CURRICULUM VITAE

MICHAEL R. KING

1. Personal Data

ADDRESS	Home:	2026 Macarthur St. Houston, TX 77030 (585) 733-9313	Office:	6500 Main Street; BRC 467 Rice University Houston, TX 77030 USA (713) 348-2848 mike.king@rice.edu
BORN		13 October 1973 Rochester, New York		
MARITAL STATUS		Married; two children		

2. Current Position and Title

E.D. Butcher Chair of Bioengineering, Rice University, July 2024 – Present

3. Education

BS (Chemical Engineering) University of Rochester, 1995
PhD (Chemical Engineering) University of Notre Dame, 1999

4. Professional Experience

Associate Vice President for Research, Physical and Life Sciences and Engineering, Rice University, January 2025 – Present

Special Advisor to the Provost on Life Science Collaborations with the Texas Medical Center, Rice University, July 2024 – Present

Core Faculty, SynthX Center, Rice University, March 2025 – Present

Affiliate, Ken Kennedy Institute, Rice University, March 2025 – Present

J. Lawrence Wilson Professor of Engineering, Vanderbilt University, January 2017 – June 2024.

Department Chair of Biomedical Engineering, Vanderbilt University, January 2017 – September 2023.

Faculty Member, Vanderbilt Institute of Nanoscale Science and Engineering, Vanderbilt University, August 2017 through June 2024.

Professor, Department of Radiology and Radiological Sciences, Vanderbilt University School of Medicine, April 2017 through June 2024.

Member, Vanderbilt-Ingram Cancer Center, Vanderbilt University Medical Center, March 2017 through June 2024.

Editor-In-Chief, *Cellular and Molecular Bioengineering*, June 15, 2013 through December 2024.

Daljit S. and Elaine Sarkaria Professor of Biomedical Engineering, Department of Biomedical Engineering, Cornell University, April 1, 2015 to December 2016.

Professor, Department of Biomedical Engineering, Cornell University, November 1, 2012 through December 2016.

Associate Professor, Department of Biomedical Engineering, Cornell University, July 1, 2008 through October 31, 2012.

Associate Chair, Department of Biomedical Engineering, Cornell University, January 1, 2010 through July 31, 2010.

Member, Graduate Field of Computational Biology, Cornell University, July 1, 2009 through present.

Member, Graduate Field of Chemical Engineering, Cornell University, November 1, 2009 through present.

Adjunct Associate Professor, Department of Biomedical Engineering, University of Rochester, July 1, 2008 to June 30, 2009.

Associate Professor with Unlimited Tenure, Department of Biomedical Engineering, University of Rochester, July 1, 2006 to June 30, 2008.

Member, Biophysics and Structural Biology Cluster, University of Rochester, November 1, 2002 to June 30, 2008.

Secondary Appointment, Department of Chemical Engineering, University of Rochester, October 1, 2002 to June 30, 2008.

Secondary Appointment, Department of Surgery, University of Rochester, July 1, 2002 to June 30, 2005.

Assistant Professor, Department of Biomedical Engineering, University of Rochester, February 1, 2002 to June 30, 2006.

Postdoctoral Researcher, Dept. of Bioengineering, University of Pennsylvania, Philadelphia, PA
Supervisor: Dr. Daniel A. Hammer
Experimental and Computational Study of Multicellular Leukocyte Adhesion Under Flow.
October 16, 1999 – January 15, 2002.

Graduate Instructor, Department of Chemical Engineering, University of Notre Dame, Notre Dame, IN
August 1997 – December 1998.

Graduate Research Assistant, University of Notre Dame
Thesis: "Topics in Fluid Mechanics. I. On the Stability of Stratified Flows. II. Droplet-Droplet and Particle-Plane Interactions Near Contact."
Research Advisors: Drs. David T. Leighton, Jr. and Mark J. McCready
August 1995 – September 16, 1999.

Graduate Teaching Assistant, University of Notre Dame
Four graduate/undergraduate courses.
August 1995 – May 1997.

Engineering Intern, Wilson Center for Research and Technology, Xerox Corp., Webster, NY

Characterization of granular flow patterns in an experimental desktop color xerography developer.
May – August 1995.

Engineering Intern, Wilson Center for Research and Technology, Xerox Corp., Webster, NY
Optimization of pigment levels in an experimental color toner set.
May – August 1994.

5. Honors and Awards.

2024 Chris Jacobs Award for Excellence in Leadership, Cellular and Molecular Bioengineering Special Interest Group, Biomedical Engineering Society
2023 Fellow, National Academy of Inventors
2023 Cellular and Molecular Bioengineering Most Downloaded Article Award
2021 Fellow, American Association for the Advancement of Science (AAAS)
2019 Fellow, International Academy of Medical and Biological Engineering
2018 Faculty Member, Alpha Eta Mu Beta, the National Biomedical Engineering Honor Society
2018 Cellular and Molecular Bioengineering Most Downloaded Article Award
2015 Fellow, Biomedical Engineering Society
2014 Inducted into the Faculty of Fellows, American Institute for Medical and Biological Engineering (AIMBE)
2013 Outstanding Speaker Award, American Association of Clinical Chemistry
2011 National Cancer Institute Physical Sciences Oncology Transnetwork Award
2011 Fiona Ip Li ’78 and Donald Li ’75 Award for Teaching Excellence, College of Engineering
2011 Inducted into Rush-Henrietta (N.Y.) Alumni Council Hall of Fame
2009 Outstanding Contribution for a Publication in the International Journal *Clinical Chemistry*
2008 ICNMM Outstanding Researcher Award, American Society of Mechanical Engineers
2007 – 2008 Professor of the Year in Engineering, Student Association, University of Rochester
2007 Election to Sigma Xi, the Scientific Research Society, as Lifetime Member
2005 NSF CAREER Award
2004 James D. Watson Investigator Award
2003 Whitaker Investigator
2002 Wadsworth C. Sykes Curricular Development Award, University of Rochester
2000 NIH Individual National Research Service Award
1995 Magna Cum Laude, University of Rochester
1995 Phi Beta Kappa; Tau Beta Pi; Golden Key Honor Society
1991 Bausch and Lomb Honorary Science Award and Scholarship

6. Research Interests

The King Lab works at the interface between **Cellular Engineering**, **Drug Delivery**, and **Nanotechnology**.

We employ tools and concepts from engineering to understand biomedically important processes that occur in the bloodstream, including cancer metastasis, inflammation, and thrombosis. We have found that tumor cells in the circulation can mimic the physical mechanisms used by white blood cells to traffic through the body and adhere to the blood vessel wall, and we have explored strategies to interrupt this metastasis process by targeting specific adhesion receptors. Microscale flow devices have been developed in our lab that recreate the complex microenvironment of the circulation where inflammation and cancer metastasis occur. We have invented new biomaterial surfaces based on natural halloysite nanotubes, that capture rare circulating tumor cells (CTCs) from blood while simultaneously repelling white blood cells. This nanotube-based flow system has gained widespread attention since it can be easily adopted by clinical labs and recreates the natural rolling process that CTCs follow in the body.
The selectin adhesion receptors important in leukocyte, stem cell, and CTC trafficking have unique biophysics that make them ideal for targeted drug delivery. The King Lab has pioneered the use of

selectin proteins to deliver apoptosis death signals to tumor cells in flowing blood, and to deliver therapeutic cargo (e.g., siRNA, chemotherapeutics) encapsulated in nanoscale liposomes. The King lab is currently testing these novel cancer therapies in mouse models of metastatic breast and prostate cancer through the use of whole body bioluminescence imaging.

We also have a strong interest in mechanotransduction, i.e., how circulating cells transduce fluid shear forces into changes in biochemical signaling cascades. Our lab recently showed that physiological levels of fluid shear stress desensitize white blood cells to bacterial activation signals. Interestingly, fluid shear stress also modulates how tumor cells respond to apoptosis death signals in the bloodstream. All of these cell adhesion phenomena are also being interrogated by a group of multiscale computer simulations that we have developed under the name Multiparticle Adhesive Dynamics.

7. Former Responsibilities while Department Chair of BME at Vanderbilt (1/17 – 9/23)

As Department Chair of Biomedical Engineering at Vanderbilt University, I oversaw faculty hiring, faculty promotions and tenure, graduate and undergraduate teaching, graduate recruiting, ABET assessment, faculty meetings, external advisory board meetings, graduation events, departmental social events, marketing, faculty mentoring, awards nominations, proposal support and IRB applications. I represented the department at national and regional events including: Biomedical Engineering Society annual conference, American Institute of Medical and Biological Engineering annual conference, Cellular and Molecular Bioengineering annual conference, departmental seminars, and the SEC Deans and Chairs Conference. I met with students, parents, faculty (teaching, research, TTK), employers, and alumni. I interviewed faculty candidates for medical school and medical center departments on a regular basis, and many potential secondary and adjunct/adjoint faculty. I also promoted the department and VUSE on social media (www.twitter.com/profmikeking; www.twitter.com/VandyBME).

Leadership Highlights:

- Hired 7 tenure track faculty and 3 professors of the practice, including 4 women and 4 underrepresented minority colleagues.
- Created 4 new salaried staff positions in BME, including 2 senior grants managers, a senior administrative officer, and a graduate program coordinator, resulting in an increase in annual research expenditures to over $11M per year (increase of 40.8% from FY2017 to FY2019).
- Raised the US News graduate ranking of Vanderbilt BME from 25th (2018) to 14th (2023).
- Served as the Chair of the BME Council of Chairs, an organization of 145 department chairs in the U.S. and the Americas. (known colloquially as the “Chair of Chairs”).
- Completed the Vanderbilt Leadership Academy course in AY 2019-20.
- Oversaw the following: (i) First major revamp of the undergraduate curriculum since 1993; (ii) Successful ABET site visit in Fall 2019; (iii) Faculty retreat on best practices in online education in Spring 2020.
- Elected as the Chair-Elect of the AIMBE College of Fellows, an organization of over 2000 distinguished bioengineering fellows who represent the top 2% of their profession. In this role I oversaw the 2022-23 nomination and election of fellows, who make up the most diverse class of fellows in the 30 year history of the organization, in terms of gender, race and ethnicity.

8. Research Support

Current Support

1. "Enabling Technology to Study Mechanosensitive and Mechanoresistant Cancer Cells in Flow," NIH R01 CA256054 (M.R. King, PI). 8/01/2021 – 6/30/2026. $250,000/year direct costs to King Lab. 16% effort. **Received an Impact Score of 20 and a Percentile of 2.0**.

2. CPRIT Award, 7/01/2024 – 6/30/2029. $6M in direct costs to King Lab. 16% effort.

Pending Support

1. "Mechanobiology Approach to CAR-T Therapy Applied to Metastatic Prostate Cancer," NIH R01 CA286973 (M.R. King, PI). 9/01/2023 – 8/31/2028. $250,000/year direct costs to King Lab. 16% effort.

Completed Support

1. "Super Natural Killer Cells That Target Metastases in the Tumor-Draining Lymph Nodes," NIH R01 CA203991 (M.R. King, PI). 12/23/2016 – 11/30/2022 (in NCE). $200,000/year direct costs to King Lab. 16% effort. **Received an Impact Score of 19 and a Percentile of 3.0**.
This proposal was later used as an example of an awarded grant in the 2020-21 Mentored Mock Review Sessions.

2. "Blocking lymphatic metastasis using a T cell based TRAIL delivery platform," GI Spore Pilot Project (M.R. King, PI; Matthew Wilson, co-PI). 07/01/2018 – 06/30/2019. $50,000 total costs. 0% effort

3. "MRI: Acquisition of an Atomic Layer Deposition Tool for Research, Education, and Outreach at Vanderbilt University," National Science Foundation DMR Award No. 1726533 (M.R. King, Co-PI; with J. Valentine, PI; F. Williams, Co-PI; C. Pint, Co-PI; Y. Xu, Co-PI). 09/15/2017 – 08/31/2019. $416,623. 0% effort.

4. "Multiscale Model of Platelet Adhesion and Thrombus Formation," NIH R01 (M.R. King, PI). 12/01/09 – 11/30/15. $1,250,000 in direct costs. 25% effort. **Received an impact score of 13 (2.0 percentile)**.

5. "Hydrodynamic Interactions Between Adhering Neutrophils," National Institutes of Health (M.R. King, Trainee), Individual NRSA Fellowship F32 HL010353, 4/01/00 – 1/31/02. $35,000/year.

6. "Vascular Relations of Blood Cells and Proteins," National Institutes of Health, P01 HL018208, (Co-I, with Ingrid Sarelius PI and Richard Waugh PD), 7/1/02-6/30/03. 5% salary.

7. "The Biomolecular Interface: A Special Symposium of the ACS Colloid & Surface Science Division," Conference Support Grant, The Whitaker Foundation (M.R. King, PI). March 13-17, 2005. $3,500 direct costs.

8. "The Effect of Cell-Cell Hydrodynamic Interactions and Flow Disturbances on the Dynamics of Endothelial Cell Adhesion," Whitaker Foundation (M.R. King, PI), 9/1/03 – 8/31/06. $231,000 total costs. 25% effort.

9. "Exploiting the Differential Adhesion of Stem Cell Populations for Therapeutic and Diagnostic Applications," James D. Watson Investigator Award. New York State Office for Science, Technology and Academic Research (M.R. King, PI). 10/01/04 – 9/30/06. $200,000 direct costs over 2 years.

10. "In vitro purification of CD34+ bone marrow stem cells," Technology Transfer Incentive Program, New York State Office for Science, Technology, and Academic Research (M.R. King, PI). 7/1/06 – 6/30/08. $500,000 in direct costs. 25% effort.

11. "Cell Adhesion Research and Outreach in the King Laboratory," CellTraffix unrestricted funds, 1/01/06 – 6/30/08. $300,000 direct costs.

12. "CAREER: Multiparticle Cell Deposition in Realistic Geometries," National Science Foundation BES–0448788 (M.R. King, PI), 2/15/05 – 2/14/10. $400,000 Total costs. 25% effort.

13. "Substrata Interactions of Normal and Leukemic Hematopoietic Stem Cells," NIH/NCI 1R21CA129249 (M.R. King, Co-I; Jane Liesveld, PI). 4/1/08 – 3/31/2010. $423,500 in total costs. 10% effort.

14. "Blood Systems Biology: Coagulation and Inflammation," NIH/NHLBI via University of Pennsylvania R33 Exploratory Program in Systems Biology HL087317 (M.R. King, PI of subcontract; Scott Diamond, Program Director). 10/01/06 – 9/30/10. $282,780 in direct costs to the King laboratory. 10% effort.

15. "Integrated optical nanosensors in a microbubble array cell culture system," CBET-0827862 NSF CBET - Biotechnology (M.R. King, Co-PI). 9/01/08 – 8/31/2011. $529,500 in total costs. 10% effort.

16. "Role of Cellular Microrheology in the Metastatic Adhesion of Circulating Tumor Cells," NIH/NCI (Physical Sciences Oncology Network). (M.R. King, co-PI with 3 other institutions: Johns Hopkins, ASU, and USC). 11/01/2011 – 10/31/2012. $63,000 direct costs to the King Lab. 0% effort.

17. "Innovation of Cell & Molecular Therapeutics in the King Laboratory," Sanofi-Aventis, (M.R. King, PI). 11/08/2011 – 10/31/2012. $10,000 unrestricted gift. 0% effort.

18. "In Vivo Stem Cell Extraction Device," U.S. Army Research, via Celltraffix, Inc. (C. Strohsahl, PI; M.R. King PI of Cornell subcontract). 01/15/2012 – 12/31/2012. $91,500 direct costs to King Lab. 4% effort.

19. "Prostate Cancer Circulating Tumor Cell Heterogeneity and the Metastatic Phenotype," NIH/NCI (Physical Sciences Oncology Network). (M.R. King, co-PI with Y. Lee). 12/01/2011 – 11/30/2012. $40,000 direct costs to the King Lab. 0% effort.

20. "The Role of Age-Related Matrix Stiffening on Endothelial Cell Dysfunction," NIH/NHLBI (C. Reinhart-King, PI; M.R. King, Co-I). 01/20/2011 – 12/31/2012. $46,160 direct costs to the King Lab. 0% effort.

21. "Physical Sciences Oncology Center on Metastasis and the Microenvironment," NIH/NCI (M. Shuler, PI; M.R. King leader of Project 3). 09/01/09 – 8/31/14. $400,000/year direct costs to Project 3. 8% effort. Project 3 rated Outstanding.

22. "Circulating Tumor Microemboli (CTM) Interactions with Blood Cells in the Vascular Microenvironment," NIH/NCI PSOC Transnetwork Project (King, PI). 4/01/12 – 7/31/14. $65,120/ year direct costs to King Lab. 0% effort.

23. "Vascular Relations of Blood Cells and Proteins. Project 5," National Institutes of Health, NIH HL-18208-28 (R.E. Waugh, Program Director; M.R. King, Project Leader for Project 5); 7/1/04 – 6/30/15. $ 15,790,000 Direct/10 years total for entire grant; Total direct costs for King over 11 years: $1,980,000. Total direct costs for current year for King, $ 198,000. 25% effort.

24. "Research Diversity Supplement to Super Natural Killer Cells That Target Metastases in the Tumor-Draining Lymph Nodes," NIH/NCI (King, Mentor; Maria Lopez-Cavestany, Trainee). 01/01/19 – 11/30/21. $69,984 Total costs per year. 0% effort.

9. Student Supervision

A. Graduate Students
At Rice:
As Committee chairman (9 PhD students)
In progress

Natalie Curry (BME PhD expected 2026; *2022 NSF Graduate Fellow*). "Role of CTC aggregate composition in the bloodborne metastasis of prostate cancer".

Nicole Sarna (BME PhD expected 2026; *2022 NSF Graduate Fellow*). "Use of fluid shear stress for the improvement of T cell immunotherapy"

Benjamin Kaufman (BME PhD expected 2028). Title:
Alexandria Carter (BIOE PhD expected 2028). Title TBD
Ehsan Aalai (BIOE PhD expected 2028). Title TBD
Melissa Cantú (BIOE PhD expected 2029) Title TBD
Allen Liu (BIOE PhD expected 2029) Title TBD
River Qian (BIOE PhD expected 2029) Title TBD
Samuel Lu (BIOE PhD expected 2029) Title TBD

As thesis committee member:
Lizzy Kelley, BIOE
Marco Tulio de Freitas Reis, BioSciences
Neica Joseph,BIOE
Emily Henrich, BIOE
Chaoyang Tang, BIOE

At Vanderbilt:
As Committee chairman (5 PhD students; 1 MS student)
Completed

Jacob Hope (BME PhD October 2021; *2019 NSF Graduate Fellow*). "Mechanotransduction of Cancer Cells and T Cells in the Fluid Flow Environment of the Circulation". Currently a Research Scientist at Beam Therapeutics.

Joshua Greenlee (BME PhD February 2023; *2018 NSF Graduate Fellow*). "TRAIL Therapy for Exploiting Mechanisms of Drug Resistance and Metastasis in Advanced Colorectal Cancer". Currently a Scientist at Sarepta Therapeutics.

Jenna Dombroski (BME PhD May 2023; *2020 NSF Graduate Fellow*). "Nano-vaccines and dendritic cell processing for anti-cancer therapies". Currently a Scientist at Labcorp.

Olivia Wright (BME M.S. March 2023). "Superhydrophobic array devices for the production of a tunable in vitro CTC cluster model". Currently an Immunology Sales Specialist at ProImmune, Inc.

Maria Lopez Cavestany (BME PhD July 2023; *2019 NIH Diversity Supplement Fellow*). "Targeting cell surface vimentin to neutralize disseminating colon cancer cells". Currently a Postdoctoral Fellow at Cambridge University.

In progress

Abigail Fabiano (BME PhD expected 2025; *2021 NSF Graduate Fellow*). "Multichannel flow device for the high throughput study of cancer mechanobiology"

As thesis committee member:

Sean Bedingfield (BME PhD completed Feb. 2020) "Protein-functionalized nanoparticles for targeted osteoarthritis therapies"

Isom Kelly (BME PhD completed 2022) "Inhibition of miR-24 in hepatocytes for therapeutic effect in atherosclerosis"

Carcia Carson (BME PhD completed 2022) "Biomaterials and nanotechnologies to improve immune responses to cancer vaccines"

Emily Kight (BME, PhD completed 2023) "Microfluidic capture of bacteria and cell-free DNA fragments from patient samples"

As (1st – 2nd year) mentoring committee member:

Jessalyn Baljon (John Wilson Lab): 2017 – 2018
Paul Taufalele (Reinhart-King Lab): 2017 – 2018
Shrusti Patel (Craig Duvall Lab): 2018 – 2019
Bonnie Walton (Jonathan Brunger Lab): 2019 – 2020
Mariah Bezold (Craig Duvall Lab): 2020 – 2021
Hayden Pagendarm (John Wilson Lab): 2020 – 2021
Morgan Struthers (Craig Duvall Lab): 2021 – 2022
Jacob Schulman (John Wilson Lab): 2022 – 2024
Megan Keech (Craig Duvall Lab): 2022 – 2024
Marsalas Whitaker (Todd Giorgio Lab): 2021 – 2023

As lab rotation mentor:

Candace Grisham, MSTP student: 2019

External PhD thesis committee member:

Daniel Puleri (Duke University BME): 2020 – 2023

At Cornell:

As Committee chairman (13 PhD students; 17 MEng students; 1 M.S. student)

Completed

Korie Grayson (BME PhD completed 2020; *2014 NSF Graduate Fellow*). "Novel nanoparticle and liposome formulations to target metastatic cancer cells in the bloodstream." Currently an AAAS Science & Technology Policy Fellow at NSF.

Nerymar Ortiz-Otero (BME PhD completed 2019; *2014 NSF Graduate Fellow*). "Comparison of adhesion phenotype and response to therapeutics of subpopulations of primary leukemia cells." Currently a Translational Scientist at Ikena Oncology.

Thong Cao (BME PhD completed 2019). "Receptor mediated adhesion of circulating cells in immune cell interactions and cancer." Currently a Senior Process Development Engineer at Caribou Biosciences.

Kevin Anderson (BME PhD completed 2016; *2012 NSF Graduate Fellow*). "Multiscale computational model of tumor aggregate adhesion to the blood vessel wall." Currently an Associate Research Scientist at the Jackson Laboratory.

