanical stimulation".

**Yi Guo, M.S.** inBiomedical Engineering, 2008, thesis title: "Development of iron oxide based nanoparticles as dual-modality imaging probes".

**Peiying Liu, Ph.D**., inBiomedical Engineering, 2008, thesis title: "Evaluating bone by ultrasound".

**Yevgeniya Le, Ph.D**., in Pathology and Laboratory Medicine, 2009, thesis title: "Immunocamouflage: The biophysical and biological basis of immunoprotection by grafted methoxypoly(ethylene glycol)" invited as external reviewer by ***The University of British Columbia***, Vancouver, Canada.

**Pavitra Chakravarty, Ph.D**., inBiomedical Engineering, 2010, thesis title: "Targeted delivery of carbon nanotubes to cancer cells".

**Hao Xu, M.D., Ph.D**., inBiomedical Engineering, 2010, thesis title: "Enhanced endothelialization on surface modified poly (L-lactic acid)".

**Soujanya Kona, Ph.D**., inBiomedical Engineering, 2010, thesis title: "Multi-ligand nanoparticles for targeted drug delivery to the vascular endothelium".

**ZarnaBhavsar, M.S**., inBiomedical Engineering, 2010, thesis title: "Development of magnetic-based core-shell nanoparticles for drug delivery application in melanoma skin cancer".

**Parvathi Nair, M.S**., inBiomedical Engineering, 2010, thesis title: "A novel injectable porous hydrogel composite scaffold for bone tissue engineering".

**Swarup Narayan Dash, B.S**.,**Ph.D.** exam II,2011, thesis title: "Pleiotrophin mediated nerve regeneration across long gap peripheral nerve defects and spinal cord contusion injury".

**Allison Carroll Case, Ph.D**., inBiomedical Engineering, 2012, thesis title: "A novel platform to generate synthetic vaccine candidates".

**Chengxin Zhou, Ph.D.** exam II,2012, thesis title: "Novel 3-D culture models for investigating the migratory mechanics of both activated and quiescent corneal keratocytes".

**Swarup Narayan Dash, Ph.D**. inBiomedical Engineering, 2012, thesis title: "Pleiotrophin enhance nerve regeneration across long gap peripheral nerve defect.".

**Sonia Santimano, M.S.**, inBiomedical Engineering, 2012, thesis title: "Development of magnetic based multi-layer microparticles for stem cell isolation, enrichment and detachment.".

**AniketSharadraoWadajkar, Ph.D**. inBiomedical Engineering, 2012, thesis title: "Design and application of magnetic-based theranostic nanoparticles for prostate cancer management.".

**Alicia Prieto Langarica, Ph.D**. inMathematics, 2012, thesis title: "From Discrete to continuous models of cell movement: An application to medical implants.".

**Yi Zhang, Ph.D**. inBiomedical Engineering, 2012, thesis title: "Methodology of citric acid based functional biomaterial development and application.".

**Lee-Chun Su**, **M.S.** in Biomedical Engineering, 2012, thesis title: "Antimicrobial properties of citric acid based polymers.".

**SaritaBhetawal**, **M.S.** in Biomedical Engineering, 2012, thesis title: "Evaluation of tissue responses from the regenerative multielectrode array (REMI) implant using ATF-3 and cJUN.".

**Princy K Prasad**, **M.S.** in Biomedical Engineering, 2012, thesis title: "Study of a log gap nerve injury in a rabbit common peroneal nerve model.".

**MohammadrezaMehdizadeh**,**Ph.D.** in Material Science and Engineering,2012, thesis title: "Syntheses, characterization, and applications of injectable citrate-based mussel-inspired biodegradable adhesive (iCMBA) polymers and hydrogels.".

**Srikanth Vasudevan**,**Ph.D.** in Biomedical Engineering,2013, thesis title: "Long gap peripheral nerve reconstruction using decelluarized nerve grafts.".

**Chengxin Zhou**,**Ph.D.** in Biomedical Engineering,2013, thesis title: "The functional roles of RHO-kinase and matrix metalloproteinases in regulating corneal stromal cell mechanics in 3-D collagen matrices.".

**HomaHomayoni**,**Ph.D.** in Biomedical Engineering,2013, thesis title: "Protoporphysin IX (PPIX)-conjugated self-lighting nanoparticles for photodynamic therapy: synthesis and characterization.".

**JyothiUnnikrishna Menon**,**Ph.D.** in Biomedical Engineering,2014, thesis title: "Polymeric nano/microparticles for management of pulmonary diseases.".

**OlumideAruwajoye**,**Ph.D.** in Material Science & Engineering,2015, thesis title: "Material changes of bone following ischemia of the immature femoral head.".

**PrimanaPunnakitikashem**,Ph.D. Exam II, Bioengineering,2015, thesis title: "Nanostructured material for tissue repair & tissue regeneration.".

## SCHOLARLY AND CREATIVE ACTIVITIES

## INVITED SEMINARS AND LECTURES

1994, March, Presentation title: "*Complement activation*", Department of Pathology and Laboratory Medicine, **Albany Medical College**, Albany, New York.

1997, April, Presentation title: "*Inflammatory responses to biomaterial implants.*", The Learner Research Institute, **Cleveland Clinic Foundation**, Cleveland, Ohio.

1998, March, Presentation title: "*Molecular mechanisms of foreign body responses.*", College of Engineering / School of Medicine, **University of Washington**, Seattle, Washington.

1998, September, Presentation title: "*Molecular mechanisms of biomaterial-mediated tissue responses.*", Center for Biomaterials,**University of Connecticut Health Center**, Farmington, Connecticut.

1998, November, Presentation title: "*Molecular mechanisms of biomaterial-mediated phagocyte responses.*", Division of Leukocyte Biology, **Baylor College of Medicine**, Houston, Texas.

1998, December, Presentation title: "*Mast cells mediate acute inflammatory responses to implanted biomaterial.*", Pulmonary and Critical Care Laboratories, **Houston VA Medical Center**, Houston, Texas.

1999, February, Presentation title: "*Molecular mechanisms of tissue responses to biomaterial implants.*", Department of Biomedical Engineering, **Northwestern University**, Evanston, Illinois.

1999, November, Presentation title: "*Foreign body reaction and device-centered infection.*", Division of Leukocyte Biology, **Baylor College of Medicine**, Houston, Texas.

1999, November, Presentation title: "*Molecular mechanisms of tissue responses to biomaterialimplants.*", Biomedical Engineering program, **University of Texas at Arlington**, Arlington, Texas.

2000, January, Presentation title: "*Molecular mechanisms of biomaterial-mediated tissue responses.*",**Children Hospital Oakland Research Institute**, Oakland, California.

2000, March, Presentation title: "*Phagocyte: surface interaction.*"**Pittsburgh Conference**.", "*In vivo* sampling. Biocompatibility issues" section, New Orleans, Louisiana.

2000, April, Presentation title: "*Foreign body reaction and device-centered infection.*",Center of Immunology and Microbiology, **Albany MedicalCollege**, Albany, New York.

2000, October, Presentation title: "*Artificial Blood.*", Biomedical Engineering program. **University of Texas at Arlington**, Arlington, Texas.

2001, March 2, Presentation title: "*Albumin-affinity coating for improving biocompatibility.*", Department of Materials Science and Engineering, **University of Texas at Arlington**, Arlington, Texas.

2001, August 14, Presentation title: "*Molecular mechanisms of inflammatory responses to peritoneal implants.*",**Infimed Therapeutics, Inc**., Cambridge, Massachusetts.

2001, December 10, Presentation title: "*Inflammatory and fibrotic reactions to implanted biomaterials: mechanisms and implications*.", Pathology Department, **University of Linkoping**, Linkoping, Sweden.

2002, February 1, Presentation title: "*Biocompatibility and sensibility of implantable sensor*.", Automation and Robotics Research Institute, **University of Texas at Arlington**, Fort Worth, TX.

2002, August 24, Presentation title: "*Dog skin plasters and drug controlled deliver devices*.",**Convention for Chinese Institute of Engineers (CIE/USA)**, Dallas, TX.

2003, May 27, Presentation title: "*The molecular mechanism of foreign body reactions: The implications to sensor development*.",**Molecular Design of Chemical Systems (MODECS) meeting**, Novo Nordisk, Hilleroed, Denmark.

2003, July 21, Presentation title: "*Biomaterial-mediated inflammation and device-centered infection: Is there a connection*?",**Gordon Research Conference**, Biomaterials: Biocompatibility/Tissue Engineering. Holderness School, Plymouth, New Hampshire.

2003, August 28, Presentation title: "*Foreign body reactions - Natural responses to unnatural materials*. ", **2003University of Washington Engineered Biomaterials (UWEB) Summer Scientific Symposium**, Seattle, Washington.

2004, February 5, Presentation title: "*Foreign body reactions and stem cell recruitment – Is there any connection*?",**University of Louisville**, **Brown Cancer Center**, Louisville, Kentucky.

2004, April 16, Presentation title" *Novel inflammation-recruited pluripotent stem cells*.", **Texas Back Institute**, Plano, Texas.

2004, April 16, Presentation title: "*UTA capabilities and facilities for industrial joint ventures*.",**Alcon Laboratories, Inc.,**Fort Worth, Texas.

2004, May 11, Presentation title: "*Novel peritoneal stem cells*.", Department of Internal Medicine, **University of Texas Southwestern Medical Center**, Dallas, Texas.

2005, May 27, Presentation title: "*Engineered biomaterials for tissue engineering and stem cell therapies*.", Department of Biology, **National Changhua University of Education**, Changhua, Taiwan.

2005, August 20, Presentation title: "*The current status and future promise of adult stem cell therapies*. ", **Convention for Chinese Institute of Engineers (CIE/USA),**Dallas, Texas.

2005, October 6, Presentation title: "*Development of drug delivery nanoparticles*.", Department of Cell Biology and Genetics, **University of North Texas Health Science Center at Fort Worth**, Fort Worth, Texas.

2005, November 1, Presentation title: "*Stem cell therapy: promise and problems*.", Master of Arts in Interdisciplinary Science program, **University of Texas at Arlington,** Arlington, Texas.

2005, December 9, Presentation title: "*Molecular mechanisms of foreign body reactions*."**UMKC-CRISP seminar, University of Missouri at Kansas City**, Kansas City, Missouri.

2006, February 2, Presentation title: "*Development of tissue-targeted nanoparticles for treatment of eye diseases*.",**JSPS Symposium on Nanoscale Materials for optoelectronics and biotechnology at University of North Texas**, Denton, Texas.

2006, April 10, Presentation title: "*Nanoparticles for drug delivery*.",BioNano meeting at **University of Texas at Dallas**, Dallas, Texas.

2006, July 12, Presentation title: "*Controlled drug delivery: promise and problems*.",**Mid-Cities Technical Club of Arlington monthly seminar**, Arlington, Texas.