Jocelyn Marshall (BME PhD completed 2016; *2012 NSF Graduate Fellow*). "The role of lipid rafts and membrane composition on tumor cell adhesion and apoptosis." Currently VP, Medical Director at Biolumina.

Kelvin Lin, (CBE MEng completed 2016). "Optimization of E-selectin/TRAIL liposome formulations and efficacy on cancer patient blood samples."

Andrew Hughes, (BME PhD 2015; *2011 NSF Graduate Fellow*). "Halloysite nanotubes for the capture and manipulation of circulating tumor cells." Currently a medical student and research fellow at U. Pittsburgh.

Anne Rocheleau (BME PhD received 2015). "Multiscale modeling of selectin-mediated neutrophil transport and adhesion." Currently a Senior Engineer/Consultant at RQM+.

Siddarth Chandrasekaran (BME PhD received 2015). “"Super" natural killer cells that target metastases in the tumor draining lymph nodes.” Currently an Associate Director at Notch Therapeutics.

Jiahe Li (BME PhD received 2015). “Engineering platelets to neutralize circulating tumor cells.” Currently an Assistant Professor of BME at University of Michigan.

Sweta Roy (BME MEng received 2015). “Role of GNPTAB in metastatic prostate cancer” Currently a Bioengineering PhD student at Syracuse University

Yue Leng (BME MEng received 2015). “Nanoparticles for drug and gene delivery to circulating tumor cells.” Currently a Software Engineer at Google.

Michelle Hung (BME Meng received 2015). “Mouse studies of platelets engineered to neutralize metastatic cancer cells in the bloodstream.” Currently a Biochemist II at Siemens Healthineers.

Jessica Qianhui Wu (BME MEng received 2015). “Silica particles coated with platelet membrane for targeted drug delivery.” Currently a Modeler at Takeda.

Carlos Castellanos (BME MEng completed May 2014). “Differential spreading and drug delivery to cancer cells in the presence of leukocytes under flow.” Currently a PhD student in BME at Cornell.

Michael Mitchell (BME PhD completed June 2014). “Molecular Mechanosensors on the Neutrophil Surface.” Currently an Associate Professor of Bioengineering at the University of Pennsylvania.

Zhexiao “Josh” Wang (BME MEng completed May 2014). “Role of nuclear mechanics in the shear stress response of metastatic breast cancer cells.”

Weiwei Wang, (BME PhD completed January 2014). “Multiscale model for platelet adhesion and thrombus formation.” Currently a Fundamental Analyst at Jane Street.

Yue Geng (BME PhD completed 2013; *2011 NSF Graduate Fellow*). “Wolf in Sheep's Clothing: Differential Metastatic Adhesion Cascade of Tumor Cells Bearing Selectin-Binding Ligands” Currently an SVP, Platform Business at Berkeley Lights.

Mark Lu (BME MEng completed May 2013). “Detection and quantification of circulating tumor cells in patient blood samples using a standard Cytospin instrument.”
Currently a Product Specialist at Sartorius Stedim Biotech.

Pedro Silberman (BME MEng completed May 2013). “Controlled release of encapsulated doxorubicin from halloysite nanotubes.” Currently an MD student at Ohio State University, after PhD at Memorial Sloan Kettering.

Siddarth Patel (BME MEng completed 2012). “Controlled drug release from natural halloysite nanotubes.” Currently a Director at Sail Biomedicines.

Alex Gorovits (BME MEng completed 2012). “Immortalized cell lines generated from primary circulating tumor cells.” Currently a Senior Genomic Data Engineer at Regeneron.

Carissa Ball (Randolph), (BME M.S. completed 2010). “Mechanisms of L-selectin Mediated Leukocyte Adhesion in Response to Injury.” Currently a Manufacturing Manager at Lonza.

Adelaide de Guillebon (BME MEng completed 2011). “The dynamics of colorectal cancer aggregate adhesion in the microcirculation.” Currently Workday Manager at Accenture.

Sathvika Chintalapani (BME MEng completed 2011). “Effect of HS treatment on L-selectin shedding from neutrophils.”

John P. Lindsey, (BME MEng completed 2011). “Analysis of in vivo model for thrombus formation.” Currently a medical student at the University of Florida.

Thong Cao, (BME MEng completed 2011). “Dynamics of P-selectin mediated cell adhesion in acidic pH”

Christina Chen, (BME MEng completed 2010). “Drug and Gene Delivery Using Selectin-Coated Nanoparticles” Currently a Clinical Assistant Professor in Internal Medicine, Nova Southeastern University.

Kuldeepsinh Rana, (BME PhD completed 2011). “The Targeting and Neutralization of Metastatic Cancer Cells Using E-selectin and TRAIL.” Currently an Associate Director at Alcon.

Andrew Hughes, (BME MEng completed 2009). “Nanoparticle Coatings for Enhanced Capture of Circulating Tumor Cells.”

Robin Zhao, (BME MEng completed 2009). “Use of nanoparticles and selectin proteins for separation of hematopoietic stem cells.” Currently a Manager, Project Management at Regeneron.

Priyatha Premnath, (BME MEng completed 2010). "Physical Flow Parameters Controlling Selectin-Mediated Cell Capture Under Flow." Currently an Assistant Professor at University of Wisconsin-Milwaukee.

Varun Ponmudi, (BME MEng completed 2009). "Targeted gene delivery to circulating leukemic cells." Currently an Enterprise Account Executive at Osso VR.

As committee minor advisor

Vikram Singh, (CBE PhD completed 2011). "Biophysical mechanisms of vasculogenesis and angiogenesis."

Izath Aguilar, (BME PhD expected 2016). "Insulin-like growth factor-binding proteins in alginate polymers."

Spencer Park, (BME PhD expected 2016). "Development of antibodies against ICAM-1 for drug delivery applications."

Yifan Cheng, (Food Science PhD expected 2017). "Interaction between bacteria cells and food contact surface."

Lindsey Crawford, (CBE PhD expected 2016). "Targeting Multidrug Resistant Cancers by Exploiting P-glycoprotein Overexpression."

Justin Rosch (BME PhD expected 2017). "Fluid Flow in the Brain: Using Two-Photon Excited Fluorescence Microscopy to Investigate High-Conductivity Pathways in vivo."

Chris DiDomenico (BME PhD expected 2018). "Cyclic mechanical loading enhances transport of antibodies through articular cartilage."

At Rochester:

As committee chairman (3 PhD students; 5 MS students)

Completed

John Gentile, (Biophysics M.S. completed 2007)."Parallel Computation of Multiparticle Cell Adhesion Phenomena Under Flow." Currently a Consultant/Engineer at CAI Software, LLC.

Laura Ferguson (nee Western), (BME M.S. completed 2009). "Isolation of Circulating Cancer Cells from the Peripheral Blood." Currently a Clinical Instructor at Penn Medicine.

Sivaprakash Agastin, (ChE M.S. January 2009). "Rapid flow fractionation of biomolecules combining liquid and particulate dielectrophoresis." Currently an Engineer at Bristol-Myers Squibb.

Nichola Charles, (BME PhD August 2008). "High-Throughput Purification of Stem Cells Based on Selectin-Mediated Rolling Affinity." Currently an Associate Director, Product Development at BD.

Nipa Mody, (ChE PhD December 2007). "Platelet Adhesive Dynamics: A Multiscale Model of Receptor-Mediated Platelet Adhesion Under Flow." NIH Individual Predoctoral NRSA Fellow. Currently a Senior Manager, R&D Field Triage at QuidelOrtho.

Dooyoung Lee, (ChE PhD December 2007), "Influences of Hydrodynamic Shear Force on Selectin-Mediated Neutrophil Rolling Dynamics In Vitro." Currently a Director at Morphic Therapeutic.

Michelle Nsahlai, (ChE M.S. August 2005), "Blood Cell Adhesion Distal to a Backward-Facing Step." Currently a Resident Physician at Brigham and Women's Hospital.

Sarah Latham, (ChE M.S. June 2006). "Neutrophil Adhesion Dynamics in Pulsatile Flow." Currently an Operations Support Specialist at Unither Pharmaceuticals.

As committee member

Completed

Thomas Gaborski, (BME PhD August 2008). "Receptor transport and binding on the leukocyte surface."

Yu-chiao Hsu (CHE M.S. June 2008). "The regulation of Per1, a circadian gene."

Ronin Sumagin (BME PhD February 2008). "Role of ICAM-1 in leukocyte recruitment and permeability in the in vivo microcirculation."

Yi-Jen Chiu, (Biochemistry PhD January 2008). "Role of PECAM-1 in mechanosensing of endothelial cells."

Michael Newcomb (CHE PhD December 2007). "Transcription Regulation of the Cellulase System in *Clostridium thermocellum*."

Rajib Ahmed, (ECE PhD 2006). "Dielectrophoretic manipulation of fluid samples at the microscale."

Elaine Yen Shi Kuo, (CHE M.S. 2005). "Haematopoietic Stem Cell Niches."

Bo-Ying Bao (CHE PhD 2006). "Use of vitamin D as a chemotherapeutic agent for prostate cancer."

Ut-Binh Thi Giang, (BME M.S. completed 2009; BME PhD completed 2010; previously served as co-advisor). "Microfabricated Bioreactors for Cancer Cell Culture and Drug Screening."

Jong-Wei (Gus) Hsu (Pathology PhD completed 2011). "Effects of Vitamin D on prostate cancer metastasis."

External chairman of PhD defense

Christopher Buttaccio (Mech. Eng. PhD, December 2006). "A Hyperelastic Finite Element Formulation for Soft Tissue Biomechanics with Viscoelasticity and Damage Mechanics."

Chun-Yu Chen (Chem. Eng. PhD, June 2008). "Circadian Gene Regulation and its Influence on Hematopoiesis."

First-year examination committees

Yixin Ren (BME), Nichola Charles (BME), Chris Bailey (Mechanical Engineering), John Gentile (Biophysics), Ronen Sumagin (BME), Fanny Casado Pena (CHE), Yuanhong Wei (Biophysics), Tim Kneezel (BME), Jessica Snyder (Biophysics), Yin-Ying Chiu (CHE), Henry Chung (BME), Hsin-Yi Tsai (CHE), Paul Black (Biophysics).

Qualification examination committees (as non-member of thesis committee)

Jessica Snyder (Biophysics)

Laboratory rotations

Rahul Tyagi (Biophysics), Lea Vacca (Biophysics), Tom Gaborski (BME), Ronen Sumagin (Pharmacol. & Physiol.), Rhiannon Bussey (BME), John Gentile (Biophysics), Nichola Charles (BME), Tony Chen (BME), Daniel Letzring (Biophysics), Henry Chung (BME).

B. Undergraduate Research Students (66 total)

At Rice:

Jonathan Largoza (from Univ. of Pennsylvania)
Jason Deng (Rice BIOE)
Elias Sivavitsas (Rice Chem. Eng.)
Tony Morales (Rice BIOE)
Tatum Thompson (Rice BIOE)
Tyler Neilson (Rice BIOE)

At Vanderbilt:

Carter Sheppard (from U. Tennessee Knoxville): Consultant at Graphable.ai
Sumanth Chennareddy (Neuroscience; his senior thesis directed by King received the VU Founder's Medal, the highest award given in the College of Arts & Science at graduation): Research Fellow at NYU School of Medicine
Emily Lederman (from Cornell U.): Associate Manager of Engineering at Tesla
Alexander Sorets (from Cornell U.): PhD student at Vanderbilt U.
Tejas Subramanian (BME): MD student at Weill Cornell Medical College
Dannielle Hendon (BME): Technical Services at Epic
Su Bin Hahn (BME), Sadhana Durbha (Neuroscience), Antonio Glenn (BME)
Sagar Patel (BME): Process Development Associate Scientist at Pfizer

Ethan Jones (BME), Michael Jindea (BME), Kevin Liu (Biochemistry; senior thesis directed by King), Davis Crews (BME): Site Management Associate at ICON pharmaceuticals
Rebecca Pereles (BME): PhD student at Univ. of Michigan
Sungmin Kwon (BME), Schyler Rowland (BME), Noah Reckhorn (Chem. Eng.), Samantha Knoblauch (Neuroscience), Shanay Desai (Neuroscience), Sarah Shibuya (from Rose Hulman), Tin Nguyen (from U. California San Diego), Spencer Robbins (from Columbia U.), Erica Palermo (BME), Kayla Bleich (from U. Maryland), Laura Weinstein (from U. Delaware), Sarah Zeng (Medicine, Health, and Society).

At Cornell:

Robin Zhao (BEE), Michael Jureller (Biology/Statistics), Svetlana Ikonomova (CBE), Elizabeth Hedges (BIO), Kimberly Lin (BEE), Kimberly Yeh (CBE), Ana Steen (CHE at Bucknell U.), Charles Sharkey (CBE). Mishka Gidwani (CBE), James Messing (BIO), Matt Maguire (BIO), Ryan Bender (BEE), Sue Yan (6th year medical student from Kings College, London), Danielle (Dantong) Huang (BEE), Maxine Chan (CBE), Brittany Wun (CBE), Shannon Good (CBE at Penn State), Andrea Clinch (BEE), Rahul Rajagopalan (CBE), Kelly Wilson (BME), Emily Lederman (BME), Alexander Sorets (BME)

At Rochester:

Deepa Bansal (BME): currently a Business Consultant at Slalom Consulting
Elissa Burke (BME, from U. Minnesota): completed PhD in BME at Univ. of Minnesota
Erich Schmidt (BME)
Pallab Singh (BME): currently a Patent Agent at Riverside Law LLP, after a PhD in Bioengineering at Univ. of Pennsylvania.
Aimee Ruscio (CHE): currently a Senior Consultant at IMS Health.
Michael Mancini (BME): currently VP of Research & Development at Spectropath, Inc., after PhD in Biomedical Engineering at Georgia Tech.
Johnson Chuang (Stats): currently a Pharmacy Technician II at UCSF Medical Center
Jared Kanofsky (BME): currently an Attorney at Merlo Kanofsky Gregg & Machalinski Ltd, Chicago.
Claire Ferris (CHE, from Notre Dame)
Chris Carruthers (BME): currently a PhD student in Bioengineering at Univ. of Pittsburgh.
Brian Duffy (BME): currently an Anesthesia Resident at Univ. of Buffalo, after MD from Univ. of Buffalo.
Bryce Allio (BME)
Meghan O'Donavan (BME): currently a Research Engineer at US Army Natick Soldier Systems Center.
David Mitsche (BME): currently in Technical Services, Epic (healthcare software)
Woojin Han (BME): currently a PhD student in Bioengineering at the University of Pennsylvania.

C. Postdoctoral Associates (18 total)

Kathleen Lamkin-Kennard, 2003 – 2006 (after PhD in BME from Drexel U). Currently an Associate Professor of Mechanical Engineering at Rochester Institute of Technology.

David J. Gee, 2005 – 2008 (after PhD in Mech. E. from Boston U). Currently an Associate Professor and Chair of Mechanical Engineering at Gannon University.

Navraj Hanspal, 2005 – 2006 (after PhD in Chem. E. from Loughborough U., U.K.). Currently a Senior Subject Matter Expert at Corteva Agriscience.

Srinivas Narasipura, 2006 – 2009 (after postdoc. at the Wadsworth Center, Albany, NY) Currently a Staff Scientist at Rush University Medical Center.

Joel Wojciechowski, 2005 – 2008 (after PhD in Biophysics from Univ. of Rochester). Currently Clinical Science Manager at LSI Solutions.

Zhong Huang, 2007 – 2008 (after PhD in Cell Biology from Univ. of Oklahoma Health Science Center). Currently a full Professor at Shenzhen University School of Medicine, Shenzhen, China.

Raman Lall, 2007 – 2008 (after PhD in Chemical Engineering from Drexel University). Currently Adjunct Faculty at the Univ. of Delaware.

Sara (Xiaoyan) Yin, 2008 – 2009 (after PhD in Biochemistry from Vanderbilt University). Currently Senior Director, Market Access Strategy & Operations, Collegium Pharmaceutical, Inc.

Tait Takatani, 2010 – 2014 (after PhD in Chemistry from Georgia Tech). Currently Owner/Scientific Consultant at Takatanium LLC.

Jong-Wei (Gus) Hsu, 2011 – 2013 (after PhD in Pathology from Univ. of Rochester). Currently Scientist I, Preclinical Development at Eisai US.

Dai Liu, 2017 (after PhD from Penn State Univ. College of Medicine). Currently Associate Director, Intellia Therapeutics, Inc.

Zhenjiang Zhang, 2017 – Present (after PhD from Peking Univ. and postdoctoral work at Rice Univ.). Promoted to Research Assistant Professor in King Lab in January 2019.

Fang Yu, 2017 – 2018 (after MD from Medical Centre of Luoyang and PhD from Huazhong Univ. of Science and Technology.

Nidhi Jyotsana, 2018 – 2020 (after PhD from Hannover Medical School, Germany). Promoted to Research Assistant Professor in King Lab in January 2020.

Kalana Jayawardana, 2018 – 2021 (after PhD from U. Mass, Lowell, and postdoctoral work at MIT in the Langer Lab). Currently Module Development Engineer, Intel Corporation.

Liqin Ren, 2024 – Present (after PhD from UT Arlington)

Davoud Ghazanfari, 2024 – 2025 (after PhD from Ohio University and postdoctoral work at Harvard Medical School)

Abbie Clevenger, 2025 – Present (after PhD from Texas A&M). Co-sponsored with Prof. Julea Vlassakis. Damon Runyon-St. Jude Pediatric Fellow.

D. Pre-College Students (22 total)

Mentor for Career Internship Program, Pittsford (NY) Central School District, 2003-2008

Johnson Chuang, Kyle Matthews, Cina Sasannejad, Fiona Adams, John Miller, Karin Lee, Isha Saini, Scott Longwell, William Malia (from Palmyra/Macedon district), Bonita Sur, Elaine Zhong, John Andy Miller (from Palmyra/Macedon district), Dennis Liu, Cheryl Lau, Hannah Bibens, Olivia Sheppard (Skaneateles, NY, 2013-4; Intel Science Prize Finalist), Ava Cassidy, Anne Hanna, Simon King, Nia John, Aliya Macknojia, Titan Yasir.

National/International Student Awards Received

Nicole Sarna, 1st place poster competition, NIH National Cancer Institute (NCI) Cancer Tissue Engineering Collaborative (TEC) Annual Meeting, Madison, WI, July 2022.

Michael Mitchell, 2010 NSF Graduate Research Fellowship, Honorable Mention; International Society of Biorheology Extended Abstract Award; Extended Abstract Award, 14th International Congress of Biorheology in Istanbul, Turkey; Oral Presentation Award at the Ecole Nationale Superieure des Mines de Saint Etienne in Porquerolles, France; 2013 AIChE Separations Division Graduate Student Award; 2015 Student Award for Outstanding PhD Research from the Society For Biomaterials; Student/Fellow Award, 2016 CMBE Conference.

Yue Geng, 2010 BMES Outstanding Contribution; 2011 HHMI International Student Research Fellowship; 2012 BMES Research & Design Award.

Andrew Hughes, 2012 AIChE Separations Division Graduate Student Research Award.

Carissa Ball, 2010 NSF Graduate Research Fellowship, Honorable Mention

Ut-Binh 1st Prize paper at the 16th Annual Symposium on Materials Research, Rochester Chapter of MRS.

Nipa Mody, 2005 Individual NIH NRSA Predoctoral Fellowship.

Kathleen Lamkin-Kennard, 2004 Individual NIH NRSA Postdoctoral Fellowship.

10. Courses Taught (courses I developed in bold)

Rice University

Spring 2025, BIOE 585: Prompt Engineering for Science and Society, 4 students.
Fall 2025, BIOE 345: Prompt Engineering for Science and Society, 11 students

Fall 2025, Responsible Conduct of Research, guest lecture on ethical authorship, 100 students

Vanderbilt University:
Fall 2017, BME 7410 Quantitiative Methods in Biomedical Engineering. 14 students.
Spring 2017-19, BME 1015: Innovations in Biomedical Engineering (guest lecture), 36 students
Fall 2018-20, BME 3890-03 Special Topics: Engineering Approaches in Cancer. 20 students.
Fall 2021 – Fall 2023, BME 7410 Quantitiative Methods in Biomedical Engineering.
Fall 2021, PSCH 1857 - Peabody Honors Seminar in Mathematics and Natural Science - Nanoscience and Nanotechnology (guest lecture), 16 students
Spring 2024, BME 8901: Classical and Systems Biology Models of Cancer. 6 students.

Cornell University:
Fall 2008, BME/BEE 5010 Bioengineering Seminar (guest lecture). 60 students.
Fall 2008-15, BME 4110 Science and Technol. Approaches to Problems in Human Health (guest lecture). 100 students.
Fall 2008-10, 2013-15, BME 7110 Fundamentals of Biomedical Engineering Research I (2-3 lectures). 15 students.
Spring 2009-13, BME 5600 Biotransport and Drug Delivery (new course). 51 students.
Fall 2009-16, Spring 2015, BME 5400 Biomedical Computation (new course). 43 students.
Fall 2009, MAE/CBE 5240/6240 Physics of Micro- and Nanoscale Fluid Mechanics (guest lecture). 42 students.
Spring 2010, BEE/MAE 4530 Computer-Aided Engin.: Applications to Biomed. Processes (guest lecture). 40 students.
Spring 2010, Fall 2010-15, BME 6670 Nanobiotechnology (guest lecture). 100 students.
Spring 2011, BME 7130 Engineering Approaches to Human Disease (Inflammation Module Organizer, guest lecture). 22 students.
Fall 2015-16, ENGRD 2202 / BME 2000: Biomedical Transport Phenomena (new required course for BME undergraduate major), 38 students.

University of Rochester:
Spring 2003-05, BME/CHE 466 Microhydrodynamics (new course). enrollment 12 students.
Spring 2003-08, BME 262 Cell & Tissue Engin. (3-9 lectures per semester; new course). 21 students.
Fall 2002-04, BME 397 Biomedical Engineering Seminar (guest lectures). 16 students.
Fall 2002-07, BME 221 Biomedical Computation (new BME core course). 49 students.
Spring 2006-08, BME/CHE 466 Fluid Flow in Microchannels (new course). 20 students.
Fall 2006, CHE 259 Transport Phenomena in Biological Systems (guest lecture). 21 students.