2006, September 7, Presentation title: "*Inflammation and cancer cell metastasis: Is there any connection?*", **University of Louisville,** Molecular Targets group,BrownCancerCenter, Louisville, Kentucky

2006, December13, Presentation title: "*Mechanism-based approaches for alteringfibrotic tissue responses to peritoneal implants*", **Boston Scientific In.,**Urology Division,Boston, Massachusetts.

2007, December13,Presentation title: "*Stem cells: aging: osteoporosis*", **University of Louisville,** Molecular Targets group, Brown Cancer Center, Louisville, Kentucky.

2008, January 30, Presentation title: "*Potential role of inflammation on cancer cell metastasis*", **University of North Texas Health Science Center,** Institute for Cancer & Blood Disorder, Fort Worth, Texas.

2008, February 20, Presentation title: "*Biomaterial-mediated inflammation and device-centered infection: Is there a connection*?", **Universityof Texas Southwest Medical Center,** Surgery Research Conference, Dallas, Texas.

2008, April 9, Presentation title: "*Hyaluronic acid nanoparticles for retinal drug delivery*", Drug Delivery group meeting, **Alcon Laboratories, Inc.,**Fort Worth, Texas.

2008, May9, Presentation title: "*Intraocular lens and cataract surgery*", **Northstar School,** Arlington, Texas.

2009, March 4, Presentation title: "*Potential role of inflammatory cytokines and T lymphocyteson cancer cell metastasis*", **University of North Texas Health Science Center,** Institute for Cancer Grand Round, Fort Worth, Texas.

2009, September 18, Presentation title: "*Novel in situ stem cell tissue engineering –Turing old foes into new friends*", **University of Texas at Arlington and University of Texas Southwest Medical Center at Dallas,** Bioengineering Videoconference Seminar,Arlington, Texas.

2009, October 7, Presentation title: "*Emerging trends of nanotechnology in biomedical research*", **University of Texas at Arlington,** Physics Department Colloquium, Arlington, Texas.

2010, April 30,Laboratory tour and Presentation title: "*New developments in tissue Engineering and Regenerative Medicine*", Capital Staffers Visit, **University of Texas at Arlington,** Arlington, Texas.

2010, June 2-4, Distinguished Speaker Series, given 3 separate lectures hosted by College of Life Science, **Kaohsiung Medical University**, Kaohsiung, Taiwan.

June 2, Presentation title: "*Stem cell culture and tissue engineering*", **Faculty of Biomedical Science and Environment Biology.**

June 3, Presentation title: "*Nanodevices for disease diagnosis and drug delivery*", **Faculty of Medicinal and Applied Chemitry.**

June 4, Presentation title: "*Biomaterial and tissue engineering research in comtemporary medicine*", **Faculty of Biomedical Science and Environment Biology.**

2010, June 24, Presentation title: "*Tissue Engineering and Regenerative Medicine*", "Austin to Arlington" State Legislators and Staffers Visit, **University of Texas at Arlington,** Arlington, Texas.

2010, October 29, Presentation title: "*Development of pH sensitive probes for real-time noninvasive inflammation imaging*", Graduate Materials Seminar, **University of Texas at Arlington,** Arlington, Texas.

2011, August 11, Presentation title: "*Imaging inflammation*", Brown Cancer Institute, **University of Louisville**, Louisville, Kentucky.

2011, September 9, Presentation title: "*Development of nanoprobes forimaging inflammation*",Chemistry Department seminar at **University of Texas at Dallas**, Dallas, Texas.

2012, September 9, Presentation title: "*Development of nanoprobes forimaging inflammation*",Department of Internal Medicine seminar at **University of Texas Southwestern Medical Center**, Dallas, Texas.

2012, May 8-9, Presentation title: "*Novel imaging technology to monitor foreign body reactions in vivo*",keynote speaker at the **Scandinavian Society for Biomaterials meeting** in Uppsala, Sweden.

2012, Visiting Chair Professor lecture Series, given 4Academic Lectures and 3 Technical Discussions hosted by **National Changhua Univesity of Education**, Changhua, Taiwan.

May 21, Academic Lecture, Presentation title: "*Nanotechnology fro drug delivery and in vivo imaging*".

May 28, Academic Lecture, Presentation title: "*Becoming a biomedical engineer – a less known career option for biologist"*.

May 31, Discussion of Techniques, Presentation title: "*Fabrication of controlled release carriers*".

June 7, Discussion of Techniques, Presentation title: "*In vivo imaging*".

June 8, Academic Lecture, Presentation title: "*How safe are medical devices?"*.

June 11, Academic Lecture, Presentation title: "*Stem cells in tissue engineering."*.

June 14, Discussion of Techniques, Presentation title: "*Tissue engineering scaffolds*".

2012, June 7, Presentation title: "*Novel approaches for stem cell tissue engineering and inflammation imaging"*, invited speaker, **Chang Bing Show Chwan Memorial Hospital**, Department of Medical Research and Development in Changhua, Taiwan.

2012, June 18, Presentation title: "*Development of nanoprobes for imaging inflammation*",invited speaker, **National Cheng Kung University**, Department of Surgery and Graduate Institute of Biomedical Engineering in Tainan, Taiwan.

2012, June 19, Presentation title: "*Development of nanoprobes for imaging inflammation*",invited speaker, **China Pharmaceutical University**, Department of Biomedical Engineering, Nanjing, China.

2012, June 22, Presentation title: "*Novel approaches for stem cell tissue engineering"*,invited speaker, **National Taiwan University**, Department of Chemical Engineering, Taipei, Taiwan.

2012, October 8th, Presentation title: "*Development of optical probes for imaging inflammation*",Guestspeaker, The University of Texas at Arlington, **Chemistry & Biochemistry Society**, Arlington, Texas.

2013, May 17th, Presentation title: "*Novel approaches for inducing bone regeneration and imaging inflammation*",Guestspeaker, **Biomaterial Interest Group meeting**, **The University of Texas Southwestern Medical Center at Dallas,** Texas.

2013, August 25, Presentation title: "*Potential role of inflammatory cytokines and T lymphocyteson cancer cell metastasis and cancer trap development*", **University of Louisville,** Molecular Targets group, Brown Cancer Center, Louisville, Kentucky.

2014, August 25,Invited Guest Speaker, Presentation title: "*Development of optical probes for imaging inflammation"*, hosted by the College of Life Science, **Kaohsiung Medical University**, Kaohsiung, Taiwan.

2014, August 26,Invited Speaker, 2014 International Conference of Stem Cells and Tissue Engineering hosted by **Kaohsiung Medical University**, Kaohsiung, Taiwan.Presentation title: "Novel scaffold design for inducing tissue regeneration via autologous stem cells.".

2014, August 27-29, keynote speaker, Presentation title: "Novel approach for inducing autologous stem cell-mediated bone", **The 3rd International Symposium of Materials on Regenerative Medicine**, Chang Gung University, Taoyuan County, Taiwan.

2014, September 2, Invited speaker, Presentation title: "Development of imaging probes and microscaffolds for minimal invasive disease detection and tissue regeneration", **National Central University**, Tao YuanCounty, Taiwan.

2014, September 3, Invited speaker, Presentation title: "Novel approaches for inflammatory disease detection,drug delivery, and tissue regeneration", **Show Chwan Health Care System – Asian Institute of TeleSurgery**, Changhua County, Taiwan.

2014, October 1,Invited speaker,Presentation title: "*Development of optical probes for imaging inflammation*", **Center for Blood Research, University of British Columbia,** Vancouver, British Columbia, Canada.

2014, November 3, Presentation title: "*New directions on tissue engineering, inflammation imaging and cancer therapy*",Visiting Professor Lecture, **China Pharmaceutical University**, Department of Biomedical Engineering, Nanjing, China.

2014, November 4, Presentation title: "*Development of an implantable device for trapping metastatic cancer cells*",Visiting Professor Lecture, **Nanjing University of Aeronautics and Astronautics**, Department of Biomedical Engineering, Nanjing, China.

2015, January 28, Presentation title: "*Development of a new treatment for metastatic prostate cancer",*Invited Speaker, **Wilson Foundation**, Dallas, Texas.

2015, February 20, Presentation title: "*Near-infrared molecular probes for in vivo imaging of pH and reactive oxygen species",* GuestSpeaker, The University of Texas at Arlington, **Chemistry & Biochemistry Society**, Arlington, Texas.

2015, March 11, Presentation title:"*Development of cancer traps for eliminating metastatic cancer cells",*GuestSpeaker, ICR Research Seminar Series, **The University of North Texas Health Center**, Institute of Cancer Research, Fort Worth, Texas.

2015, May 25-29, Distinguished Speaker Series, given 4 separate lectures hosted by College of Life Science, **Kaohsiung Medical University**, Kaohsiung, Taiwan.

May 25, Graduate Seminar, Presentation title: " *Turing the enemies into friends - Story of atuologous stem cells in foreign body reactions and tissue regeneration*".

May 27, Research Seminar, Presentation title: " *Development of cancer traps for eliminating metastatic cancer cells*".

May 28, Department Lecture, Presentation title: *"Advice for getting into a gradaute program and finding a job in the US"*.

May 29, Undegraduate Lecture, Presentation title: " *How to read a scientific article?*".

2015, May 26, Presentation title: "*Novel approaches for stem cell tissue engineering and inflammation imaging"*, invited speaker, Institute/Center of Medical Science and Technology, **National Sun Yat-sen University**, Kaohsiung, Taiwan.

2015, June 2, Presentation title: *"Development of cancer traps for eliminating metastatic cancer cells"*, Invited Speaker, **Biomaterials International 2015**, Kenting, Taiwan.

2015 November 11, Presentation title: "*Development of nanoprobes for imaging inflammation*",invited speaker, **The 3rd International Workshop on Persistent and Photostimulable Phosphors**, Arlington, Texas.

2015, November 20, Presentation title:"*Development of cancer traps for eliminating metastatic cancer cells",*InvitedSpeaker,**BME – Cancer Imaging program seminar series,** University of Texas Southwestern Medical Center, Dallas, TX.

2015, December 4, Presentation title: "*Development of an optical probe for detection of chondrocyte apoptosis following cartilage injury*",Visiting Professor Lecture, College of Life Science, **Kaohsiung Medical University**, Kaohsiung, Taiwan.

2015, December 9, Presentation title: "*Development of cancer traps for eliminating metastatic prostate cancer*",Visiting Professor Lecture, **China Pharmaceutical University**, Department of Biomedical Engineering, Nanjing, China.

2016, February 19,Keynote Speaker, International Combined Academic Conference, 2nd Symposium of Musculoskeletal Regeneration, presentation title: "*New tissue engineering strategy for inducing autologous stem cell-mediated bone regeneration.*" hosted by the Orthopaedic Research Center, **Kaohsiung Medical University**, Kaohsiung, Taiwan.