University of Pennsylvania:
Spring 2000, CHE 350 Fluid Mechanics (guest lecture). 40 students.

University of Notre Dame:
Fall 1998, CHEG 355, Transport Phenomena I (as graduate instructor). 45 students.
Spring 1998, CHEG 258, Computer Methods (as graduate instructor). 60 students.
Fall 1997, CHEG 255, Introduction to Chemical Engineering (as graduate instructor). 60 students.
Fall 1995 – Spring 1997, Teaching Assistant, four graduate/undergrad courses in chem. engineering

11. Department and University Service

Departmental (Rochester):
2002 – 2003, 2004 – 2005, Member, BME ABET Committee
2006 – 2007, Chair, BME ABET Committee

2002 – 2004, Member, BME Undergraduate Curriculum Committee
2003 – 2004, Faculty Advisor, BME Class of 2004. 17 students.
2003 – 2005, 2007, Mentor for BME Senior Design.
2002 – 2008, Academic Advisor, BME first year graduate students.
2004 – 2006, Member, BME Graduate Admissions Committee
2004 – 2008, Academic Advisor, Biophysics first year graduate students.
2004, 2005 – 2008, Member, BME Faculty Search Committee
2005 – 2008, Faculty Advisor, BME Class of 2009. 20 students.
2006, Biophysics & Structural Biology (BSB) Awards Committee
2007 – 2008, Director of Undergraduate Studies, BME
2006 – 2008, BME Senior Advisory Committee
2007, BSB Graduate Admissions Committee
2007, CHE M.S. exit examiner
2008, BME M.S. exit examiner

University (Rochester):
2003 – 2004, Forbes Award Committee, School of Engineering and Applied Sciences
2004, Administrative Committee, School of Engineering and Applied Sciences
2004 – 2005, Committee on SEAS Computing, School of Engineering and Applied Sciences
2005 – 2007, Faculty Council, The College
2005, Strategic Planning Workshop, School of Engineering and Applied Sciences
2005 – 2007, Interviewer, Rochester Early Medical Scholars (REMS) Program
2006 – 2007, Research Computing Committee
January 2007: site visit to Microsoft Research, Redmond, WA
2006 – 2008, MD/PhD Admissions Committee
2006, Nanomedicine Strategic Planning Committee
2006 – 2007, 2107 BME-Optics Time Capsule Committee
2007 – 2008, University Information Technology Governance Council
Co-Chair, Research Computing Subcommittee
2007, Biological, Physical, and Computational Sciences Working Group for Planning, The College
2007, Nanoscience Working Group for Planning, The College
2007 – 2008, Faculty Senate, University of Rochester
2007 – 2008, Faculty Associate, M.K. Gandhi Institute for Nonviolence
2007 – 2008, Search Committee for Director, Center for Computational Arts, Science, and Engineering

Departmental (Cornell):
2009 – 2011, Chair, Joint Faculty Search Committee BME / Weill Institute
2009 – 2013, Editor, BME Departmental Newsletter
2009 – 2011, Undergraduate Advising, College of Engineering, 20 students
2011, Faculty Judge, Work in Progress (WIP) Graduate Seminar
2011 – 2012, Chair, BME Department Chair Search Committee
2011 – 2013, Undergraduate Advising, College of Engineering, 20 students
2012 – 2013, Chair, BME Faculty Search Committee
2015 – 2016, Undergraduate Curriculum Committee

University (Cornell):
2008 – 2010, Internal Life Sciences Advisory Council
2009, Judge, 7th Annual BioExpo poster competition, Institute of Biological Engineering
2009 – 2012, Elected At Large Member of the Faculty Senate
2012 – 2016, Policy Committee, College of Engineering
2014 – 2017, Committee on Academic Programs and Policies
2015 – 2018, Academic Integrity Hearing Board
2015 – 2016, ABET Committee, College of Engineering

Departmental (Vanderbilt):
2018 – 2020: Inaugural Faculty Advisor of the reinstated student chapter of Alpha Eta Mu Beta, the National Biomedical Engineering Honor Society
2019 – 2020, Chair, BME Data Science Faculty Search Committee

School of Engineering (Vanderbilt):
2017 – Present, Administrative Committee (ADCOM)
2018 Working Group on "Values"
2021 – 2022 ESB Build-out Working Group

University (Vanderbilt):
2017 – 2022, Medical Innovators Development Program (MIDP) Leadership Committee
2022 – 2024, Medical Innovators Development Program (MIDP) Challenge Team
2017 – 2018, Faculty Search Committee, Department of Plastic Surgery, Vanderbilt University Medical Center
2017 – 2024, ESB Animal Housing Facility Advisory Committee
2017, Faculty Marshal in Commencement Exercises
2018, Limited Submission Reviewer, Mallinckrodt Grant Program
2022, Wetlab Incubator Committee
2022 – 2024, *Faculty Mentor* to research professor Dr. Yurui Gao
2023, Poster Judge, Vanderbilt Center on Mechanobiology 2nd Annual Research Retreat

Departmental (Rice)
2024, Departmental Review of a Tenure and Promotion Candidate
2024 – 2025, Chair, Faculty Search Committee
2024, Abstract Reviewer, Gulf Coast Undergraduate Research Symposium
2025, Helix Park Space Committee
2025 – Present, *Faculty Mentor* to Dr. Kelsey Swingle
2025 – Present, BIOE Faculty Awards Committee
2025 – Present, BIOE – TMC Interactions Committee, *Ex Officio*

Brown School of Engineering and Computing (Rice)
2024, Mock Interviewer, Future Faculty Fellows

University (Rice):
2024, Review Panel, BCM INSTINCT and Rice University ENRICH Seed Grants
2024 – Present,
2024, Collaboration Committee of Rice-MD Anderson, Academics Subgroup
2024, Chair, Collaboration Committee of Rice-MD Anderson, Research, Intellectual Property and Data Subgroup
2024 – Present, Rice – Baylor College of Medicine Oversight Council
2024 – Present, Institutional Advisory Board, SynthX Center
2025 – Present, Joint Partnerships between Rice and Houston Methodist Committee
2025 – Present, Shared Equipment Authority (SEA) Board, *Ex Officio*
2025 – Present, *Co-Chair*, Limited Submissions Faculty Review Committee
2025, *Reviewer*, Center for Human Performance Seed Grants
2025 – Present, *Faculty Sponsor*, Rice Men's Club Lacrosse Team
2025 – 2028, Animal Research Facility (ARF), Faculty Board

12. Professional Activities

Professional development:
2005, Bioinformatics Course, Cold Spring Harbor Laboratory
2019 – 2020, Vanderbilt Leadership Academy

Advisory activities
2005 – 2006, *Director*, American Institute of Chemical Engineers, Rochester Professional Section.
2005 – 2010, 2013 – 2014, *Co-Chair*, Biorheology Scientific and Standardization Committee, International Society on Thrombosis and Haemostasis.
2010 – 2013, *Chairman*, Biorheology Scientific and Standardization Committee, International Society on Thrombosis and Haemostasis
2004 – 2005, *Member*, International Steering Committee, iNEER Conference for Engineering Education and Research (iCEER), Tainan, Taiwan, Republic of China.
2002 – 2014, *Member*, Scientific Committee, ASME, International Conference on Nanochannels, Microchannels and Minichannels
2004 – 2008, *Professional Panel Member*, AIChE Rochester Section
2005 – 2008, Chair*, Scientific Advisory Board*, CellTraffix, Inc.
2007, *Member*, Scientific Committee, International Conference on Engineering Education, Coimbra, Portugal.
2007, *Panelist,* Perspectives and Process on Promotion at the University of Rochester
2009, *Member*, International Scientific Advisory Committee, 1st International Symposium on Biomimetic Functional Surfaces with Fluids Interactions (Biomimetic FSFI '09), Nottingham, UK.
2010 – 2019, *Vice President*, International Society of Bionic Engineering
2019 – 2023, *Director*, International Society of Bionic Engineering
2010 – 2011, Member, Communications Committee, Biomedical Engineering Society
2010 – 2015, Co-Leader, Systems Biology Working Group, Multiscale Modeling (MSM) Consortium, Interagency Modeling and Analysis Group (IMAG)
2014 – 2017, *Member*, Shu Chien Award Committee, Biomedical Engineering Society
2016, *Panel Member*, Journal Editors "Meet the Experts" session, 2016 BMES Annual Meting
2017, *Search Committee to find next Editor-in-Chief of Annals of Biomedical Engineering*, Biomedical Engineering Society
2018 – 2021, Elected as Chair of the Biomedical Engineering Council of Chairs
2019, *External Reviewer*, Department of Biomedical Engineering, Stevens Institute of Technology
2019 – 2022, Member, FASEB (Federation of American Societies of Experimental Biology) Publications and Communications Committee
2019, *Reviewer*, Workshop Proposals, AIMBE
2019, *Member*, BMES Nominations Committee
2020, Think-Tank Workshop on Grand Challenges in Engineering in Medicine and Biology, sponsored jointly by the IEEE Engineering in Medicine and Biology Society, the Department of Biomedical Engineering at the Johns Hopkins University and the Department of Bioengineering at the University of California at San Diego on January 17-18. 2020, La Jolla, CA.
2020, *Panelist*, BMES Q&A Panel on Racism in BME and in Healthcare, BMES 2020 Annual Meeting, October 14 – 17, 2020, Virtual Meeting.
2020 – 2021, *Founding Member*, BME Organizations Leading Diversity (BOLD). Mission: To conceive of and coordinate a national, BME community response to the longstanding racism in our nation and its impact on 1) the composition and culture of our field and 2) healthcare inequality.
2020 – Present, *Member*, External Advisory Board, Biomedical Engineering Program, United Arab Emirates University
2021, *Panelist*, Academic Career Panel, Department of Biomedical Engineering, University of Delaware
2021, *Panelist*, Research Roundtable, Oracle Research Cloud Computing
2022, External Judge, e4usa Design-a-Thon, Brentwood High School
2022 – 2024, Elected as Chair-Elect of the AIMBE College of Fellows
2022, Member, IAMBE Nominations Committee
2022, *External Reviewer*, Department of Biomedical Engineering, Johns Hopkins University

2022 – 2025, Elected to Long Range Planning Committee, BME Council of Chairs
2022 – 2023, *Chair*, Executive Director Search Committee, American Institute for Medical and Biological Engineering
2024, *Panelist*, Virtual Career Development Forum: Negotiating First Faculty Position, North American Vascular Biology Organization
2024, *Panelist*, Society for Biomaterials Drug Delivery Special Interest Group Trainee Networking Event
2024, *Panelist*, AIMBE Academic Council meeting on departmental and university policies on AI
2023 – 2024, *Faculty Mentor,* BME UNITE webinar series
2025, *Panelist*, Best Practices in Manuscript Preparation and Submission (Meet the Journal Editors), Cellular and Molecular Bioengineering Conference, January 3 – 6, 2025, Carlsbad, CA
2025, *Co-Chair*, Tissue Engineering Collaborative (TEC), National Cancer Institute
2025, Universities Research Association, Council of Presidents, Annual Meeting and Policy Forum, January 29, 2025, Washington, DC
2025 – Present, *Founding Member*, Friends of the National Institute for Biomedical Imaging and Bioengineering (FoNIBIB)
2025, *Academic Program Reviewer*, Department of Biomedical Engineering, University of Delaware

Society Membership
Member, American Chemical Society, American Institute of Chemical Engineers (Senior Member), American Society of Mechanical Engineers, Biomedical Engineering Society, Biophysical Society, International Network of Engineering Education and Research, International Society of Bionic Engineering, International Society on Thrombosis and Haemostasis, Order of the Engineer, Phi Beta Kappa, Society for Medical Innovation and Technology, Tau Beta Pi, Sigma Xi, Alpha Eta Mu Beta.

Conference organization
Symposium Co-Organizer, "The Biomolecular Interface," Colloid & Surface Chemistry Division, ACS Spring Meeting, San Diego, CA, March 13-15, 2005.

Technical Track Chairman: 1. Biological Systems; 2. Biomolecule Separations. 3. Biosensors. Third International Conference on Microchannels and Minichannels (Sponsored by ASME International), Toronto, Canada, June 14-16, 2005.

Technical Track Chairman: 1. Biomedical, 2. Mass Transfer. Fourth International Conference on Nanochannels, Microchannels, and Minichannels (ASME International), Limerick, Ireland, June 19-21, 2006.

Technical Track Co-Chairman: Optics Track, Fourth International Conference on Nanochannels, Microchannels, and Minichannels (ASME International), Limerick, Ireland, June 19-21, 2006.

Technical Track Chairman: Biomedical Track, Fifth International Conference on Nanochannels, Microchannels, and Minichannels (ASME International), Puebla, Mexico, June 2007.

Technical Track Chairman: DNA Applications Track, Fifth International Conference on Nanochannels, Microchannels, and Minichannels (ASME International), Puebla, Mexico, June 2007.

Technical Track Chairman: Biomedical (Including DNA) Applications, 6th International Conference on Nanochannels, Microchannels and Minichannels, Darmstadt, Germany, June 2008.

Technical Track Chairman: Biomedical, 7th International Conference on Nanochannels, Microchannels and Minichannels, Pohang, South Korea, June 2009.

Technical Track Chairman: DNA Applications, 7th International Conference on Nanochannels, Microchannels and Minichannels, Pohang, South Korea, June 2009.

Technical Track Co-Chairman: Keynote Papers, 7th International Conference on Nanochannels, Microchannels and Minichannels, Pohang, South Korea, June 2009.

Conference Co-Chair, 8th International Conference on Nanochannels, Microchannels and Minichannels, Montreal, Quebec, Canada, August 2010.

Technical Track Chairman: Biomedical, 9th International Conference on Nanochannels, Microchannels and Minichannels, Edmonton, Alberta, Canada, June 2011.

Technical Track Chairman: Biomedical, 10th International Conference on Nanochannels, Microchannels and Minichannels, Puerto Rico, June 2012.

Technical Track Chairman: Biomedical and Lab-On-A-Chip, 11th International Conference on Nanochannels, Microchannels and Minichannels, Sapporo, Japan, June 2013.

Technical Track Chairman: Biomicrofluidics and Lab-On-A-Chip, 12th International Conference on Nanochannels, Microchannels and Minichannels, Chicago, IL, August 2014.

Topic Chairman: Biomicrofluidics and Lab on a Chip, 13th International Conference on Nanochannels, Microchannels and Minichannels, San Francisco, CA, July 2015.

Track Chair, Drug Delivery and Intelligent Systems, Biomedical Engineering Society Annual Meeting, Minneapolis, MN, October 2016.

Conference Co-Chair, 2017 Cellular and Molecular Bioengineering Conference, Kohala Coast, The Big Island, HI, January 2017.

International Scientific Committee, 3rd International Symposium on Mechanobiology, Singapore, December 11-14, 2017.

Conference Co-Chair, 6th International Conference of Bionic Engineering, Changchun, China, September 23-26, 2019.

Planning Committee, Physical Sciences-Oncology Network / Cancer Tissue Engineering Collaborative Annual Meeting, 2025

Session chairmanship

Session Chairman, "Junior Investigator Poster Lightning Talks Part 1," Physical Sciences-Oncology Network / Cancer Tissue Engineering Collaborative Annual Meeting, Atlanta, GA, November 18-21, 2025.

Session Chairman, "Junior Investigator Poster Lightning Talks Part 2," Physical Sciences-Oncology Network / Cancer Tissue Engineering Collaborative Annual Meeting, Atlanta, GA, November 18-21, 2025.

Session Chairman, "General Session Day 1," American Institute for Medical and Biological Engineering Annual Event, Washington, DC, March 23 – 25, 2024.

Moderator, Panel Discussion, American Institute for Medical and Biological Engineering Annual Event, Washington, DC, March 23 – 25, 2024.

Session Chairman, "Young Innovators of Cellular and Molecular Bioengineering, Part 1," BMES Annual Meeting, Seattle, WA, October 11 – 14, 2023.

Session Co-Chairman, "Young Innovators of Cellular and Molecular Bioengineering, Part 2," BMES Annual Meeting, Seattle, WA, October 11 – 14, 2023.

Session Chairman, "Young Innovators of Cellular and Molecular Bioengineering, Part 1," BMES Annual Meeting, San Antonio, TX, October 12 – 15, 2022.

Session Co-Chairman, "Young Innovators of Cellular and Molecular Bioengineering, Part 2," BMES Annual Meeting, San Antonio, TX, October 12 – 15, 2022.

Moderator, "Keynote: Challenges and opportunities in image-guided drug and gene delivery," Carnegie Mellon Forum on Biomedical Engineering, Virtual on Zoom, September 18, 2020.

Session Chairman, "Young Innovators I." BMES Annual Meeting, Philadelphia, PA, October 16-19, 2019.

Session Chairman, "Young Innovators II," BMES Annual Meeting, Philadelphia, PA, October 16-19, 2019.

Session Chairman, "Plenary Session," 6th International Conference of Bionic Engineering, Chongchun, China, September 24-26, 2019.

Session Chairman, "CMBE Young Innovators I," BMES Annual Meeting, Atlanta, GA, October 17 – 20, 2018.

Session Chairman, "CMBE Young Innovators II," BMES Annual Meeting, Atlanta, GA, October 17 – 20, 2018.

Session Chairman, "Multiscale mechanobiology of health & disease I," 2018 Cellular and Molecular Bioengineering Conference, Key Largo, Florida, January 2 – 6, 2018.

Session Chairman, "Cancer Mechanobiology," 3rd International Symposium on Mechanobiology, National University of Singapore, December 11 – 14, 2017.

Session Co-Chairman, "CMBE Young Innovarors I," BMES Annual Meeting, Phoenix, AZ, October 11 – 14, 2017.

Session Chairman, "CMBE Young Innovators II," BMES Annual Meeting, Phoenix, AZ, October 11 – 14, 2017.

Session Chairman, "Genomic Engineering and Editing," 2017 Cellular and Molecular Bioengineering Conference, Kohala Coast, The Big Island of Hawaii, January 3 – 7, 2017.

Session Chairman, "Topics in Drug Delivery I," BMES Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

Session Chairman, "Cancer Drug Delivery," BMES Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

Session Chairman, "Precision Medicine and Biomarkers," BMES Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

Session Chairman, "CMBE Young Innovarors I," BMES Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

Session Chairman, "CMBE Young Innovators II," BMES Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

Session Chairman, "3D Tissues for Disease Models," 2016 Cellular and Molecular Bioengineering (CMBE) and Advanced Biomanufacturing (ABioM) Joint Conference, New Orleans, LA, January 6 – 10, 2016.

Session Chairman, "Cancer Drug Delivery," 2015 BMES Annual Meeting, Tampa, FL, October 7-10, 2015.

Session Chairman, "Degeneration: Mechanobiology of Pathology," 2015 Cellular and Molecular Bioengineering Conference, St. Thomas, USVI, January 2015.

Session Chairman, "Cancer Mechanobiology," BMES Annual Meeting, San Antonio, TX October 2014.

Session Chairman, "Nanotechnologies for Cancer Detection and Treatment II," BMES Annual Meeting, Seattle, WA, October 2013.

Session Chairman, "Cellular and Molecular Biomechanics III," BMES Annual Meeting, Seattle, WA, October 2013.

Session Chairman, "Multiscale Modeling: Cells to the whole body," BMES Annual Meeting, Seattle, WA, October 2013.

Session Chairman, "Flow-based assays of thrombosis and hemostasis," XXIV Congress of the International Society on Thrombosis and Haemostasis, Amsterdam, NL, June 29 – July 4, 2013.

Session Chairman, "Mechanical degradation of VWF in medical devices," XXIV Congress of the International Society on Thrombosis and Haemostasis, Amsterdam, NL, June 29 – July 4, 2013.

Session Co-Chairman, "Physics in Cancer," Experimental Biology 2013, Boston, MA, April 20-24, 2013.

Session Chairman, "Cancer Nanotechnology II," BMES Annual Meeting, Atlanta, GA, October 2012.

Session Chairman, "Thrombosis Biomechanics," BMES Annual Meeting, Atlanta, GA, October 2012.

Session Chairman, "In Vitro Assays of Thrombosis and Haemostasis Under Flow," Biorheology SSC Meeting of the International Society on Thrombosis and Haemostasis, June 27-30, 2012, Liverpool, U.K.

Session Co-Chairman, "In vitro thrombosis assays and standardization," Biorheology SSC Meeting of the International Society on Thrombosis and Haemostasis, Kyoto, Japan, July 23-28, 2011.

Session Chairman, "Biomedical Papers," 9th International Conference on Nanochannels, Microchannels and Minichannels, Edmonton, Alberta, Canada, June 19 – 22, 2011.

Session Chairman, "Functional Bionics/Biomimetics," 3rd International Conference of Bionic Engineering, Zhuhai, China, September 14-16, 2010.

Session Chairman, "Biomedical Papers. Biomedical Papers II," 8th International Conference on Nanochannels, Microchannels, and Minichannels, Montreal, Quebec, August 1-5, 2010.

Session Chairman, "Blood flow-dependent processes in vitro and in vivo: novel concepts," 56th Annual Meeting of the Scientific and Standardization Committee of the ISTH, Cairo, Egypt, May 22-25, 2010.

Session Co-Chairman, "Multiscale and in vivo models of thrombosis," BMES 2009 Annual Meeting, Pittsburgh, PA, October 7–10, 2009.

Session Chairman, "Biomimetics and fluid interactions III," 1st International Symposium on Biomimetic functional surfaces with fluid interactions (Biomimetic FSFI'09), September 14 – 15, 2009, Nottingham, UK.

Session Chairman, "Determination of flow-dependent molecular interactions," Biorheology SSC of the International Soc. on Thrombosis and Haemostasis, Boston, MA, July 11, 2009.

Session Co-Chairman, "Biorheology and rheology in biological systems," 2009 Society of Rheology Annual Meeting, Madison, WI, October 19-22, 2009.

Session Chairman, "Biomedical and DNA Applications," 7th International Conference on Nanochannels, Microchannels and Minichannels, Pohang, South Korea, June 2009.

Session Co-Chairman, "Cell Adhesion and Migration II," AIChE 2008 Annual Meeting, Philadelphia, PA, November 16 – 21, 2008.