2016, February 21,Invited Speaker, Presentation title: "*Influence of stem cell aging on the development of osteoporosis",* hosted by the College of Life Science, **Kaohsiung Medical University**, Kaohsiung, Taiwan.

2016, February 23, Presentation title:"*From biology to biomedical engineering – Applying basic knowledge to solving medical problems",*Visiting Professor Lecture, Department of Biology, **Tunghai University**, Taichung, Taiwan.

2016, March 3, Presentation title:"*Harnessing stem cell responses for tissue regeneration and cancer treatment",*Invited Speech, Biomedical Engineering Department, **University of Connecticut**, Farmington, Connecticut.

2016, March 10, Presentation title:*"Harnessing stem cell responses for tissue regeneration and cancer treatment",*Invited Speech, Biomedical Engineering Department, **Tulane University**, New Orleans, Louisiana.

2016, September 20, Presentation title: *"Human multipotent stem cells recruited via peritoneal dialysis*.",Nephrology Grand Round, **University of Texas Southwestern Medical Center**, Dallas, Texas.

2016, September 29, Presentation title: *"Development of cancer trap for metastatic prostate cancer",* Invited Speaker, **Wilson Foundation**, Dallas, Texas.

2016, November 2, Presentation title: *"New tissue engineering strategy for inducing autologous stem cell-mediated tissue regeneration.",* Invited Speaker, Department of Agricultural & Biological Engineering, **Mississippi State University**, Mississippi State, MS.

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117. Zhou J, Dacy AC, Huang Y, **Tang L**. Development of a novel injectable microscaffold for the treatment of injured cartilage in PTOA. 2015 4th TERMIS World Congress,#1253, 2015.

118. Huang Y-H, Zhou J, Weng H, Borrelli JB, **Tang L**. Development of an optical probe for detection of chondrocyte apoptosis following cartilage injury. BMES 2015 conference,818, 2015.

119. Baker DW, Tsai Y-T, Weng H, **Tang L**. Novel strategy to alter fibrotic tissue responses by directed-adipogenic differentiation. BMES 2015 conference,729, 2015.

120. Fan N, Liu Y, Kim B, Tang L, Clark A, Pan I-H. Real-time in vivo detection of retinal reactive oxygen species. Investigative Ophthalmology & Visual Science 56(7): 1995-1995, 2015.

121. Zhou J, Dacy AC, Huang Y, Dela Pena JK, Wu J, Hong Y, Borrelli JB, **Tang L**. A novel hyaluronatemicroscaffold for treating posttraumatic osteoarthritis. 10thWorld Biomaterials Congress,P0409, 2016.

122. Baker DW, Tsai Y-T, Weng H, **Tang L**. Modification of fibrocyte responses to diminish biomaterial-mediated fibrotic tissue responses.10thWorld Biomaterials Congress,118.1, 2016.

123. Zhou J, Li Shuxin, Huang Y, Wu J, Borrelli J,**Tang L**,. Development of Imaging Probe for Osteoarthritis Diagnosis. BMES 2016 conference,#906, 2016.

124. Xu C, Huang Y, Wu J, Liao J, **Tang L**, Hong Y. Optimizing anisotropic polyurethane scaffolds to mechanically match with the native myocardium. BMES 2016 conference, #918, 2016.

125. Kuriakose AE, Rajnikant P, Mali U, Xie Z, **Tang L**, Banerjee S, Yang J, Nguyen KT. Nanoscaffolds using photoluminescentpolylactones to prevent restenosis after PCI. BMES 2016 conference,#1513, 2016.

126. Hakamivala A, Chicas C, Castro J, Wallace C, Nair A, **Tang L**. Development of lymph node construct for investigating prostate cancer metastasis. BMES 2016 conference, #1005, 2016.

127. Pandey N, Hakamivala A, Hariharan P, Rodionov B, Huang Z, Zimmern P, Nguyen K, **Tang L**, Hong Y. Nanoparticle enhanced adhesion of mussel inspired hydrogels for tissue interfacing. BMES 2016 conference, #1247, 2016.

128. Noukeu L, Banerjee S, **Tang L**, Nguyen K. Nanoparticles for protein delivery and gene therapy: An alternative treatment for hind limb ischemia. BMES 2016 conference, #1956, 2016.

129. Huang Y, Hakamivala A, Nair A, Hsieh J-T, **Tang L**. Cancer trap for capturing metastatic prostate cancer. BMES 2016 conference, #945, 2016.

**PATENT APPLICATIONS:**

1. Zhibing Hu, Xiaohu Xia,**Liping Tang**. "*Process for synthesis of oil and surfactant-free hyaluronic acid nanoparticles and microparticles*". US Patent #7601704. October 13th, 2009
2. **Liping Tang**. "*Injectable cancer traps to reduce metastatic cancer*", US Patent, PCT/US13/65803 with international patents (Canada, Japan, China and Europe)sponsored by University of Texas at Arlington, Submitted on October 2013.
3. **Liping Tang**. "*Composition and methods for growing autologous biological tissue*", a US patent application (US 61/971,351) and an international application (PCT/US15/22680) was sponsored by UTA and filed on March 27, 2014.
4. **Liping Tang,** David Baker. "*Adipogenic differentiation method to reduce fibrotic responses*", a US patent application (US 61/973,696) was sponsored by UTA and filed on March 14, 2014.
5. Wen-Jing Hu,**Liping Tang**. "*Coating for measuring pH changes*", US 13/905,520 sponsored by Progenitec Inc., Filed on May 30, 2013.
6. Wen-Jing Hu,**Liping Tang**. "*Oxygen free radical detection*", US 14/515,475, sponsored by Progenitec Inc., Filed on October 15, 2014.
7. **Liping Tang, Jun Zhou, Joseph Borrelli**. "*Micro- and nano-device for cartilage injury detection and treatment*", a patent application was sponsored by UTA and filed on October 7, 2015.