Session Co-Chairman, "Nano Mechanics of Leukocyte Rolling and Adhesion," 13th International Congress of Biorheology and 6th International Conference on Clinical Hemorheology, State College, PA, July 2008.

Session Co-Chairman, "Assessment of Flow-Determined Molecular Processes in Thrombosis and Hemostasis," 54th Scientific and Standardization Committee Meeting, International Society on Thrombosis and Haemostasis, July 2008.

Session Chairman, "Biomedical (Including DNA) Applications: Part I," 6th International Conference on Nanochannels, Microchannels and Minichannels, Darmstadt, Germany, June 2008.

Session Chairman, "Biomedical (Including DNA) Applications: Part II," 6th International Conference on Nanochannels, Microchannels and Minichannels, Darmstadt, Germany, June 2008.

Session Co-Chairman, "Device Technologies: Nano to Micro Scales, Cell Responses in Tissue Engineering," BMES Annual Meeting, Los Angeles, CA, September 2007.

Session Co-Chairman, "Device Technologies: Nano to Micro Scales, Drug and Gene Delivery," BMES Annual Meeting, Los Angeles, CA, September 2007.

Session Chairman, "Device Technologies: Nano to Micro Scales, Cellular Therapy & Microdevices I," BMES Annual Meeting, Los Angeles, CA, September 2007.

Session Chairman, "Device Technologies: Nano to Micro Scales, Cellular Therapy & Microdevices II," BMES Annual Meeting, Los Angeles, CA, September 2007.

Session Chairman, "Receptor Mediated Phenomena," AIChE Annual Meeting, Salt Lake City, UT, November 2007.

Session Chairman, "Practical biophysics of cellular bond characteristics mediated by flow," Scientific Subcommittee Session of the International Society on Thrombosis and Haemostasis, Geneva, Switzerland, July 2007.

Session Co-Chairman, "Biomedical and DNA Applications," Fifth Int. Conference on Nanochannels, Microchannels, and Minichannels (ASME International), Puebla, Mexico, June 2007.

Session Chairman, "Lab on a Chip," Fifth International Conference on Nanochannels, Microchannels, and Minichannels (ASME International), Puebla, Mexico, June 2007.

Session Chairman, "Nanoscale Drug and Gene Delivery," BMES Annual Meeting, Chicago, IL, October, 2006.

Session Chairman, "Cellular Therapy and Microdevices," BMES Annual Meeting, Chicago, IL, October, 2006.

Session Chairman, "Cell Membrane Mechanics and Bioengineering, Part 1" BMES Annual Meeting, Chicago, IL, October, 2006.

Session Chairman, "Cell Membrane Mechanics and Bioengineering, Part 2" BMES Annual Meeting, Chicago, IL, October, 2006.

Session Chairman, “Receptor Mediated Phenomena,” AIChE Annual Meeting, San Francisco, CA, November, 2006.

Session Co-Chairman, “Cell Adhesion and Migration,” AIChE Annual Meeting, Cincinnati, OH, November, 2005.

Session Co-Chairman, “Adhesion Receptors of Eukaryotic and Prokaryotic Cells,” AIChE Annual Meeting, Cincinnati, OH, November, 2005.

Session Co-Chairman, “Computational Biology: Part I,” AIChE Annual Meeting, Cincinnati, OH, November, 2005.

Session Co-Chairman, “Computational Biology: Part II,” AIChE Annual Meeting, Cincinnati, OH, November, 2005.

Session Co-Chairman, “Poster Session: Fundamental Research in Fluid Mechanics,” AIChE Annual Meeting, Cincinnati, OH, November, 2005.

Session Chairman, “Microscale Flows in Biological Systems,” Third International Conference on Microchannels and Minichannels (Sponsored by ASME International), Toronto, Canada, June 14-16, 2005.

Session Chairman, “Plenary Session: Hydrodynamic Dispersion in Microfluidic Geometries,” Third International Conference on Microchannels and Minichannels (Sponsored by ASME International), Toronto, Canada, June 14-16, 2005.

Session Chairman, “Mechanics of blood cells and vascular cells,” 12th International Congress of Biorheology (ICB) and the 5th International Conference on Clinical Hemorheology (ICCH), Chongqing, China, May 30-June 3, 2005.

Session Chairman, “The Biomolecular Interface: Multivalent Ligand Binding,” ACS Spring Meeting, San Diego, CA, March 13, 2005.

Session Co-Chairman, “The Biomolecular Interface: Lipid Phase Behavior and Organization II: Bilayers, Monolayers,” ACS Spring Meeting, San Diego, CA, March 13, 2005.

Session Chairman, “The Biomolecular Interface: Molecular Surfaces for Control/Measurement of Cell Function,” ACS Spring Meeting, San Diego, CA, March 14, 2005.

Session Co-Chairman, “The Biomolecular Interface: Lipid Phase Behavior and Organization I: Bilayers, Monolayers,” ACS Spring Meeting, San Diego, CA, March 13, 2005.

Session Co-Chairman, “The Biomolecular Interface: Interactions with Cell Membrane and Cell Wall Mimetics,” ACS Spring Meeting, San Diego, CA, March 15, 2005.

Session Co-Chairman, “The Biomolecular Interface: Panel Discussion – Overviews of Posters,” ACS Spring Meeting, San Diego, CA, March 15, 2005.

Session Chairman, “The Biomolecular Interface: poster – molecular surfaces : lipids, ligands, and cells,” ACS Spring Meeting, San Diego, CA, March 13, 2005.

Session Co-Chairman, “The Biomolecular Interface: poster – general biointerfaces,” ACS Spring Meeting, San Diego, CA, March 14, 2005.

Session Chairman, “Biofluids and Complex Fluids,” AIChE Annual Meeting, Austin, TX, November, 2004.

Session Co-Chairman, “Fundamental Research in Fluid Mechanics: Microscale Flows,” AIChE Annual Meeting, Austin, TX, November, 2004.

Session Chairman, “Advances in Numerical and Statistical Methods Education,” International Conference on Engin. Education and Research, Olomouc, Czech Republic, June 28, 2004.

Session Chairman, “Biological Systems,” Second International Conference on Microchannels and Minichannels (Sponsored by ASME International), Rochester, NY, June 19, 2004.

Session Chairman, “Novel Fabrication Methods for Microchannels and Minichannels”, First International Conference on Microchannels and Minichannels (Sponsored by ASME International), Rochester, NY, April 25, 2003.

Session Co-Chairman, "General Papers in Fluid Mechanics,” AIChE Annual Meeting, Indianapolis, IN, November 7, 2002.

Session Chairman, “Drug Encapsulation: Controlled Drug Release,” ACS 74th Colloid and Surface Science Symposium, Lehigh University, June 2000.

Grant Review Panels
2004, *Review Panel Member*, NSF SBIR/STTR: Computational Bioengineering and Biometrics.
2005, *Review Panel Member*, NASA Multiphase Flow and Heat Transfer.
2006, *Review Panel Member*, NSF SBIR/STTR: Chemical Based Technologies – Fluid Flow
2009, *Review Panel Member,* NIH Enabling Bioanalytical and Biophysical Technol. Regular Study Section (EBT)
2009, *Review Panel Member,* NSF Chemical, Bioengineering, Environmental, and Transport Systems
2010, 2011, *Review Panel Member*, NIH Tumor Microenvironment Regular Study Section (TME)
2011, *Review Panel Member*, NSF-NCI Special Panel on Physical and Engineering Sciences in Oncology
2012, *Review Panel Member*, NIH NIBIB Special Emphasis Panel on Multiscale Modeling
2012, *Review Panel Member*, P41 Site-Visit Review Meeting, Multiscale Modeling
2012, *Review Panel Member*, American Heart Association
2012, *Review Panel Member,* NIH Bioengineering, Technology, and Surgical Sciences Regular Study Section (BTSS)
2013, *Review Panel Chairman*, P41 Review Meeting, Multiscale Modeling
2013, *Review Panel Member*, NCI Special Emphasis Panel, Provocative Questions – Group C
2013, *Review Panel Member*, NIH Tumor Cell Biology (TCB) Regular Study Section
2014, *Review Panel Member*, NIH Pregnancy & Neonatology (PN) Regular Study Section
2014, *Review Panel Member*, NIH Physical Sciences Oncology Centers Special Emphasis Panel
2015, 2016 *Review Panel Member,* NIH Bioengineering Research Partnership (BRP)
2017, *Review Panel Member*, NIH Innovative Molecular Analysis Technologies (IMAT)
2017, *Review Panel Member*, NIH Nanotechnology (NANO)
2018, *Review Panel Member*, NIH Bioengineering Research Partnership (SBIB-H55)
2019, *Review Panel Member*, NIH-NIBIB ImmuneChip: Engineering Microphysiological Immune Tissue Platforms U01
2020, *Review Panel Member,* NIH Interdisciplinary Molecular Sciences and Training Member Conflict study section
2020, *Co-Chair,* NIH Special Emphasis Panel on Innovative Molecular Analysis Technologies (IMAT)
2021, *Review Panel Member*, NIH-NCI Biospecimen Science Technologies for Basic and Clinical Cancer Research Special Emphasis Panel
2022, *Review Panel Member*, ZRG1 IMST-J (02) Interdisciplinary Molecular Sciences and Training Member Conflict study section
2022, *Review Panel Member*, Special Emphasis Panel (SEP) for the review of NCI's 2022 Loan Repayment Program (LRP)
2022, *Chair*, NIH Innovative Molecular Analysis Technologies (IMAT) Program
2023, *Chair,* NIH ZRG1 MCST (02) Member Conflict study section
2023, *Review Panel Member*, NSF Biomechanics and Mechanobiology CAREER Award Review Panel
2024, *Chair*, NIH Innovative Molecular Analysis Technologies (IMAT) Program
2025, *Review Panel Member*, NIH Innovative Molecular Analysis Technologies (IMAT) Program
2025, *Review Panel Member,* NIH Special Topics: Basic and Translational Cancer Research (R03&R21)

Journal Editorial Boards
2011 – Present, *Associate Editor*, Frontiers in Oncology, Special Topic Editor: *Therapeutic Targeting of Circulating Tumor Cells.*
2011 – 2013, Guest Associate Editor, Annals of Biomedical Engineering, including Special Issue on Multiscale Systems Biology.
2013 – Present, *Editorial Board*, Journal of Bionic Engineering
2013 – Present, *Editorial Board*, EPJ Nonlinear Biomedical Physics – Physics in Cancer and Oncology Section
2013 – Present, *Editorial Board*, Journal of Visualized Experiments (JoVE) – Bioengineering Section

2017 – Present, *Editorial Board,* Biorheology

Referee
2024, Poster Judge, Cellular and Molecular Bioengineering Conference, San Juan, Puerto Rico, January 2024
2023, Poster Judge, NCI Tissue Engineering Collaborative Annual Investigators' Meeting, Portland, OR, August 2023
2023, Book proposal reviewer, Springer-Nature, Computer Science
2021, Ad hoc reviewer, NSF PMP-Particulate and Multiphase Processes**,** Directorate for Engineering
2013, *Ad hoc reviewer*, NIH Tumor Cell Biology (TCB) Study Section
2013, *Proposal reviewer*, German-Israel Foundation for Scientific Research and Development
2012, *Proposal reviewer*, Health Research Board, Ireland
2012, *Proposal reviewer*, U.S.-Israel Binational Science Foundation
2011, *Mail reviewer*, NIH Small Business: Cell, Computational, and Molecular Biology
2011, *Proposal reviewer*, Romanian National Research Council
2009, *Proposal reviewer*, Univ. of South Carolina EPSCoR and IDEA Programs
2009, *Review panel*, Integrated Research Program, Nanobiotechnology Center, Cornell University
2008, *Proposal reviewer*, NASA ARMD Innovations in Aeronautics Instruction
2007, *Proposal reviewer*, NASA Experimental Program to Stimulate Competitive Research (EPSCoR)
2007, *Ad hoc reviewer,* Research Council of Norway
2007, *Ad hoc reviewer,* Natural Sciences and Engineering Research Council of Canada (NSERC)
2006, *Ad hoc reviewer,* NSF Chemical Based Technologies.
2006, *Ad hoc reviewer,* Natural Sciences and Engineering Research Council of Canada (NSERC)
2006, *Ad hoc reviewer*, Israel Science Foundation.
2005, *Ad hoc reviewer*, NSF BES – Biotechnology.
2005, *Ad hoc reviewer*, Medical Research Council, U.K.
2005, *Ad hoc reviewer,* NSF BES – Biochemical Engineering.
2004 – 2005, *Proposal reviewer* for Phillip Morris External Research Program.
2007, *Book reviewer* of Innovations 2007: World Innovations in Engineering Education and Research, edited by Win Aung, iNEER.
2004, *Book reviewer* of Innovations 2005: World Innovations in Engineering Education and Research, edited by Win Aung, iNEER.
2004, 2007, *Proposal reviewer* for the Baker Fund, Ohio University Research Committee.
2003, *Book reviewer* of Basic Transport Phenomena in Biomedical Engineering by R.L. Fourier, Taylor & Francis.
2003, *Book reviewer* of Applied Numerical Methods with MATLAB for Engineers and Scientists by S. Chapra, McGraw-Hill.
2003, *Book reviewer* of Bioengineering Fundamentals by Saterbak, San, and McIntire, Prentice Hall.
2002, *Proposal reviewer* for Biomedical Research Council, Singapore.
2007, *Professorial Review Board*, Journal of Undergraduate Research (JUR), University of Rochester
1999 – Present, *Paper reviewer* for ACS Nano, Acta Biomaterialia, American Journal of Physiology, The Analyst, Analytical Chemistry, Annals of Biomedical Engineering (>25 ms), ASEE New Engineering Educator, Biomacromolecules, Biomaterials, Biomechanics and Modeling in Mechanobiology, Biomedical Microdevices, Biophysical Journal (>30 ms), Biorheology, Bioscience Reports, BioTechniques, Biotechnology and Bioengineering, Biotechnology Progress, Cell Biochemistry and Biophysics, Cancer Epidemiology, Biomarkers and Prevention, Cancer Investigation, Cellular and Molecular Bioengineering, Chemical Physics Letters, Computer Methods in Applied Mechanics and Engineering, European Biophysical Journal, Expert Review of Hematology, Frontiers in Oncology, Industrial & Engineering Chemistry Research, Integrative Biology, International Journal of Multiphase Flow, Journal of Adhesion, Journal of Biomechanical Engineering, Journal of Biomedical Materials Research, Journal of Biophotonics, Journal of Cell Science, Journal of Cellular Biochemistry, Journal of Fluid Mechanics, Journal of Leukocyte Biology, Journal of Physiology, Journal of Proteome Research, Journal of Reproductive Immunology, Journal of the Royal Society Interface, Journal of Theoretical

Biology, Journal of Thrombosis and Haemostasis, Journal of Translational Medicine, Journal of Visualized Experiments (JoVE), Lab on a Chip, Langmuir, Mathematical Biosciences, Medical Engineering & Physics, Microfluidics and Nanofluidics, Molecular BioSystems, Molecular Carcinogenesis, Nature Communications, Nature Medicine, Nature Nanotechnology, New Journal of Physics, Physical Biology, Physics of Fluids, Proceedings of the National Academy of Sciences of the USA, Scientific Reports, Sensors & Actuators: B. Chemical, Stem Cell Reviews, Theoretical Biology and Medical Modelling, Transactions on Biomedical Engineering, Translational Oncology, Translational Research, and many more.

PATENTS (4 awarded, several pending)

1. King, M.R., T.B. Jones, O. Lomakin, and R. Ahmed. "Rapid Flow Fractionation of Particles Combining Liquid and Particulate Dielectrophoresis." U.S. Patent No. 7,267,752 issued 9/11/07.

2. King, M.R., N. Charles J. Liesveld, J.P. Gentile, N.A. Clark, N.A. Mody. "Continuous Flow Chamber Device for Separation, Concentration and/or Purification of Cells." U.S. Patent No. 7,892,766, issued 2/22/11.

3. King, M.R., D.G. Foster, W. Han, and B.A. Allio. "Device and Method for Separation, Concentration, and/or Purification of Cells." U.S. Patent No. 8,399,205 issued 3/19/13.

4. King, M.R., M.J. Mitchell, K. Rana, E.C. Wayne, C.B. Schaffer, and S. Chandrasekaran. "Method to functionalize cells in human blood, other fluids and tissues using nanoparticles." U.S. Patent No. 10,391,146 issued 8/27/19.

5. DeLouise, L., U.-B.T. Giang, and M.R. King. "Microfluidic Device and Method of Manufacturing the Microfluidic Device." U.S. Patent Application, no. 20090075361, filed March 19, 2009.

6. King, M.R., and Z. Huang. "Compositions and methods for delivery of molecules to selectin-ligand-expressing and selectin-expressing cells." U.S. Patent Application, no. 20100151573, filed June 17, 2010.

7. King, M.R., and A. Hughes. "Fluid Flow Device Containing Nanotubes and Method for Cell Trafficking Using Same." U.S. Patent Application, no. 20120252116, filed October 4, 2012.

8. King, M.R. and T. Cao. "Use of DNA netosis to deliver TRAIL for cancer therapy." U.S. Patent application, no. 16/364,903, filed October 3, 2019.

9. King, M.R. and N. Jyotsana. "Cells Engineered for Co-Expression of Decoy Receptor 1 and TNF-Related Apoptosis-Inducing Ligand and uses Therefor." U.S. Patent application, no. 20210338738, filed November 4, 2021.

10. King, M.R., J.M. Hope, J.A. Dombroski, and N.S. Sarna. "Fluid shear stress for ex vivo activation of immune effector cells." U.S. Patent application, filed June 17, 2022.

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1. Principles of Cellular Engineering: Understanding the Biomolecular Interface, M.R. King (Ed.), Academic Press (Elsevier), New York, 2006.

Reviewed in: [Shock 26:107-109 (2006)]

2. Proceedings of the Third International Conference on Microchannels and Minichannels, M.R. King (co-Editor), ASME International, New York, 2005.

3. Multiscale Modeling of Particle Interactions: Applications in Biology and Nanotechnology, M.R. King and D.J. Gee (Editors), Wiley, Hoboken, NJ, 2010.

BOOKS AUTHORED

1. S. Kandlikar, S. Garimella, D. Li, S. Colin, and M.R. King. (2005). Heat Transfer and Fluid Flow in Minichannels and Microchannels, Elsevier Science, New York.
Reviewed in: [Heat Transfer Engineering 27:63-65 (2006)]

2. M.R. King and N.A. Mody. (2010). Numerical and Statistical Methods for Bioengineering: Applications in Matlab, Cambridge University Press.

3. S. Kandlikar, S. Garimella, D. Li, S. Colin, and M.R. King. (2014). Heat Transfer and Fluid Flow in Minichannels and Microchannels, Second Edition, Butterworth-Heinemann, Waltham, MA.

PEER-REVIEWED JOURNAL PUBLICATIONS

1. King, M.R., and D.T. Leighton, Jr. (1997). "Measurement of the inertial lift on a moving sphere in contact with a plane wall in a shear flow," Physics of Fluids 9:1248-1255.

2. King, M.R., D.T. Leighton, Jr., and M.J. McCready. (1999). "Stability of oscillatory two-phase Couette flow: theory and experiment," Physics of Fluids 11:833-844.

3. King, M.R., and M.J. McCready. (2000). "Weakly nonlinear simulation of planar stratified flows," Physics of Fluids 12:92-102.

4. King, M.R., and D.T. Leighton, Jr. (2001). "Measurement of shear-induced dispersion in a dilute emulsion," Physics of Fluids 13:397-406.

5. King, M.R., S.D. Rodgers, and D.A. Hammer. (2001). "Hydrodynamic collisions suppress fluctuations in the rolling velocity of adhesive blood cells," Langmuir 17:4139-4143.

6. King, M.R., and D.A. Hammer. (2001). "Multiparticle Adhesive Dynamics. Interactions between stably rolling cells," Biophysical Journal 81:799-813.

7. King, M.R., and D.A. Hammer. (2001). "Multiparticle Adhesive Dynamics: Hydrodynamic recruitment of rolling cells," Proceedings of the National Academy of Sciences of the USA 98:14919-14924.

8. Bhatia, S.K., M.R. King, and D.A. Hammer. (2003). "The state diagram of leukocyte adhesion mediated by two receptors," Biophysical Journal 84:2671-2690.

9. King, M.R., and D.A. Hammer. (2003). "Hydrodynamic recruitment of rolling cells in vitro," Biophysical Journal 84:4182.

10. King, M.R., M.B. Kim, I.H. Sarelius, and D.A. Hammer. (2003). "Hydrodynamic Interactions Between Rolling Leukocytes In Vivo," Microcirculation 10:401-409.

11. King, M.R. (2004). "Apparent 2-D Diffusivity in a Ruffled Cell Membrane," Journal of Theoretical Biology 227:323-326.

12. King, M.R., D. Bansal, M.B. Kim, and I.H. Sarelius. (2004) "The Effect of Hematocrit and Leukocyte Adherence on Flow Direction in the Microcirculation," Annals of Biomedical Engineering 32:803-814.

13. King, M.R. (2004). "Scale Invariance in Selectin-Mediated Leukocyte Rolling," Fractals 12:235-241.

14. Lomakina, E.B., C.M. Spillmann, M.R. King, and R.E. Waugh. (2004). "Rheological analysis and measurement of neutrophil indentation," Biophysical Journal 87:4246-4258.

15. Mody, N.A., O. Lomakin, T.A. Doggett, T.G. Diacovo, and M.R. King. (2005). "Mechanics of transient platelet adhesion to von Willebrand factor under flow," Biophysical Journal 88:1432-1443.

16. King, M.R., O. Lomakin, R. Ahmed, and T.B. Jones. (2005). "Size-selective deposition of particles combining liquid and particulate dielectrophoresis," Journal of Applied Physics 97 Art. 054902.

17. King, M.R. (2005). "Fractal analysis of eight glacial cycles from an Antarctic ice core," Chaos, Solitons, and Fractals 25:5-10.

18. King, M.R., V. Heinrich, E. Evans, and D.A. Hammer. (2005). "Nano-to-Micro Scale Dynamics of P-selectin Detachment from Leukocyte Interfaces: III. Numerical Simulation of Tethering Under Flow," Biophysical Journal 88:1676-1683.

19. King, M.R., A.D. Ruscio, M.B. Kim, and I.H. Sarelius. (2005). "Interactions Between Stably Rolling Leukocytes In Vivo," Physics of Fluids 17 Art. 031501.
* selected for the March 1, 2005 issue of the Virtual Journal of Biological Physics Research.

20. King, M.R., R. Sumagin, Chad E. Green, and S.I. Simon. (2005). "Rolling dynamics of a neutrophil with redistributed L-selectin," Mathematical Biosciences 194:71-79.

21. King, M.R. (2005). "Cell-Surface Adhesive Interactions in Microchannels and Microvessels," Microscale Thermophysical Engineering 9:255-264.

22. Lamkin-Kennard, K., J. Cheung, M.B. Kim, I.H. Sarelius, and M.R. King. (2005). "The distribution of rolling neutrophils in venular convergences," Biorheology 42:363-383.

23. Mody, N., and M.R. King. (2005). "Three-dimensional simulations of a platelet-shaped spheroid near a wall in shear flow," Physics of Fluids 17:113302-(1-12).
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24. King, M.R. (2006). "Anisotropic Brownian diffusion near a nanostructured surface," Journal of Colloid and Interface Science 296:374-376.

25. King, M.R. (2006). "Chemical Engineers at the Frontiers of Computational Biology," Molecular Simulation 32:191-192.

26. Lamkin-Kennard, K., A.L. Lerner, and M.R. King. (2007). "Teaching biomedical engineering ethics in the context of statistics," International Journal of Engineering Education 23:184-191.

27. Caputo, K., D. Lee, M.R. King, and D.A. Hammer. (2007). "Adhesive dynamics simulations of the shear threshold effect for leukocytes," Biophysical Journal 92:787-797.

28. Nash, G., J.J. Zwaginga, M.R. King, J.W. Heemskerk, M. Frojmovic, M. Hoylaerts, and K.S. Sakariassen. (2006). "Flow-based assays for global assessment of hemostasis. Part 1: biorheologic considerations," Journal of Thrombosis and Haemostasis 4:2486-2487.

29. Zwaginga J.J., K.S. Sakariassen, G. Nash, M.R. King, J.W. Heemskerk, M. Frojmovic, M. Hoylaerts. (2006). "Flow-based assays for global assessment of hemostasis. Part 2: current methods and considerations for the future," Journal of Thrombosis and Haemostasis 4:2716-2717.

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31. Mody N.A., and M.R. King. (2007). "Influence of Brownian Motion on Blood Platelet Flow Behavior and Adhesive Dynamics near a Planar Wall," Langmuir 23:6321-6328.

32. King M.R. (2007) "Oscillatory gas flow in a circular nanotube," Open Nanoscience Journal 1:1-4.

33. King M.R. (2007) "Do blood capillaries exhibit optimal bumpiness?" Journal of Theoretical Biology 249:178-180.

34. Charles N., J.L. Liesveld, and M.R. King. (2007). "Investigating the feasibility of stem cell enrichment mediated by immobilized selectins," Biotechnology Progress 23:1463-1472.

35. Lee, D., and M.R. King. (2007). "Shear-Induced Capping of L-Selectin on the Neutrophil Surface During Centrifugation," Journal of Immunological Methods 328:97-105.

36. Hong, S., D. Lee, H. Zhang, J. Zhang, J. Resvick, A. Khademhosseini, M.R. King, R. Langer, and J. Karp. (2007). "Covalent immobilization of P-selectin enhances cell rolling," Langmuir 23:12261-12268.

37. Narasipura, S.D., J.C. Wojciechowski, N. Charles, J.L. Liesveld, and M.R. King. (2008). "P-selectin-coated microtube for enrichment of CD34+ hematopoietic stem and progenitor cells from human bone marrow," Clinical Chemistry 54:77-85.

38. Giang, U.-B.T., D. Lee, M.R. King, and L.A. DeLouise. (2007). "Microfabrication of Cavities in Polydimethylsiloxane Using DRIE Silicon Molds," Lab on a Chip 7:1660-1662.

39. Zwaginga, J.J., K.S. Sakariassen, M.R. King, T.G. Diacovo, E.F. Grabowski, G. Nash, M. Hoylaerts, J.W. Heemskerk; Biorheology Subcommittee of the SSC of the ISTH. (2007). "Can blood flow assays help to identify clinically-relevant differences in von Willebrand factor functionality in von Willebrand disease types 1-3?" Journal of Thrombosis and Haemostasis 5:2547-2549.

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42. Sumagin, R., C. Brown, I.H. Sarelius, and M.R. King. (2008). "Microvascular endothelial cells exhibit optimal aspect ratio for minimizing flow resistance," Annals of Biomedical Engineering 36:580-585 (invited paper for Special Issue honoring Prof. Harry Goldsmith).

43. Mody, N.A., and M.R. King. (2008). "Platelet Adhesive Dynamics. I. Characterization of Platelet Hydrodynamic Collisions and Wall Effects," Biophysical Journal 95:2539-2555.

44. Mody, N.A., and M.R. King. (2008). "Platelet Adhesive Dynamics. II. High Shear-Induced Transient Aggregation via GPIbα-vWF-GPIbα Bridging," Biophysical Journal 95:2556-2574.

45. Narasipura, S.D., J.C. Wojciechowski, B.M. Duffy, J.L. Liesveld, and M.R. King. (2008). "Purification of CD45+ hematopoietic cells directly from human bone marrow using a flow-based P-selectin-coated microtube," American Journal of Hematology 83:627-629.

46. Lee, D., and M.R. King. (2008). "Microcontact Printing of P-Selectin Increases the Rate of Neutrophil Recruitment Under Shear Flow," Biotechnology Progress 24:1052-1059.

47. Giang, U.-B.T., M.R. King, and L.A. DeLouise. (2008). "Microfabrication of bubbular cavities in PDMS for cell sorting and microcell culture applications," Journal of Bionic Engineering 5:308-316.

48. King, M.R., and Y.Y. Yan. (2008). "Selected papers from the 5th International Conference on Nanochannels, Microchannels, and Minichannels," Journal of Bionic Engineering.

49. Rana, K., J.L. Liesveld, and M.R. King. (2009). "Delivery of apoptotic signal to rolling cancer cells: a novel biomimetic technique using immobilized TRAIL and E-selectin," Biotechnology and Bioengineering 102:1692-1702.
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50. Narasipura, S.D., and M.R. King. (2009). "P-selectin-coated microtube for the purification of CD45+ hematopoietic cells directly from human peripheral blood," Blood Cells, Molecules, and Diseases 42:136-139.

51. Agastin, S., M.R. King, and T.B. Jones. (2009). "Rapid separation of biomolecules using liquid and particulate dielectrophoresis," Lab on a Chip 9:2319-2325.

52. Lee, D., K. Caputo, D.A. Hammer, and M.R. King. (2009). "Adhesive dynamics simulation of mechanical shedding of L-selectin from the neutrophil surface," Journal of Theoretical Biology 260:27-30.

53. Huang, Z., and M.R. King. (2009). "An immobilized nanoparticle-based platform for efficient gene knockdown of targeted cells in the circulation," Gene Therapy 16:1271-1282.

54. King, M.R., L. Western, K. Rana, and J.L. Liesveld. (2009). "Biomolecular surfaces for the capture and reprogramming of circulating tumor cells," Journal of Bionic Engineering 6:311-317.

55. Spinelli, S.L., A.E. Casey, S.J. Pollock, J.M. Gertz, D.H. McMillan, S.D. Narasipura, N.A. Mody, M.R. King, S.B. Maggirwar, C.W. Francis, M.B. Taubman, N. Blumberg, R. Phipps. (2010). "Platelets

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57. Yin, X., K. Rana, V. Ponmudi, and M.R. King. (2010). "Knockdown of fucosyltransferase III disrupts the adhesion of a circulating cancer cell line to E-selectin without affecting hematopoietic cell adhesion," Carbohydrate Research 345:2334-2342.

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INVITED BOOK CHAPTERS AND ARTICLES

Short (1-8 page) Articles

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3. King, M. R. (2004). "Thrombocytopenia," in Magill's Medical Guide, Third Revised Edition, edited by T. Irons-Georges, Salem Press, pp. 2551-2553.

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Chapters

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3. Mody, N., and M.R. King. (2005). "Platelet adhesive dynamics," in Principles of Cellular Engineering: Understanding the Biomolecular Interface, edited by M.R. King, Academic Press (Elsevier), New York.

4. Lee, D., and M.R. King. (2005). "Hydrodynamic recruitment of cells to surfaces," in Principles of Cellular Engineering: Understanding the Biomolecular Interface, edited by M.R. King, Academic Press (Elsevier), New York.

5. M.R. King and N.A. Mody. (2010). "Convection and Receptor-Mediated Adhesion of Blood Platelets," in Computational Hydrodynamics of Capsules and Biological Cells, edited by C. Pozrikidis, Chapman & Hall/CRC.

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7. S. Narasipura and M.R. King. (2011). "Biomaterial surfaces for the isolation of hematopoietic stem and progenitor cells," in Engineering Biomaterials for Regenerative Medicine, edited by S.K. Bhatia, Springer Academic Publishing.

8. J.R. Marshall and M.R. King. (2016). "Selectin-mediated targeting of circulating tumor cells for isolation and treatment," in Circulating Tumor Cells: Isolation and Analysis, edited by Z. Hugh Fan, John Wiley & Sons.

PUBLISHED BOOK REVIEWS

1. "Statistics Explained: An Introductory Guide for Life Scientists," by Steve McKillup. Reviewed by M.R. King, *CHOICE Magazine*, 2006.

2. "Mathematics & Statistics for Life Scientists," by Aulay Mackenzie. Reviewed by M.R. King, *CHOICE Magazine*, 2006.

3. "Medicine by Design: The Practice and Promise of Biomedical Engineering," by Fen Montaigne. Reviewed by M.R. King, *CHOICE Magazine*, 2006.

4. "The Gecko's Foot: Bio-Inspiration – Engineering New Materials From Nature," by Peter Forbes. Reviewed by M.R. King, *CHOICE Magazine,* 2006.

5. "MATLAB Guide to Finite Elements: An Interactive Approach," by Peter Kattan. Reviewed by M.R. King, *CHOICE Magazine,* 2007.

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7. "Perry's Chemical Engineers' Handbook," edited by Don W. Green and Robert H.Perry. 8th Edition. Reviewed by M.R. King, *CHOICE Magazine,* 2008.

8. "Fundamentals of the stem cell debate: the scientific, religious, ethical, and political issues," edited by Kristen Renwick Monroe, Ronald B. Miller, and Jerome S. Tobis. Reviewed by M.R. King, *CHOICE Magazine*, 2008.

9. "Programming for chemical engineers using C, C++, and Matlab," by Raul Raymond Kapuno, Jr. Reviewed by M.R. King, *CHOICE Magazine*, 2008.

10. "Introduction to Biomedical Instrumentation: The technology of patient care," by Barbara L. Christe. Reviewed by M.R. King, *CHOICE Magazine*, 2009.

11. "Biomedical Engineering: Bridging Medicine and Technology," by W. Mark Saltzman. Reviewed by M.R. King, *CHOICE Magazine*, 2009.

12. "Biodesign: The Process of Innovating Medical Technologies," by Zenios, Makower and Yock. Reviewed by M.R. King, *CHOICE Magazine*, 2010.

13. "Bulletproof Feathers: How Science Uses Nature's Secrets to Design Cutting-Edge Technology," by Robert Allen. Reviewed by M.R. King, *CHOICE Magazine*, 2010.

14. "A Student's Guide to Data and Error Analysis," by Herman J.C. Berendsen. Reviewed by M.R. King, *CHOICE Magazine*, 2011.

15. "Comprehensive Biomaterials Vol. 1 – 6," ed. By Paul Ducheyne with K.E. Healy et al. Reviewed by M.R. King, *CHOICE Magazine*, 2011.

16. "Biosimulation: Simulation of Living Systems," by Daniel A. Beard. Reviewed by M.R. King, *CHOICE Magazine*, 2012.

17. "Extreme Tissue Engineering," by Robert A. Brown. Reviewed by M.R. King, *CHOICE Magazine, 2013*.

18. “Introductory fluid mechanics for physicists and mathematicians,” by Geoffrey J. Pert. Reviewed by M.R. King, *CHOICE Magazine*, 2013.

19. “From X-rays to DNA: how engineering drives biology,” by W. David Lee, with Jeffrey Drazen, Phillip A. Sharp, and Robert S. Langer. Reviewed by M.R. King, *CHOICE Magazine*, 2014.

20. “Computational Bioengineering,” Edited by Guigen Zhang. Reviewed by M.R. King, *CHOICE Magazine*, 2016.

21. “Optimization in chemical engineering,” by Suman Dutta. Reviewed by M.R. King, *CHOICE Magazine*, 2016.

22. “Numerical methods in engineering with MATLAB,” by Jaan Kiusalaas. Reviewed by M.R. King, *CHOICE Magazine*, 2016.

23. “Empirical Modeling and Data Analysis for Engineers and Applied Scientists,” by Scott A. Pardo. Reviewed by M.R. King, *CHOICE Magazine*, 2016.

24. “Understanding Batch Chemical Processes: Modelling and Case Studies,” by Thokozani Majozi, Esmael R. Seid, and Jui-Yuan Lee. Reviewed by M.R. King, *CHOICE Magazine*, 2017.

25. “Basic Experimental Strategies and Data Analysis for Science and Engineering,” by John Lawson and John Erjavec. Reviewed by M.R. King, *CHOICE Magazine*, 2018.

26. “Bioinspired Devices: Emulating Nature’s Assembly and Repair Process,” by Eugene C. Goldfield. Reviewed by M.R. King, *CHOICE Magazine*, 2018.

27. “MATLAB essentials: a first course for engineers and scientists,” by William Bober. Reviewed by M.R. King, *CHOICE Magazine*, 2019.

28. “MATLAB Handbook with Applications to Mathematics, Science, Engineering, and Finance,” by David Baez-Lopez and David Alfredo Baez Villegas. Reviewed by M.R. King, *CHOICE Magazine*, 2019.

29. “The Digital Cell: Cell Biology as a Data Science,” by Stephen J. Royle. Reviewed by M.R. King, *CHOICE Magazine*, 2020.

30. “Nanocarriers for brain targeting: principles and applications,” edited by Raj K. Keservani, Anil K. Sharma, and Rajesh K. Kesharwani. Reviewed by M.R. King, *CHOICE Magazine*, 2020.

31. “Applications of Encapsulation and Controlled Release,” by Munmaya K. Mishra. Reviewed by M.R. King. *CHOICE Magazine*, 2020.

32. “Blood Relations: Transfusion and the Making of Human Genetics,” by Jenny Bangham. Reviewed by M.R. King. *CHOICE Magazine,* 2021.

33. “Theory and Applications of Colloidal Suspension Rheology,” edited by Normal J. Wagner and Jan Newis. Reviewed by M.R. King. *CHOICE Magazine*, 2021.

34. “Modern mechanobiology: convergence of biomechanics, development and genomics,” edited by Tzung K. Hsiai et al. Reviewed by M.R. King. *CHOICE Magazine*, 2021.

35. “Biomedical Measurement Systems and Data Science,” by Michael Insana. Reviewed by M.R. King. *CHOICE Magazine*, 2022.

36. “Bioengineering and biomaterials in ventricular assist devices,” edited by Eduardo Guy Perpetuo Bock. Reviewed by M.R. King. *CHOICE Magazine*, 2022.

37. “Multiphysics modeling with application to biomedical engineering,” by Z. Yang. Reviewed by M.R. King. *CHOICE Magazine*, 2022.

38. “Nanoscale Hydrodynamics of Simple Systems,” by Jesper Schmidt Hansen. Reviewed by M.R. King. *CHOICE Magazine*, 2023.

39. “Computational and Statistical Methods for Chemical Engineering,” by Wim P. Krijnen and Ernst C. Wit. Reviewed by M.R. King. *CHOICE Magazine*, 2023.

40. “How the world flows: Microfluidics from raindrops to COVID tests,” by Albert Folch. Reviewed by M.R. King. *CHOICE Magazine*, 2025.

13. Invited Presentations

2025
“High throughput studies of the mechanotransduction of cancer cell aggregates”
2025 Cancer TEC Annual Meeting, February 24-26, 2025, Miami, FL

“A nanomedicine approach to overcome drug resistance in metastatic colorectal cancer”
Cancer Bioengineering Workshop, July 11, 2025, Rice University

“Superhydrophobic nanostructures for the high throughput culture of cancer cell aggregates”
Advances in Tissue Engineering 32st Annual Short Course, August 13 – 16, 2025, Rice University, Houston TX

“The future is ~~near~~ here: Responsible use of AI in biomedical research and publishing”
Clinician Scientist Radiology Residency program, University of California, San Diego

“The impact of AI in biomedical engineering innovation: A conversation with clinicians and biomedical engineers”
Conference Keynote II, Biomedical Engineering Society 2025 Annual Meeting, San Diego, California, October 8 – 12, 2025

“Cellular delivery of TRAIL to metastatic cells: A brief history and future outlook”
Keynote talk, NanoDDS 2025, Houston, TX, October 27-28, 2025

“The future is ~~near~~ here: Responsible use of AI in biomedical research and publishing”
AI Summit, Oregon Health Sciences University, Portland, OR, November 21, 2025

“Artificial Intelligence and Ethics”
Methodist Association for Postdoc and Trainee Affairs event, November 24, 2025

2024
“Chris Jacobs Award Lecture: Cellular and Molecular Mechanobiology of Cancer and Immune Cells”
Cellular and Molecular Bioengineering Conference, San Juan, Puerto Rico, January 2 – 6, 2024

"The effect of fluid forces on cancer and immune cells"
Tissue Microenvironment (TiME) Day Symposium, University of Illinois Urbana-Champaign, April 2 – 3, 2024

"Superhydrophobic nanostructures for the high throughput culture of cancer cell aggregates"
Advances in Tissue Engineering 31st Annual Short Course, August 14 – 17, 2024, virtual on Zoom

"Ion channels in cancer mechanotransduction"
NCI Conference on Bioelectricity and Cancer, Thursday, September 12, 2024, virtual on Zoom

2023
"Use of Generative AI in Research"
ASME Webinars on Generative Artificial Intelligence, November 9, 2023, online Zoom presentation.

"Open AI Tools for Innovative Research: Can ChatGPT formulate academic research questions?"
Research Development and Innovation Authority (RDIA) of Saudi Arabia Webinar, November 2, 2023, online Microsoft Teams presentation.

"The shear force is all around us: Mechanotransduction of cancer and immune cells in fluid flow"
Cell & Tissue Mechanics Special Interest Group, Sage Bionetworks, online Zoom presentation, September 14, 2023

"Enabling Technology to Study Mechanosensitive and Mechanoresistant Cancer Cells in Flow"
NCI Patient-Derived Models of Cancer (PDMC) and Cancer Tissue Engineering Collective (TEC) Joint Annual Meeting, August 30 - September 1, 2023, OHSU Knight Cancer Center, Portland, Oregon

"The Roles of Drug Resistance and Membrane Lipid Structure on Cell Mechanotransduction and Survival in Advanced Colorectal Cancer"
15th Annual Next Generation Dx Summit, Washington, D.C., August 21-23, 2023.

"Nanotechnology to exploit the mechanical response of prostate cancer cells"
American Urological Association Board of Directors Meeting, Fort Lauderdale, FL, February 4, 2023

2021
"Enhanced T cell activation via fluid shear stress acting on Piezo1"
Plenary Talk at the Three Societies meeting of the European Society of Clinical Hemorheology and Microcirculation, International Society of Clinical Hemorheology and The International Society of Biorheology, Fukuoka, Japan (held virtually), July 4-7, 2021

"TRAIL-coated leukocytes that target circulating tumor cells in concert with fluid forces"
Keynote Lecture, American Association of Pharmaceutical Scientists (AAPS) Annaul Meeting and Exposition 2021, Philadelphia, PA, October 17-20, 2021.

2020
"Coronavirus (COVID-19) Return to Campus Plan"
BME Academic Council Fireside Chat, online webinar, May 29, 2020

"Circulating tumor cells as a possible indicator of systemic spread"
Vanderbilt Larynx Transplant Symposium, Nashville, TN, January 13, 2020.

"Cellular delivery of TRAIL to disseminating colorectal cancer cells in the circulation"

GI/Pancreas/NET/Liver Cancer SPORE Workshop, MD Anderson Cancer Center (virtually on Zoom), November 5-6, 2020.

"Nanoparticles to target and prevent cancer metastasis"
Wednesday's Webinar series, Controlled Release Society Italia, November 25, 2020

2019
"Drivers Wanted: Cellular Delivery of Anti-Cancer Therapeutics in the Circulation"
IAMBE Symposium on Grand Challenges in Biomedical Engineering, Pittsburgh, PA, September 19-20, 2019.

"Anti-cancer therapeutic inspired by the burr of the thistle plant"
6th International Conference of Bionic Engineering, Jilin University, China, September 23 – 26, 2019.

2017
"Shear stress survival and drug responses of circulating tumor cells"
3rd International Symposium on Mechanobiology, National University of Singapore, December 11 – 14, 2017.

2016
"Antibody-free capture of tumor cells from blood and novel CTC-targeting therapeutics"
Cambridge Healthtech Institute's 6th Annual Circulating Tumor Cells Conference, San Francisco, CA, March 7-9, 2016

"Synthetic and genetically engineered platelets for the therapeutic targeting of circulating tumor cells"
Annual SSC Meeting of the International Society on Thrombosis and Haemostasis, Montpellier, France, May 25–28, 2016

"Stabilization of the hinge region in human E-selectin enhances binding affinity to ligands under force"
Biomedical Engineering Society 2016 Annual Meeting, Minneapolis, MN, October 5–8, 2016

2015
"TRAIL-Mediated Apoptosis in Breast Cancer Stem Cells Cultured as 3D Spheroids"
Target Meeting 2015 Stem Cell Biology Online Conference, January 27-28, 2015

"Patient-specific tumor cell sensitivity to conventional and experimental therapeutics"
Pittcon Conference & Expo, New Orleans, LA, March 8 – 12, 2015.