## Community Service

Between 2009 and 2012, Dr. Tang served as the Director of Fort Worth Regional Science and Engineering Fair (FWRSEF) (www.fwrsef.org). FWRSEF, a nonprofit organization, is an affiliate of the Intel International Science and Engineering Fair®. This organization is to focus attention on science and stimulate interests beyond class work. Established at 1951, FWRSEF is the oldest, continually operating regional science and engineering fair in Texas. FWRSEF is also the biggest science and engineering fair in our region which open to all grade 6-12 students from 10 counties (Cooke, Denton, Erath, Hood, Johnson, Palo Pinto, Parker, Somervell, Tarrant, and Wise). Fair offers an opportunity to display meritorious scientific talent through exhibits, and to arouse the interest of the public in science abilities of students and teachers. To encourage local schools' participation, Dr. Tang had constant communication with and to provide assistant to local schools and teachers, including starting science fair programs, setting up science review committee, and filling up applications, etc. As the results of his team's outreach effort, the science fair participants had doubled in 3 years (from 250 to >500 student participants). The number of school participated in this event had also increased ~30%.

Many local engineers and scientists participated in FWRSEF. At 2009, his team recruited ~120 professionals from various field to judge the projects from >15 categories in high school. To allow direct interactions between students and judges, Dr. Tang had instrumental expanded the poster presentation opportunity to also include middle school kids. This opportunity allowed the middle school students to present their projects to the judges. To accommodate such change, his team recruited ~200 professionals to judge since 2011.

As the end of each competition, Dr. Tang's team gave out Category Awards and Best of Fair Award worth ~$7,000 per year. It should be noted that Dr. Tang's effort had won the right from the National organization to sponsor from 1 project (2008) to 4 projects and one teacher to participate the international fair at California on 2012. FWRSEF paid for all student travel with average $1,500/student. Dr. Tang's team had also nominated ~50 high school projects and ~50 middle school projects for the Texas State Science and Engineering fair competition at San Antonio, Texas. On 2012, for the first time, FWRSEF nominated 23 middle school projects for the first Broadcom MASTER™ (Math, Applied Science, Technology and Engineering for Rising Stars) program at Washington DC.

FWRSEF is one of only a few Regional Fairs that does not charge a participation fee to the schools and students. During Dr. Tang's tenure, he had been able to raise funds to the extent of around $30,000 tocover all costs, including student awards, space, equipment rental associated with the fair, and student travel to attend the international Fair.

## RESEARCH FUNDINGS

### Active Supports

***As the Principle Investigator***

*Department of Defense*, 2013 Prostate Cancer Research Program, Ideal Development Award - Established Investigator (W81XWH-14-0289), $553,650, 9/1/2014-8/31/2017, Principal Investigator, Tissue-engineered constructs for investigating the effect of lymph node microenvironment on prostate cancer metastasis.

*Department of Defense*, Congressionally Directed Medical Research Programs, 2013 Peer Reviewed Orthopaedic Research Program, Translational Research Award (W81XWH-14-0459), $1,047,359, 9/15/2014-9/14/2017, Principal Investigator, Treating posttraumatic osteoarthritis by promoting autologous stem cell-mediated cartilage regeneration.

*Wilson Charitable Foundation Trust,* Creating cancer traps to attract and trap prostate cancer cells, $300,000 ($100,000/year for 3 years), 12/1/2015-11/30/2018.

***As a Co- Investigator and/or Subcontractor***

*National Institute of Health*, RO1, HL118498-01A1, $72,000 (sub-award), 1/1/2014 - 12/31/2017, Co-Investigator, (PI: Kytai Nguyen, $955,161), Novel engineered particle platform for endothelium regeneration.

*National Institute of Health*, RO1, AG028048-06,$257,550 (subcontract), 06/1/2013 - 5/31/2018, Co-Investigator, (PI: Ann Word, $1,631,391), Elastic fiber homeostasis in the vaginal wall.

*Department of Education*, Graduate Assistance in Areas of National Need (GAANN), P200A120234, $399,798 ($133,266/year), 8/16/2012 – 8/15/2017, Co-Investigator, Project Director: KhosrowBehbehani,Doctoral training in Department of Bioengineering, University of Texas at Arlington.

*National Institute of Health*, O'Brien Kidney Center, $6,000,000, 6/1/2007 – 5/31/2018, Co-Investigator (PI: Peter Igarashi, UTSW), Core facility to conduct kidney research.

*National Institute of Health*, R44 GM101776-02A1, $1,250,212 (subcontract), 9/1/2016 – 8/31/2018, Subcontract - Principal Investigator (Progenitec Inc., $386,434; PI: Wenjing Hu), Development of ratiometric imaging probe system for monitoring inflammation.

*National Institute of Health*, R41 MH106303-01, 7/11/2014 – 7/10/2017, Co-Investigator (Progenitec Inc., $200,251; PI: Wenjing Hu), Multi-functional particles for stem cell isolation and expansion.

*National Institute of Health*, R15CA199020-01, $415,336, 4/1/2016 – 3/31/2019, Co-Investigator (PI: MingwuJin, UTA), Boosting photo-induced cancer therapies through real-time imaging guidance.