"Platelets engineered to target tumor cell-associated microthrombi"
Experimental Biology 2015, Boston, MA, March 28 – April 1, 2015

"Unnatural Killer Cells: TRAIL-Coated Leukocytes that Kill Cancer Cells in the Circulation"
Plenary Talk, 41st Northeast Bioengineering Conference, Troy, NY, April 17 – 19, 2015

2014
"Fluid shear stress sensitizes cancer cells to receptor-mediated apoptosis via death receptors"
2nd Annual BMES–CMBE Conference on Cellular and Molecular Bioengineering, La Jolla, CA, January 7–11, 2014.

"Multiscale mechanotransduction of leukocytes and circulating tumor cells exposed to fluid shear stress"
International Workshop on Multiscale Mechanobiology, Hong Kong, May 15–18, 2014.

"Unnatural Killer Cells: TRAIL-coated leukocytes that kill cancer cells in the circulation"
60th Annual Meeting of the Scientific and Standardization Committee of the International Society on Thrombosis and Haemostasis, Milwaukee, WI, June 23 – 26, 2014.

"Unnatural Killer Cells: TRAIL-coated leukocytes that kill cancer cells in the circulation" – with Michael Mitchell
World Congress of Biomechanics, Boston, MA, July 6–11, 2014.

"Simulation of Platelet, Thrombus and Erythrocyte Hydrodynamic Interactions in a 3D Arteriole with In Vivo Comparison"
World Congress of Biomechanics, Boston, MA, July 6–11, 2014.

"Effect of extracellular pH on selectin adhesion: Theory and experiment"
World Congress of Biomechanics, Boston, MA, July 6–11, 2014.

"Transport and adhesion of tumor cells in the circulation"
Fluid Dynamics of Living Systems, Arlington, VA, September 15 – 16, 2014.

"A Multiscale Adhesive Dynamics Model to Study the Interaction of Nonspherical Neutrophils with the Endothelium" – with Anne Rocheleau
86th Annual Meeting of the Society of Rheology, Philadelphia, PA, October 5 – 9, 2014.

"Unnatural Killer Cells: TRAIL-coated leukocytes that kill cancer cells in the circulation"
iMed Conference 6.0, Lisbon, Portugal, October 10 – 12, 2014.

"Rolling in the deep: Tumor cell adhesion and treatment in the bloodstream"
NYMedTalks, New York, NY, November 25, 2014.

2013
"Rapid isolation of viable circulating tumor cells from patient blood samples" – with Andrew Hughes
The Society of Rheology 84th Annual Meeting, Pasadena, CA, February 10-14, 2013.

"Adhesion and apoptosis of tumor cells under fluid shear"
Experimental Biology, Boston, MA, April 20-24, 2013.

"Rolling in the deep: Tumor cell adhesion and treatment in the bloodstream"
Upstate NY AACC Annual Spring Meeting: Next Generation Diagnostics – Opportuntity and Evolving Challenges for the Clinical Laboratory, Rochester, NY, May 9-10, 2013.

"Nanoscale Roughness and Surface Charge Control E-selectin Mediated Adhesion and Isolation of Leukocytes Under Flow" – with Michael Mitchell
3rd Bilateral Cornell-EMSE Workshop on Bioelectronics, Porquerolles, France, June 10–14, 2013.

"Multiscale simulations of blood cell interactions with a microvascular thrombus"
International Society on Thrombosis and Haemostasis Biennial Congress, Biorheology Subcommittee of the Scientific and Standardization Committee, Amsterdam, NE, June 29 – July 9, 2013.

"Simulation of platelet, thrombus, and erythrocyte hydrodynamic interactions in a 3D arteriole with in vivo comparison"
17th Conference of the European Society for Clinical Hemorheology and Microcirculation, Pecs, Hungary, July 6 – 9, 2013.

"Simulation of platelet, thrombus and erythrocyte hydrodynamic interactions in a 3D arteriole with in vivo comparison"
Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

"Patient-specific drug efficacy analysis on circulating tumor cells captured from peripheral blood" – with Andrew Hughes
World Circulating Tumor Cell Summit, November 13 – 14, 2013, Boston, MA.

2012
"Nanobiotechnology for the capture and manipulation of circulating tumor cells"
Select Biosciences' Circulating Tumor Cells 2012, San Diego, CA February 2-3, 2012.

"E-selectin Liposomal and Nanotube-Targeted Delivery of Therapeutics to Circulating Tumor Cells" – with Michael Mitchell
14th International Congress of Biorheology and 7th International Conference on Clinical Hemorheology
July 4-7, 2012, Istanbul, Turkey

"Shear-Induced Resistance to Neutrophil Activation via the Formyl Peptide Receptor" – with Michael Mitchell
14th International Congress of Biorheology and 7th International Conference on Clinical Hemorheology
July 4-7, 2012, Istanbul, Turkey

"Nanobiotechnology for the capture and manipulation of circulating tumor cells"
The First NEMB Venice Workshop on Cancer Nanotechnology, October 11-12, 2012, Venice, Italy.

"Nanobiotechology for the capture and manipulations of circulating tumor cells" – with Andrew Hughes
6th World CTC Summit, November 13-15, 2012, Boston, MA.

2011
"Biomolecular surfaces for the study and manipulation of circulating tumor cells"
241st American Chemical Society National Meeting & Exposition, March 27-31, 2011, Anaheim, CA.

"Targeting circulating tumor cells in blood using selectin adhesion and natural halloysite nanotubes"
Cambridge Healthtech Institute's 4th Annual Emerging Molecular Markers of Cancer – Evaluating for Clinical Use.
August 23 – 24, 2011, Washington, D.C.

"When seeds stick: Selectin-mediated adhesion of circulating tumor cells to vascular endothelium"
2nd Annual NCI Physical Sciences Oncology Centers (PS-OCs) Network Investivators' Meeting
April 10 – 12, 2011, La Jolla, CA.

"Fluid forces and chemical adhesion of tumor cells in the bloodstream"
2011 Cancer Forum on Cancer Cell Motility and Metastasis, May 19 – 20, 2011, Tempe, AZ

2010
"Lessons learned from the measurement of bond kinetics under flow"
Scientific Standardization Committee of the International Society of Thrombosis and Haemostasis, May 25, 2010, Cairo, Egypt.

"Nanoparticle-coated microtubes for the manipulation of cancer cells"
8th Int. Conference on Nanochannels, Microchannels, and Minichannels, August 1-5, 2010, Montreal, Quebec.

"Nanoparticle coatings for enhanced capture of circulating cells"
3rd International Conference of Bionic Engineering, September 14-16, 2010, Zhuhai, China.

2009
"Isolation and study of circulating tumor cells"
Intercampus Prostate Cancer Research Symposium, January 16, 2009, Weill Medical College.

"Computational model of multiple elastic particles near a wall in a linear flow field"
237th American Chemical Society National Meeting, March 22-26, 2009, Salt Lake City, UT.

"Keynote Talk: Flow-Based Isolation and Neutralization of Circulating Tumor Cells"
7th International Conference on Nanochannels, Microchannels and Minichannels, June 22-24, 2009, Pohang, South Korea

"Biomolecular surfaces for the capture and reprogramming of circulating tumor cells" (Keynote Talk)
1st International Symposium on Biomimetic functional surfaces with fluid interactions (Biomimetic FSFI'09)
September 14 – 15, 2009, Nottingham, UK

2008
"Multiscale models of platelet and leukocyte adhesion in disturbed flows"
Upstate NY Cardiovascular Research Symposium, December 5, 2008, Rochester, NY.

"Mechanical shedding of L-selectin from the leukocyte surface: Theory and experiment" – (with Dooyoung Lee)
AIChE 2008 Annual Meeting, Philadelphia, PA, November 16-21, 2008.

"Flow-based isolation of circulating tumor cells using immobilized selectins" – (with Laura Western)
BMES Annual Meeting, October 4-6, 2008, St. Louis, MO

"Adhesive capture and reprogramming of circulating tumor cells"
Innovations in Nanotechnology for Cancer Research Symposium, September 26, 2008, Ithaca, NY

"Hydrodynamics and Leukocyte Adhesion in Microvessels: State of the Art"
Keynote Lecture, 6th International Conference on Nanochannels, Microchannels, and Minichannels, ASME International, Darmstadt, Germany, June 22-25, 2008.

"Determining the rate of formation of single adhesion bonds: the other half of the story"
54th Scientific and Standardization Committee Meeting, International Society on Thrombosis and Hemostasis, July 2-5, 2008, Vienna, Austria

"Multiscale model of receptor-mediated platelet-platelet aggregation under high shear flow"
Fifth International Bio-Fluid Symposium and Workshop, March 28-30, 2008, Pasadena, CA

"Mechanical shedding of L-selectin from the leukocyte surface: theory and experiment"
13th International Congress of Biorheology and 6th International Conference on Clinical Hemorheology
July 9-13, 2008, State College, Pennsylvania

"Micro- to nanoscale deformation of the cell surface during blood cell adhesion under flow"
Materials Science & Technology 2008 Conference, October 5-9, 2008, Pittsburgh, PA

2007
"The Cardiovascular Microenvironment" – (with Cynthia Reinhart-King and Keigi Fujiwara)

International Conference on Nanochannels, Microchannels, and Minichannels, Puebla, Mexico, June 18 – 20, 2007.

"Models of platelet tethering to vWF surfaces, and platelet-platelet aggregate formation under flow"
XXI Congress of the International Society on Thrombosis and Haemostasis, July 6-12, 2007, Geneva, Switzerland

"Multiscale model of receptor-mediated platelet-platelet aggregation under flow"
BMES Annual Meeting, Los Angeles, CA, September 26-29, 2007

"Blood Systems Biology"
First RFA Meeting of funded Systems Biology projects, September 5, 2007, National Heart, Lung, and Blood Institute, Bethesda, MD

"In vitro and in vivo enrichment of CD34+ stem cells using immobilized selectins"
AIChE Annual Meeting, Salt Lake City, UT, November 4-9, 2007 (late addition to program)

2006
"Selectin' the target cell: Flow-based capture of stem cells and cancer cells via immune system adhesive proteins"
17th International Conference of the Society for Medical Innovation and Technology, Monterey, CA, May 11-14, 2006.

"Multiscale Modeling of Platelet Adhesion to Surfaces Under Flow"
231st National Meeting of the American Chemical Society, Atlanta, GA, March 26-30, 2006.

"Multiparticle adhesion of deformable cells" – (with D.J. Gee)
15th U.S. National Congress of Theoretical and Applied Mechanics, Boulder, Colorado, June 25-30, 2006.

"Implantable devices for stem cell and anti-cancer therapies"
2006 Western New York Bioscience Summit, Rochester, NY, October 5 and 6, 2006.

2005
"Nano-to-micro scale dynamics of P-selectin detachment from leukocyte interfaces: Numerical simulation of tethering under flow"
229th ACS National Meeting, San Diego, CA, March 13-17, 2005.

"The Effect of Hematocrit and Leukocyte Adherence on Fluid Streamlines in the Microcirculation"
12th International Congress of Biorheology (ICB) and the 5th International Conference on Clinical Hemorheology (ICCH), Chongqing, China, May 30-June 3, 2005.

"Nano-to-micro scale dynamics of P-selectin detachment from leukocyte interfaces: Numerical simulation of tethering under flow" 12th International Congress of Biorheology (ICB) and the 5th International Conference on Clinical Hemorheology (ICCH), Chongqing, China, May 30-June 3, 2005.

"The Distribution of Adherent Leukocytes in Venular Convergences"
12th International Congress of Biorheology (ICB) and the 5th International Conference on Clinical Hemorheology (ICCH), Chongqing, China, May 30-June 3, 2005.

"Mechanics of transient platelet adhesion to von Willebrand factor under flow"
12th International Congress of Biorheology (ICB) and the 5th International Conference on Clinical Hemorheology (ICCH), Chongqing, China, May 30-June 3, 2005.

"Microchannels as Models of Pathophysiological Blood Cell Adhesion"
Keynote Lecture, 3rd International Conference on Microchannels and Minichannels, ASME International, Toronto, Canada, June 13-16, 2005.

"Models of Microcirculatory Flow and Leukocyte Adhesion"
Biorheology Scientific and Standardization Committee, International Society on Thrombosis and Haemostasis, XXth Congress, Sydney, Australia, August 6-12, 2005.

"Cell-Scale Computational Modeling of Platelet Adhesion Under Flow"
Biorheology Scientific and Standardization Committee, International Society on Thrombosis and Haemostasis, XXth Congress, Sydney, Australia, August 6-12, 2005.

2004
"Exploiting the Differential Adhesion of Stem Cell Populations for Therapeutic and Diagnostic Applications"
James D. Watson Investigator Award Ceremony, University of Albany School of Public Health, Albany, NY, October 15, 2004

2003
"Cell-Surface Adhesive Interactions in Microchannels and Microvessels"
Keynote Lecture, First International Conference on Microchannels and Minichannels, ASME International, Rochester, NY, April 24, 2003.

2002
"The Effect of Hematocrit and Leukocyte Adherence on Fluid Streamlines in the Microcirculation"
AIChE 2002 Annual Meeting, Indianapolis, IN, November 5, 2002.

Invited Seminars
2025
Department of Biomedical Engineering, Rochester Institute of Technology, March 2025
North Bergen (NJ) High School Health Occupations Students of America (HOSA) Club, March 2025 (virtual)
Department of Biomedical Engineering, University of Massachusetts, Amherst, September 2025
Department of Biomedical Engineering, University of Houston, October 2025

2024
Skalak Lecture, Shu Chien-Gene Lay Department of Bioengineering, University of California San Diego, April 2024
Distinguished Speaker, Department of Bioengineering, University of Pittsburgh, October 2024
Department of Biomedical Engineering, Carnegie Mellon University, October 2024
Department of Chemical & Biological Engineering, Colorado School of Mines, November 2024

2023
Biomedical Engineering Elevated Lecture, Department of Biomedical Engineering, University of Utah, April 2023

Joint Department of Biomedical Engineering, University of North Carolina at Chapel Hill and North Carolina State University, September 2023

Department of Biomedical Engineering, New York University, December 2023

2022

Department of Biomedical Engineering, Florida International University, April 2022
Distinguished Lecture, Department of Bioengineering, University of Illinois Urbana-Champaign, September 2022
Department of Bioengineering, Rice University, November 2022

2021
Gastrointenstinal Research Meeting, Vanderbilt-Ingram Cancer Center, March 2021
Department of Bioengineering, Lehigh University, March 2021 (virtual)
Department of Biomedical Engineering, New Jersey Institute of Technology, March 2021 (virtual)
Department of Bioengineering, University of California-Riverside, November 2021 (virtual)

2020
Page Morton Hunter Distinguished Seminar Series, Department of Bioengineering, Clemson University, September 2020 (virtual)
Cancer Biology Science Hour, Cancer Biology Program, Vanderbilt University, February 2020

2019
Cell Therapy Institute, Nova Southeastern University, January 2019
Department of Biomedical Engineering, Distinguished Lecture, Stevens Institute of Technology, February 2019
Department of Biomedical Engineering, Duke University, April 2019
Harper Cancer Research Institute, University of Notre Dame, June 2019
Department of Biomedical Engineering, University of Miami, October 2019
Department of Biomedical Engineering, Northwestern University, November 2019
Department of Biomedical Engineering, Distinguished Speaker Series, University of Louisville, November 2019
Department of Biomedical Engineering, Texas A&M University, December 2019

2018
Department of Biomedical Engineering, Oregon Health Sciences University, January 2018
Grand Rounds Presentation, University of Tennessee Medical Center, January 2018
Distinguished Seminar Series, Department of Mechanical, Aerospace, and Biomedical Engineering, University of Tennessee, January 2018
Oak Ridge National Laboratory, May 2018
Harper Cancer Research Institute, University of Notre Dame, June 2018
Department of Bioengineering, Rice University, November 2018

2017
GI SPORE Seminar, Ingram Cancer Center, Vanderbilt University, May 2017
Fischell Department of Bioengineering, University of Maryland, September 2017
Department of Biomedical Engineering, Carnegie Mellon University, September 2017
Renal Research Conference, Department of Medicine, Vanderbilt University, September 2017
Department of Chemical, Biological and Pharmaceutical Engineering, New Jersey Institute of Technology, October 2017.
Sigma-Aldrich Lecture, Koch Institute, Massachusetts Institute of Technology, November 2017.

2016
Relay for Life, American Cancer Society, Cornell University, April 2016
Dept. of Biomedical, Chemical, and Environmental Engineering, University of Cincinnati, May 2016
Department of Radiology, Weill Cornell Medical College, August 2016

2015
Department of Biomedical Engineering, University of Rochester, February 2015

Department of Biomedical Engineering, Vanderbilt University, April 2015
Department of Applied Mathematics, Brown University, April 2015
Department of Pharmaceutical Sciences, University of Buffalo, September 2015
Us TOO Prostate Cancer Education and Support, Rochester, NY Chapter, December 2015

2014
Department of Biomedical Engineering, Illinois Institute of Technology, February 2014
BioExpo Keynote Speaker, Dept. of Biological and Environmental Engin., Cornell Univ., March 2014
Department of Urology, University of Rochester Medical Center, March 2014
Fluid Dynamics Reviews, University of Maryland, April 2014
Department of Biomedical Engineering, Georgia Tech – Emory, April 2014
Department of Biomedical Sciences, City University of Hong Kong, May 2014
Department of Biomedical Engineering, University of California, Irvine, September 2014
Department of Applied Computational Mathematics and Statistics, University of Notre Dame, December 2014

2013
"Viable Circulating Tumor Cells From Patient Blood: A Chip-Free Approach For Clinical Labs"
American Association of Clinical Chemistry Webinar, January 2013
Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, February 2013
Department of Chemical and Biological Engineering, Colorado School of Mines, March 2013
Department of Radiology, Stanford University School of Medicine, May 2013
Department of Biomedical Engineering, City College of New York, December 2013

2012
BioExpo Keynote Speaker, Dept. of Biological and Environmental Engin., Cornell Univ., March 2012

2011
Multiscale Systems Biology Working Group, Webinar, "The Cardiovascular System and Disease," May 2011
Okinawa Institute for Science and Technology (OIST), Okinawa, Japan, July 2011

2010
Cornell Center for Technology Enterprise & Commercializ. (CCTEC), Seminar and Social Hour, March 2010
Department of Chemical Engineering, South Dakota School of Mines and Technology, September 2010
Department of Physics & Astronomy, Ohio University, October 2010

2009
Wellstat Diagnostics, Rockville, MD, March, 2009.
Engineering Graduate Student Association (EGSA) social seminar, Cornell University, April, 2009.
Department of Physics, University of Alberta, Canada, May, 2009.
Department of Chemical Engineering, Cornell University, August, 2009

2008
Laboratory for Laser Energetics, University of Rochester, February, 2008.
Department of Biomedical Engineering, Cornell University, February, 2008.
Experimental Hematology Program, University of Rochester, April, 2008.
Department of Mechanical Engineering, Rutgers University, April, 2008.
Gauva & Millipore, Lunch and Learn, Rochester, NY, July, 2008 (with S. Narasipura).
Department of Biomedical Engineering, Carnegie Mellon University, October, 2008.

2007
Department of Chemistry, State University of New York at Plattsburgh, March, 2007.
Department of Biology, Canisius College, November, 2007.

2006
Bioengineering Program, Lehigh University, April, 2006.
Department of Polymer Science, University of Massachusetts, May, 2006.
3M Pharmaceuticals Division, Minneapolis, MN, December, 2006.

2005
Annual American Society of Mechanical Engineers/Society of Women Engineers Steak Roast, Rochester, NY, October, 2005.
Department of Biomedical Engineering, University of Wisconsin, May, 2005
Tau Beta Pi Society Lecture, Rochester Institute of Technology, April, 2005
Department of Chemical Engineering, University of Notre Dame, January, 2005

2004
Department of Mechanical Engineering, State University of New York at Binghamton, September, 2004.

2003
Local Professional Section of American Institute of Chemical Engineers, Rochester, NY, December, 2003.

2002
Department of Chemical Engineering, University of Rochester, October, 2002.

2001
Department of Mechanical Engineering, University of Illinois at Urbana-Champaign, December, 2001.
Department of Biomedical Engineering, University of California-Davis, December, 2001.
Department of Biomedical Engineering, University of Minnesota-Twin Cities, December, 2001.
Department of Biomedical Engineering, Purdue University, November, 2001.
Department of Biomedical Engineering, University of Rochester, May, 2001.
Department of Chemical Engineering, University of Houston, March, 2001.

2000
Institute for Medicine and Engineering "Chalk Talk" Series, University of Pennsylvania, November, 2000.

1999
Union Carbide Corp., Bound Brook/Somerset, New Jersey, March 1999.

14. Published Conference Abstracts and Contributed Papers

M.R. King is speaker unless otherwise noted.

1. M.R. King, D.T. Leighton, Jr., and M.J. McCready, "Stability of oscillatory two-phase Couette flow," AIChE 1997 Annual Meeting, Los Angeles, CA.

2. M.R. King and D.T. Leighton, Jr., "Measurement of the inertial lift on a moving sphere in contact with a plane wall in a shear flow," AIChE 1997 Annual Meeting, Los Angeles, CA.

3. M.R. King, D.T. Leighton, Jr., and M.J. McCready, "Mechanism for interfacial wave growth in a stratified, oscillatory shear flow," AIChE 1998 Annual Meeting, Miami, FL.

4. M.J. McCready (speaker) and M.R. King, "Comparison of flow regime transitions with interfacial wave transitions," 1999 IMuST Annual Meeting, Santa Barbara, CA.

5. M.J. McCready (speaker), B.D. Woods, and M.R. King, "Weakly-nonlinear waves in two-layer flows: Subcritical bifurcations," *Proceedings of the IUTAM Symposium on Nonlinear Waves in Multi-Phase Flow, July 7-9, 1999, Notre Dame, IN, Kluwer Academic Publishers, pp. 81-92*.

6. M.R. King and M.J. McCready, "Weakly nonlinear simulation of planar stratified flows," AIChE 1999 Annual Meeting, Dallas, TX.