*Cancer Prevention & Research Institute of Texas*, Research Grant, 12/1/2016-11/30/2019, Co-Investigator, $900,000, Super-resolution imaging of tumor angiogenesis in deep tissue with high specificity and sensitivity.

*Department of Defense*, Prostate Cancer Research Program, Collaborative Undergraduate Historically Black College and University Student Summer Training Program Award, 2016-2019, Project Director: JamboorVishwanatha.

*Cancer Prevention & Research Institute of Texas*, DO/PHD training grant, Osteopathic scholars in cancer research, participating institutes – UNTHSC, UTSW, UTA and TCU, 2016-2019, $799,055, Project Director: JamboorVishwanatha.

**Completed supports**

*National American Heart Associate*, Beginning Investigator Award,$40,000 (subcontract), 07/1/2014 - 12/31/2016, Co-Investigator, (PI: Yi Hong, $140,000), Bioactive composite cardiac patches engineered from synthetic and tissue-derived components.

*Texas Medical Research Collaborative (TexasMRC)*, $15,000 (subcontract) 7/1/2015-12/31/2016, Co-Investigator (PI: Weidong Zhou, $100,000), SMART bandage for monitoring wound perfusion.

*Texas Health Arlington Memorial Hospital,* Orthopedic Research Scholarship, $90,000 ($30,000/year for 3 years), 1/1/2014-12/31/2016.

*National Institute of Health*, 1 RO1 EB-012575-01 $180,000 (subcontract) 7/11/2011-6/30/2016, Co-Investigator (PI: Jian Yang, $1,250,184), Creating safe biodegradable photoluminescent implant polymers.

*National Natural Science Foundation of China*, Research Fund of International Young Scientists, RMB $200,000, 1/1/2014 – 12/31/2015, Principal Investigator, NIR triggered nano micelles for early diagnosis and targeted therapy of inflammation, sponsored by the China Pharmaceutical University, Nanjing, China.

*Cancer Prevention & Research Institute of Texas*, $30,000 (sub-award), 12/15/2011 - 6/30/2015, Co-Investigator (PI: Baohong Yuan, $1,092,035), Super-high resolution of tumor angiogenesis in deep tissue.

*University of Texas at Arlington*, Doctoral Program Enhancement Grant, $7,500, 1/17/2012-1/28/2015, Co-Investigator, PI: KhosrowBehbehani, Biomedical Engineering Doctoral Program Enhancement Plan.

*National Institute of Health*, R43 AR064650-01A1, $64,338 (subcontract), 8/1/2013 – 1/31/2015, Subcontract - Principal Investigator (Progenitec Inc., $199,918; PI: Wenjing Hu), A novel optical imaging probe system for assessing wound healing and infection.

*National Institute of Health*, RO-1, EB014404-01,$201,825 ($67,275/year from 2012-2015, subcontract), 09/19/2011 - 8/31/2014, Co-Investigator, (PI: Julie Stenken, $1,332,636), Modulating and monitoring the foreign body reactions to implants.

*Cancer Prevention & Research Institute of Texas,* High Impact High Risk grant, RP120572, $200,000, 12/1/2011 - 5/31/2014, Principal Investigator, Development of cancer traps for prolonging lifespan by eliminating metastatic cancer cells.

*National Institute of Health*, R43 GM101776-01, $75,490 (subcontract), 9/15/2012 – 3/14/2014, Subcontract - Principal Investigator (Progenitec Inc., $192,990; PI: Wenjing Hu), Development of ratiometric imaging probe system for monitoring inflammation.

*National Institute of Health*, RO-1, EB007271-01A2S1, $130,195, 09/1/2009 - 8/31/2011, Principal Investigator, Biomaterial-mediated fibrotic responses (administrative supplement).

*National Institute of Health*, RO-1, EB007271-01, $1,327,680, 09/22/2008 - 8/31/2013, Principal Investigator, Biomaterial-mediated fibrotic responses.

*Texas Higher Education Coordinating Board*, Grant, 14-7710-61, $196,400, 6/1/2010 - 5/31/2013, Co-Investigator, PI: Kytai Nguyen, In situ rapidly forming biodegradable hydrogels mediate wound.

*The Swedish Foundation for International Cooperation in Research and Higher Education* (STINT), SEK 1,200,000, 2010-2013, International Collaborator, PI: MarjamOtt, Pro-inflammatory characteristics of nano-porous alumina.

*American Heart Association-South Central Affiliate*, Grant-in-Aid Award-10GRNT4580013, $140,000, 7/1/2010 -6/30/2013, Principal Investigator, Engineering vascular grafts in vivo via orchestrated autologous stem cell responses.

*National Institute of Health*, R21, EB008509-01A2, $404,829, 5/1/2009 – 4/30/2012, Co-Investigator (PI: Digant P. Dave), Multifunctional image guided surgical platform.

*Alcon Research Inc.*, Research Contract, $95,460, 12/1/2005-11/30/2010, Principal Investigator, In vivo evaluation of drug delivery formulation (III).

*National Science Foundation*, $320,000, 9/1/2008 – 8/31/2009, Co-Investigator, (PI: EfstathiosMeletis), MRI: Acquistion of a high-resolution transmission electron microscope to enhance interdisciplinary research.

*MMPC Pilot and Feasibility Program*, Mouse metabolic phenotyping centers, $66,000, 1/1/2008 – 6/30/2009, Co-Investigator, (PI: Karel J. Zuzak, UTA), Monitoring diabetic retinopathy progression in mice using hyperspectral imaging.