7. M.R. King and D.T. Leighton, Jr., "Measurement of shear-induced dispersion in a dilute emulsion," AIChE 1999 Annual Meeting, Dallas, TX.

8. M.J. McCready (speaker), B.D. Woods, and M.R. King, "Interfacial wave transitions in liquid-liquid flows and insight into flow regime transition," *Proceedings of the 18th Symposium on Energy Engineering Sciences, Argonne, IL, May 15-16, 2000*.

9. M.R. King and D.A. Hammer, "Simulation of selectin-mediated neutrophil rolling in a concentrated system," ACS 74th Colloid and Surface Science Symposium, Lehigh University, 2000.

10. M.R. King and D.A. Hammer, "Simulation of hydrodynamic interactions between adherent rolling cells," BMES 2000 Annual Meeting, Seattle, WA.

11. M.R. King, S.D. Rodgers, and D.A. Hammer, "The effect of particle-particle interactions on the dynamics of bioadhesive cell rolling," AIChE 2000 Annual Meeting, Los Angeles, CA.

12. D.A. Hammer (speaker), M. King, D. Tees, and K.C. Chang, "Adhesive dynamics: Interplay between molecular properties and the dynamics of adhesion*," Abstracts of Papers of the American Chemical Society, 221:26-COLL Part 1, 2001.*

13. M.R. King and D.A. Hammer, "The effect of cell collisions on leukocyte recruitment and rolling dynamics," Second Virginia Colloquium on Biomechanics of Adhesion Molecules, June 22-23, 2001, University of Virginia.

14. M.R. King and D.A. Hammer, "Hydrodynamic recruitment of rolling leukocyte: Simulation and cell-free experiments," *Proceedings of the 2001 Bioengineering Conference, ASME, BED-Vol. 50.*

15. M.R. King and D.A. Hammer (speaker), "Multiparticle Adhesive Dynamics (MAD): Simulations of cell-cell interactions in cell adhesion," BMES 2001 Annual Meeting, Durham, NC.

16. M.R. King and D.A. Hammer, "Simulation of P-selectin-mediated cell tethering experiments," AIChE 2001 Annual Meeting, Reno, NV.

17. M.R. King, D.A. Hammer, M. Kim, T. Duza, and I.H. Sarelius, "Hydrodynamic interactions between rolling leukocytes: Modeling, synthetic cells, and in vivo experiments," AIChE 2001 Annual Meeting, Reno, NV.

18. D.A. Hammer (speaker), M.R. King, D.F.J. Tees, S.D. Rodgers, E.A. Evans, and R.T. Camphausen, "Dynamics and biomechanics in leukocyte adhesion: From molecular properties to the behavior of many cells," *American Zoologist 41:1464-1465, 2001*.

19. M.R. King, D.A. Hammer, and E. Evans, "Leukocyte tethering under flow: Bond clusters and interface dynamics," Keystone Symposium on Inflammatory Paradigms and the Vasculature II. Steamboat Springs, CO, April 9-14, 2002.

20. M.R. King, D.A. Hammer, and I.H. Sarelius, "Influence of surrounding blood cells on adhesion under flow: Comparison of numerical simulations with in vitro and in vivo experiments," Keystone Symposium on Molecular Mechanisms of Leukocyte Trafficking, Steamboat Springs, CO, April 9-14, 2002.

21. M.R. King, V. Heinrich, E. Evans, and D.A. Hammer, "Leukocyte tethering under flow: Model for interfacial compression, viscoelastic tether extension, and cytoskeletal unbinding," 4th World Congress on Biomechanics, Calgary, Alberta, Canada, August 4-9, 2002.

22. M.R. King, D. Bansal, M. Kim, and I. Sarelius, "Effect of Hematocrit and Leukocyte Adherence on Fluid Streamlines in the Microcirculation," AIChE 2002 Annual Meeting, Indianapolis, IN.

23. S.K. Bhatia (speaker), M.R. King, and D.A. Hammer, "Two-receptor adhesive dynamics," AIChE 2002 Annual Meeting, Indianapolis, IN.

24. M.R. King, "In Vitro Assays and Computational Models of Cell Adhesion Under Flow," AIChE 2002 Annual Meeting, Indianapolis, IN. (late addition to program)

25. M.R. King, M.B. Kim, and I.H. Sarelius, "Dynamics of leukocyte rolling on punctate distributions of P-selectin," *Molecular Biology of the Cell, 13 Supplement: 547a-548a, 2002.*

26. S.K. Bhatia (speaker), M.R. King, and D.A. Hammer, "Dynamic simulations of neutrophil recruitment demonstrate synergistic roles for selectins and integrins," *Blood, 100(11):459A, 2002*.

27. I.H. Sarelius (speaker), M.R. King, D. Bansal, and M.B. Kim, "The effect of hematocrit and leukocyte adherence on fluid streamlines in the microcirculation," *FASEB Journal, 17:532, 2003*.

28. M.R. King, R. Ahmed (speaker), O. Lomakin, T.B. Jones, and C. Bailey, "Microparticle Transport via High-Speed Dielectrophoretic Liquid Actuation," IEEE/EMBS Annual Meeting, October, 2003.

29. M.B. Kim, I.H. Sarelius, and M.R. King, "Hydrodynamic Interactions between Rolling Leukocytes In Vivo," BMES 2003 Annual Meeting, Nashville, TN.

30. D. Bansal, M.B. Kim, I.H. Sarelius, and M.R. King, "Effect of Hematocrit and Leukocyte Adherence on Fluid Streamlines in the Microcirculation," BMES 2003 Annual Meeting, Nashville, TN.

31. O. Lomakin, T.A. Doggett, T.G. Diacovo, and M.R. King, "Modeling the Dynamic Interactions between Platelets and Surface-Immobilized vWF at Physiological Flow Rates," BMES 2003 Annual Meeting, Nashville, TN.

32. S. Latham, O. Lomakin, and M.R. King, "Dynamics of Neutrophil Adhesion to Sialyl-Lewis X in Pulsatile Flow," BMES 2003 Annual Meeting, Nashville, TN.

33. R. Ahmed, T.B. Jones, O. Lomakin, and M.R. King, "Microparticle transport via high-speed dielectrophoretic liquid actuation," BMES 2003 Annual Meeting, Nashville, TN.

34. M.R. King, "Biomedical Computation: A Numerical Methods Course at the University of Rochester," BMES 2003 Annual Meeting, Nashville, TN.

35. T.N. Thomas, Y. Chiu, M.R. King, and K. Fujiwara (speaker), "Morphological and Biochemical Changes in Cultured Endothelial Cells Induced by Reversed Gravity," ASCB 2003 Annual Meeting, San Francisco, CA.

36. M.R. King, "Adoption of a Uniform Programming Platform in an Undergraduate Biomedical Engineering Program," Proceedings of the iNEER Conference on Engineering Education and Research (iCEER-2004), Olomouc, Czech Republic, June 27–30, 2004.

37. N. Mody (speaker), O. Lomakin, T.A. Doggett, T.G.Diacovo, and M.R. King, "Evidence for Compressive Forces as a Requirement for Platelet Adhesion Under Flow," BMES 2004 Annual Meeting, Philadelphia, PA.

38. K.A. Lamkin-Kennard (speaker), J. Chuang, M.B. Kim, I.H. Sarelius, and M.R. King, "The Distribution of Adherent Leukocytes in Venular Convergences," BMES 2004 Annual Meeting, Philadelphia, PA.

39. M.R. King, R. Sumagin, C.E. Green, S.I. Simon, "Rolling Dynamics of a Neutrophil with Redistributed L-selectin," AIChE 2004 Annual Meeting, Austin, TX, November 7-12, 2004.

40. M.R. King, "Scale Invariance in Selectin-Mediated Leukocyte Rolling," AIChE 2004 Annual Meeting, Austin, TX, November 7-12, 2004.

41. M.R. King, "Apparent 2-D Diffusivity in a Ruffled Cell Membrane," AIChE 2004 Annual Meeting, Austin, TX, November 7-12, 2004.

42. K.A. Lamkin-Kennard, J. Chuang, M.B. Kim, I.H. Sarelius, and M.R. King, "The Distribution of Adherent Leukocytes in Venular Convergences," AIChE 2004 Annual Meeting, Austin, TX, November 7-12, 2004.

43. N. Mody, O. Lomakin, T. Doggett, T.G. Diacovo, and M.R. King, "Evidence for compressive forces as a requirement for platelet adhesion under flow," AIChE 2004 Annual Meeting, Austin, TX, November 7-12, 2004.

44. N. Charles (speaker), J.P. Gentile, G. Csucs, and M.R. King, "Enhanced cell capture to molecular micropatterns of P-selectin," 229th ACS National Meeting, San Diego, CA, March 13-17, 2005.

45. K.A. Lamkin-Kennard (speaker), M.R. King, and H.A. Awad, "CFD analysis of a bioreactor for use in cartilaginous tissue engineering," 3rd International Conference on Microchannels and Minichannels, Toronto, Ontario, Canada, June 13-15, 2005.

46. K.A. Lamkin-Kennard, M.R. King, and H.A. Awad (speaker), "A novel lid-driven cavity flow bioreactor for cartilage tissue engineering," 2005 Summer Bioengineering Conference, June 22-26, 2005, Vail, Colorado.

47. K.A. Lamkin-Kennard (speaker), A. Lerner, and M.R. King, "Teaching bioengineering ethics in the context of statistics," Third International Conference on Ethical Issues in Biomedical Engineering, June 4-6, 2005, Rochester, NY.

48. N.A. Mody (speaker) and M.R. King, "Platelet adhesive dynamics: Platelet tethering and translocation via GPIbα-vWF binding," 2005 BMES Annual Fall Meeting, September 28 – October 1, 2005, Baltimore, MD.

49. K.A. Lamkin-Kennard (speaker), A. Lerner, and M.R. King, "Teaching bioengineering ethics in the context of statistics," 2005 BMES Annual Fall Meeting, September 28 – October 1, 2005, Baltimore, MD.

50. K.A. Lamkin-Kennard (speaker), I. Sarelius, and M.R. King, "Hydrodynamics and Leukocyte Adhesion in Branched Post-Capillary Venules," 2005 BMES Annual Fall Meeting, September 28 – October 1, 2005, Baltimore, MD.

51. N. Charles (speaker), J.L. Liesveld, and M.R. King, "Adhesion of hematopoietic stem cells and acute myeloid leukemia cell lines to functionalized surfaces of P-selectin and CD34 antibody," 2005 AIChE Annual Meeting, October 30 – November 4, 2005, Cincinnati, OH.

52. D. Lee (speaker) and M.R. King, "Shear-induced Mechanical Shedding of L-selectin on Neutrophils can Explain the Shear Threshold Effect at Higher Shear," 2005 AIChE Annual Meeting, October 30 – November 4, 2005, Cincinnati, OH.

53. J.P. Gentile (speaker), N. Charles, G. Csucs, and M.R. King, "Micropatterns of P-selectin Enhance Cell Capture and Rolling," 2005 AIChE Annual Meeting, October 30 – November 4, 2005, Cincinnati, OH.

54. N. Mody (speaker) and M.R. King, "Multiscale modeling of receptor-mediated platelet adhesion to surfaces under flow," 2005 AIChE Annual Meeting, October 30 – November 4, 2005, Cincinnati, OH.

55. D. Lee (speaker), P.A. Knauf, and M.R. King, "Mechanical shedding of L-selectin on neutrophils occurs during rolling in vitro," Experimental Biology 2006, April 1-5, San Francisco, CA.

56. N. Charles (speaker), J. Kanofsky, J.L. Liesveld, and M.R. King, "Using protein-functionalized microchannels for stem cell separation," 4th International Conference on Nanochannels, Microchannels, and Minichannels, Limerick, Ireland, June 19-21, 2006.

57. N.S. Hanspal (speaker), K. Fujiwara, and M.R. King, "Finite element modeling of blood flow in artery stenosis," 4th International Conference on Nanochannels, Microchannels, and Minichannels, Limerick, Ireland, June 19-21, 2006.

58. N.A. Mody (speaker) and M.R. King, "Platelet-Platelet Collisions and Brownian Motion of Platelets Near a Surface," American Institute of Chemical Engineers 2006 Annual Meeting, San Francisco, CA, November 12-17, 2006.

59. M.R. King and K. Fujiwara, "Modeling of blood flow in artery stenosis," American Institute of Chemical Engineers 2006 Annual Meeting, San Francisco, CA, November 12-17, 2006.

60. D. Lee (speaker), J.B. Schultz, P.A. Knauf, and M.R. King, "Mechanical shedding of L-selectin from neutrophils during rolling on sialyl Lewis x under flow," Biomedical Engineering Society 2006 Annual Meeting, Chicago, IL, October 11-14, 2006.

61. D. Lee (speaker) and M.R. King, "Shear-induced capping of L-selectin on neutrophils during centrifugation: Theory and experiment," Biomedical Engineering Society 2006 Annual Meeting, Chicago, IL, October 11-14, 2006.

62. D. Lee (speaker), S.D. Narasipura, and M.R. King, "Microcontact printing of selectin improves the rate of neutrophil recruitment under shear flow," Biomedical Engineering Society 2006 Annual Meeting, Chicago, IL, October 11-14, 2006.

63. J.C. Wojciechowski (speaker), N. Charles, S.D. Narasipura, D. Mickelsen, M.L. Blair, and M.R. King, "Capture of CD34 positive cells from blood circulation using an implantable cell capture device in rats," Biomedical Engineering Society 2006 Annual Meeting, Chicago, IL, October 11-14, 2006.

64. K. Rana (speaker), N. Charles, J.L. Liesveld, and M.R. King, "Delivery of apoptosis signal to rolling cancer cells," Biomedical Engineering Society 2006 Annual Meeting, Chicago, IL, October 11-14, 2006.

65. D.J. Gee (speaker) and M.R. King, "Deformable leukocyte cell-cell and cell-substrate interactions," Biomedical Engineering Society 2006 Annual Meeting, Chicago, IL, October 11-14, 2006.

66. N.S. Hanspal, K. Fujiwara, and M.R. King, "CFD modeling of blood flow in artery stenosis," American Institute of Chemical Engineers 2006 Annual Meeting, San Francisco, CA, November 12 – 17, 2006.

67. D. Lee, K. Rana, K. Lee, L. DeLouise, and M.R. King, "Microfabricated Cavities for Adhesive Capture of Stem Cells Under Flow," Fifth International Conference on Nanochannels, Microchannels & Minichannels, Puebla, Mexico, June 18-20, 2007.

68. S.D. Narasipura (speaker), J.C. Wojciechowski, J.L. Liesveld, and M.R. King, "Enrichment of CD34+ hematopoietic stem cells from human bone marrow with P-selectin coated flow device," ISLH 2007, the XXth International Symposium on Technological Innovations in Laboratory Hematology, Miami, FL, May 8-11, 2007.

69. S.D. Narasipura (speaker), J.C. Wojciechowski, N. Charles, D. Mickelsen, M.L. Blair, and M.R. King, "Capture of CD34-positive hematopoietic stem cells from blood circulation using P-selectin in an implantable cell capture device in rats," ISLH 2007, the XXth International Symposium on Technological Innovations in Laboratory Hematology, Miami, FL, May 8-11, 2007.

70. S. Hong (speaker), A. Taylor, D. Lee, M.R. King, S. Jiang, R. Langer, and J. Karp, "Preparation of Cell Rolling Surfaces by Controlled Covalent Immobilization Methods," 2007 BMES Annual Meeting, Los Angeles, CA, September 26-29, 2007.

71. J.C. Wojciechowski (speaker), S.D. Narasipura, D. Mickelsen, N. Charles, M.L. Blair, and M.R. King, "Enrichment of hematopoietic stem cells from the bloodstream using P-selectin in an implanted device," 2007 BMES Annual Meeting, Los Angeles, CA, September 26-29, 2007.

72. S.D. Narasipura, J.C. Wojciechowski (speaker), N. Charles, J.L. Liesveld, and M.R. King, "Enrichment of CD34+ hematopoietic stem cells from human bone marrow using selectin-coated microtubes," 2007 BMES Annual Meeting, Los Angeles, CA, September 26-29, 2007.

73. D.J. Gee (speaker) and M.R. King, "Cell membrane deformation enhances recruitment in the inflammatory response," 2007 BMES Annual Meeting, Los Angeles, CA, September 26-29, 2007.

74. D.J. Gee (speaker) and M.R. King, "Evaluation of a linear elastic model for inclusion in a multiscale model of deformable leukocytes," 2007 BMES Annual Meeting, Los Angeles, CA, September 26-29, 2007.

75. N.A. Mody (speaker) and M.R. King, "Influence of Brownian motion on blood platelet flow behavior and adhesive dynamics near a planar wall," 2007 AIChE Annual Meeting, Salt Lake City, Utah, November 4-9, 2007.

76. K. Rana (speaker), N. Charles, J.L. Liesveld, and M.R. King, "Use of TRAIL to deliver an apoptotic signal to rolling cancer cells under shear," 2007 AIChE Annual Meeting, Salt Lake City, Utah, November 4-9, 2007.

77. N.A. Mody (speaker) and M.R. King, "Multiscale model of receptor-mediated platelet-platelet aggregation under high shear flow," 2007 AIChE Annual Meeting, Salt Lake City, Utah, November 4-9, 2007.

78. D. Lee (speaker) and M.R. King, "Shear-induced capping of L-selectin on the neutrophil surface during centrifugation," 2007 AIChE Annual Meeting, Salt Lake City, Utah, November 4-9, 2007.

79. D. Lee (speaker) and M.R. King, "Microcontact printing of P-selectin increases the rate of neutrophil recruitment under shear flow," 2007 AIChE Annual Meeting, Salt Lake City, Utah, November 4-9, 2007.

80. S.D. Narasipura (speaker), J.C. Wojciechowski, N. Charles, J.L. Liesveld, and M.R. King, "Capture and Enrichment of CD34+ Hematopoietic Stem and Progenitor Cells from Human Bone Marrow Using a P-Selectin-Coated Microtube," American Society of Hematology 49th Annual Meeting, Atlanta, Georgia, December 8-11, 2007.

81. S.D. Narasipura (speaker), J.C. Wojciechowski, N. Charles, D. Mickelsen, M.L. Blair, and M.R. King, "Capture and enrichment of CD34-positive haematopoietic stem and progenitor cells from blood circulation using P-selectin in an implantable device," American Society of Hematology 49th Annual Meeting, Atlanta, Georgia, December 8-11, 2007.

82. J.C. Wojciechowski (speaker), S.D. Narasipura, D. Mickelsen, N. Charles, M.L. Blair, and M.R. King, "Enrichment of hematopoietic stem cells from the bloodstream using P-selectin in an implanted device," Experimental Biology 2008, San Diego, CA, April 5-9, 2008.

83. G.M. Seigel (speaker), S. Narasipura, M.R. King, A. Lis, and A. Hackam, "Stem Cell Signaling Pathways in Human Retinoblastoma Cells," Association for Research in Vision and Ophthalmology (ARVO) 2008 Annual Meeting, Fort Lauderdale, Florida, April 27-May 1, 2008.

84. S.D. Narasipura (speaker), J.C. Wojciechowski, N. Charles, J.L. Liesveld, and M.R. King, "Enrichment of CD34+ Hematopoietic Stem and Progenitor Cells from Human Bone Marrow Using a P-Selectin-Coated Microtube," Frontiers in Stem Cell Medicine Symposium, Rochester, NY, May 23, 2008.

85. J.C. Wojciechowski (speaker), S.D. Narasipura, N. Charles, D. Mickelsen, M.L. Blair, and M.R. King, "Capture and Enrichment of CD34-Positive Hematopoietic Stem Cells from Blood Circulation using P-Selectin in an Implantable Device," Frontiers in Stem Cell Medicine Symposium, Rochester, NY, May 23, 2008.

86. J.P. Gentile and M.R. King, "Leukocyte recruitment mechanisms in impinging flow: a flow model for atherosclerosis," 6th International Conference on Nanochannels, Microchannels and Minichannels, Darmstadt, Germany, June 23-25, 2008.

87. N. Charles, J.L. Liesveld, and M.R. King, "Geometry optimization of a flow-based device to maximize selectin-mediated hematopoietic stem cell enrichment," 6th International Conference on Nanochannels, Microchannels and Minichannels, Darmstadt, Germany, June 23-25, 2008.

88. U.-B.T. Giang, M.R. King, and L.A. DeLouise (speaker), "Microfabrication of Bubble Cavities in PDMS for Cell Sorting and Storage Applications," 6th International Conference on Nanochannels, Microchannels and Minichannels, Darmstadt, Germany, June 23-25, 2008.

89. U.-B.T. Giang (speaker), L.A. DeLouise, and M.R. King, "Microbubble formation in polydimethylsiloxane as microfluidic devices for cell proliferation studies," BMES 2008 Annual Meeting, St. Louis, MO, October 1-4, 2008.

90. U.-B.T. Giang, M.R. King, and L.A. DeLouise, "Controlled microfabrication of microbubbles in polydimethylsiloxane using gas expansion molding techniques," BMES 2008 Annual Meeting, St. Louis, MO, October 1-4, 2008.

91. K. Rana (speaker), J.L. Liesveld, and M.R. King, "Capture and neutralization of circulating cancer cells," BMES 2008 Annual Meeting, St. Louis, MO, October 1-4, 2008.

92. S.D. Narasipura (speaker), J.C. Wojciechowski, B.M. Duffy, J.L. Liesveld, and M.R. King, "Purification of CD45+ hematopoietic cells directly from human bone marrow and peripheral blood using a flow-based P-selectin–coated microtube," AIChE 2008 Annual Meeting, Philadelphia, PA, November 16-21, 2008.

93. S.D. Narasipura (speaker), J.C. Wojciechowski, N. Charles, J.L. Liesveld, and M.R. King, "Enrichment of CD34+ Hematopoietic Stem and Progenitor Cells from Bone Marrow and peripheral blood Using a P-Selectin-Coated Microtube," AIChE 2008 Annual Meeting, Philadelphia, PA, November 16-21, 2008.

94. B.A. Allio (speaker), D.G. Foster, and M.R. King, "Colloidal Silica Nanoparticle Surface Coating for Increased Protein Adhesion and Cell Capture in Flow-Based Microtubes," AIChE 2008 Annual Meeting, Philadelphia, PA, November 16-21, 2008.