*National Institute of Health*, RO-1, GM074021-01, $844,063, 4/1/2005– 3/31/2009, Principal Investigator, Biocompatibility: Surface initiated biochemistry.

*Advanced Technology Program, Texas Higher Education Coordinating Board*, 003594-0003-2006, $50,000, 5/15/2006- 1/31/2009, Co-Investigator (Consortium Proposal), Targeted drug delivery nanoparticles for treating uveal melanoma.

*Alcon Research Inc.*, Research Contract, $35,520, 2/1/2007 - 1/31/2008, Principal Investigator, Assessment of anti-neoplastic property of NSAID drugs in vivo.

*COE Research Excellence Infrastructure Grant,* $45,621.25 (with $9,124.25 matching fund), 4/1/2007 – 12/31/2007, Principal Investigator, Water Alliance HPLC system.

*National American Heart Association*, Established Investigator Award, $300,000, 7/1/2002-6/30/2007, Principal Investigator, Molecular mechanism of biomaterial-mediated fibrotic responses.

*Alcon Research Inc.*, Research Contract, $166,396, 12/1/2004-11/30/2005, Principal Investigator, In vivo evaluation of drug delivery formulation (II).

*UTA CBC Collaborative Research Grant*, $25,000, 1/1/2005-12/31/2005, Principal Investigator, Target drug delivery magnetic nanospheres for cancer therapy.

*TissueGen Inc.*, Research Contract, $44,918, 12/1/2003-11/30/2005, Principal Investigator, Nicotine effect on angiogenesis.

*Collaborative UNTHSC-UTA Joint Institutional Seed Research Program Award*, $10,500 (total $21,000), 1/1/2005-12/31/2005, Co-Investigator (Vishwanatha, Jamboor K., PI), Prostate Cancer Therapy with Annexin II Nanoparticles.

*Alcon Research Inc.*, Research Contract, $127,000, 12/1/2003-11/30/2004, Principal Investigator, In vivo evaluation of drug delivery formulation (I).

*National Institute of Health*, RO-1, EB-00287, $943,463, 6/11/99 – 7/31/2004, Principal Investigator, Foreign body reactions and device-centered infection.

*Advanced Surface Technology Inc.,* $20,000, 1/1/2001-12/31/2004, Eye implant-mediated tissue responses.

*Advanced Technology Program, Texas Higher Education Coordinating Board*, $25,000, 1/1/2000-8/31/2002, Co-Investigator and Subcontractor, Timed-release anti-microbial coatings to combat implant-centered infection.

*National American Heart Association*, Grant-in-Aid, $131,890, 7/1/1995-6/30/1999, Principal Investigator, Inflammatory responses to implanted biomaterials.

*Baylor Neonatology Section Abbott Grant Award Program*, $29,602, 5/1/1997-4/30/1999, Principal Investigator, Mechanism of endotracheal tube infection.

*Advanced Technology Program*, Texas Higher Education Coordinating Board, $171,530, 1/1/98-8/31/2000, Principal Investigator, Bio-mimetic albumin affinity surfaces for biomaterials.

*National Institute of Health*, RO-1, $601,809, 8/1/95 - 7/31/2000, Co-Investigator, Phagocyte:surface interactions.

*National Institute of Health*, RO-1, $673,117, 2/15/97 – 5/31/2000, Co-Investigator, Biomaterial-mediated inflammation and fibrosis.

*Sherwood Medical Inc.,* Research contract, $7,950, 11/1/1996-5/31/1997, Principal Investigator, Adhesion of bacteria and platelets on PVC thoracic catheters.

*Sherwood Medical Inc.,* Research contract, $3,960, 5/1/1996-8/31/1996, Principal Investigator, SEM studies of the adhesion of platelets on hydrophilic PU umbilical catheter.

*Bard Urological Division,* Research contract, $6,623, 12/1/1995-5/31/1996, Principal Investigator, Studies of the p15 peptide in mediating the inflammatory and fibrotic responses to implanted biomaterials in mice.

*Bard Urological Division,* Research contract, $3,568, 11/1/1995-2/28/1996, Principal Investigator, Chronic inflammatory and fibrotic responses to an implant in rats (Determination of P-15 coupling density).

*Alcon Laboratories Inc.,* Research contract, $9,228, 11/1/1995-5/31/1996, Principal Investigator, Studies of acute inflammatory responses to implanted intraocular lenses.

*Sherwood Medical Inc.,* Research contract, $6,230, 9/30/1995-1/31/1996, Principal Investigator, Hydrophilic umbilical vessel catheter blood biocompatibility.

*Bard Urological Division,* Research contract, $8,843, 9/30/1995-3/31/1996, Principal Investigator, Study of immunogenic responses to a mixture of biomaterials in rabbits.

*Bard Urological Division,* Research contract, $3,002, 7/1/1995-9/30/1995, Principal Investigator, Chronic inflammatory and fibrotic responses to an implant in rats.

*Bard Urological Division,* Research contract, $6,079, 6/1/1995-12/31/1995, Principal Investigator, Chronic inflammatory and fibrotic responses to implanted biomaterials in rats.

*Sherwood Medical Inc.,* Research contract, $5,420, 5/1/1995-10/30/1995, Principal Investigator, Hydrophilic PVC thoracic catheter blood compatibility.

*Bard Urological Division,* Research contract, $1,650, 3/1/1995-5/31/1995, Principal Investigator, Study of acute inflammatory responses to implanted biomaterials in mice.