95. J.P. Gentile (speaker) and M.R. King, "Microfluidic impinging flow as a model for atherosclerosis," AIChE 2008 Annual Meeting, Philadelphia, PA, November 16-21, 2008.

96. D.J. Gee (speaker) and M.R. King, "Deformable Multiparticle Adhesive Dynamics: A new parallel computional method for the receptor-mediated adhesion of multiple elastically deformable cells near a wall in shear flow," AIChE 2008 Annual Meeting, Philadelphia, PA, November 16-21, 2008.

97. D.J. Gee (speaker), E. Lomakina, R.E. Waugh and M.R. King, "Modeling the Mechanical Behavior of Leukocytes as Elastic Solids In Micropipette Aspiration Indentation Experiments," AIChE 2008 Annual Meeting, Philadelphia, PA, November 16-21, 2008.

98. M.R. King and D.J. Gee, "Modeling the adhesion of deformable cells to surfaces under flow," Spring 2009 ACS Meeting, Salt Lake City, UT, March 22 – 26, 2009.

99. G.M. Seigel (speaker), E. Kovulou, C. Hackett, S. Narasipura, M.R. King, J. Young, and B. Ksander, "A tumor-initiating subpopulation of human retinoblastoma cells with stem cell properties," ARVO 2009 Annual Meeting, Fort Lauderdale, FL, May 3 – 7, 2009.

100. D.H. Hershberger (speaker), S.D. Narasipura, M.R. King, B. Ksander, E. Kolovou, J. Young, and G.M. Seigel, "Proteomic characterization of ABCG2+ tumor-initiating cells in retinoblastoma," ARVO 2009 Annual Meeting, Fort Lauderdale, FL, May 3 – 7, 2009.

101. G.M. Seigel (speaker), S.D. Narasipura, B. Ksander, E. Lolovou, C. Hackett, J. Young, S. Hayes, and M.R. King, "ABCG2+/ICAM-1+ tumor-initiating cells in retinoblastoma: Implications for metastasis," International Society for Stem Cell Research (ISSCR) 7th Annual Meeting, Barcelona, Spain, July 8–11, 2009.

102. X. Yin (speaker), V. Ponmudi, and M.R. King, "Targeted knockdown of fucosyltransferase III as a novel therapy to disrupt the metastasis of circulating cancer cells," Biomedical Engineering Society 2009 Annual Meeting, Pittsburgh, PA, October 7-10, 2009.

103. A.D. Hughes (speaker) and M.R. King, "Use of naturally-occuring halloysite nanotubes for enhanced captured of cancer cells from blood," Biomedical Engineering Society 2009 Annual Meeting, Pittsburgh, PA, October 7-10, 2009.

104. R. Zhou (speaker), J.L. Liesveld and M.R. King, "Isolation of hematopoietic stem and progenitor cells with P-selectin in nanoparticle-coated microtubes," Biomedical Engineering Society 2009 Annual Meeting, Pittsburgh, PA, October 7-10, 2009.

105. C. Randolph (speaker) and M.R. King, "Effect of c-Abl inhibition on L-selectin mechanical shedding from the neutrophil surface under flow," Biomedical Engineering Society 2009 Annual Meeting, Pittsburgh, PA, October 7-10, 2009.

106. K. Rana (speaker), J.L. Liesveld and M.R. King, "Killing metastatic cancer cells using immobilized TRAIL and E-selectin: Combined therapy with Bortezomib," Biomedical Engineering Society 2009 Annual Meeting, Pittsburgh, PA, October 7-10, 2009.

107. Z. Huang and M.R. King, "An immobilized nanoparticle-based platform for efficient gene knockdown of targeted cells in the circulation," Biomedical Engineering Society 2009 Annual Meeting, Pittsburgh, PA, October 7-10, 2009.

108. Y. Geng (speaker), G. Seigel, and M.R. King, "Adhesive Interactions of Circulating Tumor Cells in the Bloodstream," 1st Annual NCI PS-OC Network Investigators' Meeting, National Harbor, MD, April 5-7, 2010.

109. G.M. Seigel (speaker), S.H. Hayes, K. Rana, C. Hackett, B. Ksander, P. Kolovou, Y. Geng, and M.R. King, "Tumor Initiation and Cell Adhesion of ABCG2+/ICAM-1+ Cells in Retinoblastoma," ARVO 2010 Annual Meeting, May 2-6, 2010, Fort Lauderdale, FL.

110. M.R. King, "Differential adhesion of MCF-10A and MDA-MB-231 cell lines to E-selectin under flow," 2nd NCI Physical Sciences – Oncology Center (PS-OC) Cell Line Exercise Meeting, University of Southern California, June 19, 2010.

111. S. Agastin and M.R. King, "Role of beta-catenin gene expression in colon cancer cell adhesion and growth," 2010 BMES Annual Meeting, October 6-9, 2010, Austin, TX.

112. M. Mitchell (speaker) and M.R. King, "Neutrophil shear-induced resistance to activation via the formyl peptide receptor," 2010 BMES Annual Meeting, October 6-9, 2010, Austin, TX.

113. S. Agastin, U.-B. Giang, L. DeLouise, and M.R. King, "3D tumor spheroid model using a perfused array of spherical microcavities," 2010 BMES Annual Meeting, October 6-9, 2010, Austin, TX.

114. A. Hughes (speaker) and M.R. King, "Nanotube coatings for cell isolation alter cell separation distance while preserving fluid dynamics," 2010 BMES Annual Meeting, October 6-9, 2010, Austin, TX.

115. A. Hughes (speaker), L. Western, J. Mattison, B. Greene, and M.R. King, "Microtube device functionalized with selectins for capture and study of circulating tumor cells," 2010 BMES Annual Meeting, October 6-9, 2010, Austin, TX.

116. V. Ponmudi (speaker) and M.R. King, "Doxorubicin-loaded nanoscale liposomes targeted to E-selectin ligands on circulating tumor cells," 2010 BMES Annual Meeting, October 6-9, 2010, Austin TX.

117. Y. Geng (speaker), G. Seigel, and M.R. King, "Vascular recruitment of retinoblastoma stem cells by multicellular adhesive interactions with circulating leukocytes," 2010 BMES Annual Meeting, October 6-9, 2010, Austin, TX.

118. A.D. Hughes (speaker) and M.R. King, "Use of Naturally-Occurring Halloysite Nanotubes for Enhanced Capture of Cancer Cells From Blood," 2010 Annual Meeting of the American Institute of Chemical Engineers (AIChE), November 7-12, 2010, Salt Lake City, UT.

119. K. Rana (speaker), C.A. Reinhart-King, J.L. Liesveld, and M.R. King, "Killing Metastatic Cancer Cells Using Immobilized TRAIL and E-Selectin: Combined Treatment with Chemotherapeutics," 2010 Annual Meeting of the American Institute of Chemical Engineers (AIChE), November 7-12, 2010, Salt Lake City, UT.

120. C.J. Ball (speaker) and M.R. King, "Role of c-Abl Activity On L-Selectin Mechanical Shedding From the Neutrophil Surface Under Flow," 2010 Annual Meeting of the American Institute of Chemical Engineers (AIChE), November 7-12, 2010, Salt Lake City, UT.

121. C.J. Ball (speaker), A.J. Reiffel, J.A. Spector, and M.R. King, "Effect of hydrogen sulfide on neutrophil infiltration and adhesion following ischemia-reperfusion injury," 6th Annual Academic Surgical Congress, February 1-3, 2011, Huntington Beach, CA.

122. M.R. King, "Adhesive Dynamics: Prediction of platelet and leukocyte behaviors," Multiscale Modeling (MSM) Consortium Meeting, October 27-28, 2010, Bethesda, MD.

123. G. Gakhar (speaker), Y. Geng, M. JOdari-Karimi, S. Tagawa, N. Bander, M. King, and D. Nanus, "Characterization of prostate cancer circulating tumor cells using E-selectin coated-microtubes," American Association for Cancer Research 102nd Annual Meeting, April 2-6, 2011, Orlando, FL.

124. C.J. Ball (speaker), A.J. Reiffel, J.A. Spector, and M.R. King, "Effect of hydrogen sulfide therapy on neutrophil activation in the context of ischemia reperfusion injury," 56th Annual Meeting of the Plastic Surgery Research Council, Louisville, Kentucky, April 27 – May 1, 2011.

125. C.J. Ball, A.J. Reiffel (speaker), S. Chintalapani, J.A. Spector, and M.R. King, "Hydrogen sulfide protects against ischemia-reperfusion injury by decreasing neutrophil-mediated tissue damage," American College of Surgeons' 97th Annual Clinical Congress, San Francisco, CA, October 23 – 27, 2011.

126. A.D. Hughes (speaker) and M.R. King, "Use of naturally-occurring halloysite nanotubes for enhanced capture of cells from flow," 2011 IEEE 37th Annual Northeast Bioengineering Conference, April 1 – 3, 2011, Troy, New York.

127. M.J. Mitchell (speaker) and M.R. King, "Shear-induced resistance to neutrophil activation via the formyl peptide receptor," 2011 IEEE 37th Annual Northeast Bioengineering Conference, April 1 – 3, 2011, Troy, New York.

128. S. Agastin, U.-B. Giang, L.A. DeLouise, and M.R. King, "3D tumor spheroid model using a perfused array of spherical microcavities," Proceedings of the ASME 2011 9th International Conference on Nanochannels, Microchannels, and Minichannels, June 19 – 22, 2011, Edmonton, Alberta, Canada.

129. A. de Guillebon (speaker), Y. Geng, and M.R. King, "Dynamics of Circulating Tumor Microemboli Adhesion to E-selectin Surfaces under Flow: Effect of Fibrin Polymerization," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

130. A. Hughes (speaker), J. Mattison, K. Rana, and M.R. King, "Halloysite Nanotube Coating Applications for Enhanced Capture and Reprogramming of Circulating Tumor Cells," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

131. C. Ball, S. Chintalapani, A Reiffel, J. Spector, and M.R. King, "Effect of Hydrogen Sulfide Therapy on Neutrophil Adhesion and Tissue Infiltration During Ischemia-Reperfusion Injury," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

132. M. Mitchell (speaker) and M.R. King, "Shear-Induced Resistance to Neutrophil Activation via the Formyl Peptide Receptor," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

133. W. Wang (speaker), N. Mody, and M.R. King, "Platelet Collisions: A Key Event in the Initiation of Microthrombi," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

134. W. Wang (speaker), J. Lindsey II, J. Chen, J. Freund, T. Diacovo, and M.R. King, "Human Platelet Convection Around a Developing Thrombus In Vivo," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

135. K. Rana, C. Reinhart-King, and M.R. King, "Capture and Neutralization of Circulating Cancer Cells: Immobilized TRAIL Treatment Combined with Aspirin," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

136. Y. Geng (speaker) and M.R. King, "Differential Adhesion and Recruitment Mechanisms of Breast Cancer Cells to E-selectin under Flow," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

137. S. Agastin, Y. Geng (speaker), and M.R. King, "Role of Beta-catenin Gene Expression in the Regulation of Colon Cancer Cell Adhesion," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

138. T. Cao, T. Takatani (speaker), and M.R. King, "Strengthening of the P-selectin:PSGL-1 Interaction in Acidic pH," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

139. C. Chen, M. Mitchell (speaker), A. Hughes, V. Ponmudi, and M.R. King, "Liposomal and Nanotube Delivery of Doxorubicin to Tumor Cells Under Shear," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

140. E. Hedges, A. Hughes, J. Liesveld, and M.R. King, "Immobilized SDF-1 Modulates Selectin-Mediated Capture of Cancer Cells Under Flow," 2011 Biomedical Engineering Society Annual Meeting, October 12-15, 2011, Hartford, Connecticut.

141. A.D. Hughes (speaker) and M.R. King, "Rapid isolation of viable circulating tumor cells from patient samples," 3rd Annual Physical Sciences – Oncology Centers (PS-OCs) Network Investigators' Meeting, Tampa, FL, April 16-18, 2012.

142. J. Li (speaker) and M.R. King, "Reconstituting in vivo model to study bone metastasis in prostate cancer," 3rd Annual Physical Sciences – Oncology Centers (PS-OCs) Network Investigators' Meeting, Tampa, FL, April 16-18, 2012.

143. S. Yasmin-Karim, H.-J. Ting, M. King, E. Messing, and Y.-F. Lee, "Capture and analysis of prostate cancer stem cells using a microcirculatory channel," Annual Meeting of the American Urological Association, May 19 – 24, 2012, Atlanta, GA.

144. Y. Geng (speaker), S. Chandrasekaran, J. Hsu, and M.R. King, "Role of Pro-Inflammatory Cytokines in Metastatic Breast and Prostate Cancer Cell Adhesion to E-Selectin Coated Surfaces Under Flow," Keystone Symposium on The Role of Inflammation during Carcinogenesis, May 20 – 25, 2012, Dublin, Ireland.

145. M.R. King, "Multiscale simulation of platelet tethering and translocation," 58th Annual Meeting of the Scientific & Standardization Committee of the ISTH, Liverpool, U.K., June 27 – 30, 2012.

146. A. de Guillebon, Y. Geng, R. Carr, and M.R. King, "Adhesion of circulating tumor microemboli to E-selectin in circular branched microchannels," 10th International Conference on Nanochannels, Microchannels, and Minichannels, July 8 – 12, 2012, Puerto Rico, U.S.A.

147. J.-W. Hsu (speaker), J. Messing, and M.R. King, "A novel intravesical therapy in an orthotopic bladder cancer model," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

148. M. Mitchell (speaker), K. Lin, and M.R. King, "Fluid Shear Stress Increases Leukocyte Sensitivity to Platelet Activating Factor," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

149. A. Hughes (speaker) and M.R. King, "Halloysite nanotubes as a novel biomaterial surface for the suppression of leukocyte spreading response," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

150. S. Chandrasekaran (speaker), Y. Geng, and M.R. King, "Effect of homotypic and heterotypic interactions in 3-D on adhesive characteristics of breast cancer cells," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

151. J. Li (speaker), A. Guillebon, and M.R. King, "The impact of fucosylation in bone metastasis of prostate cancer," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

152. Y. Geng (speaker), K. Yeh, and M.R. King, "Three to Tango: MUC1 as a ligand for both E-selectin and ICAM-1 in the breast cancer metastatic cascade," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

153. Y. Geng (speaker), S. Chandrasekaran, J.-W. Hsu, and A. Hughes, and M.R. King, "Phenotypic switch of metastatic breast cancer cells via pro-inflammatory cytokines found in blood," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

154. M.J. Mitchell (speaker) and M.R. King, "Fluid shear stress sensitizes cancer cells to receptor-mediated apoptosis via trimeric death receptors," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

155. J. Huynh, N. Nishimura, K. Rana, J.M. Peloquin, J.P. Califano, C.R. Montague, M.R. King, C.B. Schaffer, and C.A. Reinhart (speaker), "Age-related matrix stiffening promotes endothelial permeability and leukocyte transmigration," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

156. S. Srinivasan (speaker), Y. Geng, M.R. King, and B. Godin, "Nanoparticles-bearing monocyte: Evaluation of flow dynamics," 2012 Biomedical Engineering Society Annual Meeting, October 25-27, 2012, Atlanta, GA.

157. Y. Geng, S. Chandrasekaran, and M.R. King, "Phenotypic Switch in Blood: Effect of Pro-Inflammatory Cytokines and Spheroid Culture on Breast Cancer Adhesion," Physical Sciences-Oncology Center Annual Investigators Meeting, April 16-19, 2013, Scottsdale, AZ.

158. S. Chandrasekaran (speaker), J.R. Marshall, and M.R. King, "TRAIL mediated apoptosis in the third dimension," Physical Sciences-Oncology Center Annual Investigators Meeting, April 16-19, 2013, Scottsdale, AZ.

159. M.J. Mitchell (speaker), K. Rana, E.C Wayne, C.B. Schaffer, and M.R. King, "Unnatural Killer Cells: TRAIL-coated Leukocytes that Kill Cancer Cells in the Circulation," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

160. M.J. Mitchell (speaker) and M.R. King, "Submillisecond Pulses of Fluid Shear Stress Suppress Chemoattractant-Induced Neutrophil Activation," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

161. T. Cao (speaker), M.J. Mitchell, and M.R. King, "Stem cell enrichment with selectin receptors: mimicking the pH environment of trauma," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

162. A. Rocheleau (speaker), W. Wang, and M.R. King, "Effect of Pseudopodial Extensions on Neutrophil Hydrodynamics and Adhesion Binding," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

163. A.D. Hughes (speaker), Y. Geng, M. Provencal, P. Miron, and M.R. King, "Isolating Circulating Fetal Cells from Maternal Blood Using Naturally Occurring Nanotubes," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

164. K. Anderson (speaker), W. Wang, A. de Guillebon, Y. Geng, A.D. Hughes, and M.R. King, "Multiscale Simulation of the Transport and Adhesion of Tumor Cell Aggregates in the Circulation," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

165. A.D. Hughes, J. Marshall (speaker), B. Greene, J. Powderly, and M.R. King, "Patient-Specific Drug Efficacy Analysis on Circulating Tumor Cells Captured from Peripheral Blood," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

166. J. Li (speaker) and M.R. King, "Sensitization of circulating tumor cells to TRAIL-induced apoptosis by targeting ROS signaling," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

167. J. Li (speaker), A. de Guillebon, and M.R. King, "Induction of prostate cancer bone metastasis in an immunocompetent mouse model," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

168. S. Chandrasekaran (speaker), M. McGuire, and M.R. King, "An engineered model to evaluate natural killer cell mediated therapeutic intervention of lymph node micrometastases," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

169. S. Chandrasekaran (speaker) and M.R. King, "TRAIL mediated apoptosis in the third dimension," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

170. M.J. Mitchell (speaker), C.A. Castellanos, and M.R. King, "Nanoscale Roughness and Surface Charge Control Selectin-Mediated Adhesion of Malignant and Non-Malignant Cells Under Flow," Biomedical Engineering Society 2013 Annual Meeting, September 25 – 28, 2013, Seattle, WA.

171. M.J. Mitchell (speaker), D. Syracuse, C.A. Castellanos, S.D. Archer, and M.R. King, "Fabrication of Jell-O Milli-fluidic Chips for Hands-On Education of Hemodynamics and Blood Cell Adhesion," American Institute of Chemical Engineers 2013 Annual Meeting, November 3 – 8, 2013, San Francisco, CA.

172. M.J. Mitchell (speaker), K. Rana, E.C. Wayne, C.B. Schaffer, and M.R. King, "Unnatural Killer Cells: TRAIL-coated Leukocytes that Kill Cancer Cells in the Circulation," American Institute of Chemical Engineers 2013 Annual Meeting, November 3 – 8, 2013, San Francisco, CA.

173. M.J. Mitchell (speaker) and M.R. King, "Submillisecond Pulses of Fluid Shear Stress Suppress Chemoattractant-Induced Neutrophil Activation," American Institute of Chemical Engineers 2013 Annual Meeting, November 3 – 8, 2013, San Francisco, CA.

174. M.J. Mitchell (speaker), C.A. Castellanos, and M.R. King, "Nanoscale Roughness and Surface Charge of Functionalized Halloysite Nanotubes Control Selectin-Mediated Adhesion of Malignant and Non-Malignant Cells Under Flow," American Institute of Chemical Engineers 2013 Annual Meeting, November 3 – 8, 2013, San Francisco, CA.

175. M.J. Mitchell (speaker), E. Wayne, K. Rana, C. Schaffer, and M.R. King, "Unnatural Killer Cells: TRAIL-coated Leukocytes that Kill Cancer Cells in the Circulation," Fifth Annual Physical Sciences – Oncology Centers (PS-OCs) Network Investigators' Meeting, April 1-4, 2014, Bethesda, MD.

176. M.J. Mitchell (speaker), E. Wayne, K. Rana, C. Schaffer, and M.R. King, "Unnatural Killer Cells: TRAIL-coated Leukocytes that Kill Cancer Cells in the Circulation," Society for Biomaterials, 2014 Annual Meeting and Exposition, April 16 – 19, 2014, Denver, CO.

177. M.J. Mitchell (speaker), C.A. Castellanos, and M.R. King, "Differentially charged nanomaterials control selectin-mediated adhesion and isolation of cancer cells and leukocytes under flow," 40th Annual Northeast Bioengineering Conference, April 25 – 27, 2014, Boston, MA.

178. M.J. Mitchell (speaker), E.C. Wayne, K. Rana, C.B. Schaffer, and M.R. King, "Unnatural killer cells: TRAIL-coated leukocytes that kill cancer cells in the circulation," 40th Annual Northeast Bioengineering Conference, April 25 – 27, 2014, Boston, MA.

179. W. Wang, J.P. Lindsey, J. Chen, T.G. Diacovo, and M.R. King, "Analysis of early thrombus dynamics in a humanized mouse laser injury model," 2014 Multiscale Modeling Consortium Meeting, Sept. 3 – 4, 2014, Bethesda, MD.

180. C. Sharkey (speaker), J. Li, and M.R. King, "Synergistic Antitumor Activity from Two-Stage Delivery of Piperlongumine and TRAIL Nanoparticles," Biomedical Engineering Society 2014 Annual Meeting, October 22 – 25, 2014, San Antonio, TX.

181. C. Castellanos (speaker), J. Li, M.J. Mitchell, and M.R. King, "Antigen-Independent Targeting of Cancer Cells on Polylysine/Fatty Acid Complexes," Biomedical Engineering Society 2014 Annual Meeting, October 22 – 25, 2014, San Antonio, TX.

182. M.J. Mitchell (speaker), E.C. Wayne, C.B. Schaffer, and M.R. King, "Unnatural Killer Cells: TRAIL-coated Leukocytes Kill Cancer Cells in a Spontaneous Metastasis Mouse Model of Prostate Cancer," Biomedical Engineering Society 2014 Annual Meeting, October 22 – 25, 2014, San Antonio, TX.

183. A. Rocheleau (speaker), R. Sumagin, and M.R. King, "A Multiscale Adhesive Dynamics Model to Study the Interaction of Neutrophils with the Endothelium," Biomedical Engineering Society 2014 Annual Meeting, October 22 – 25, 2014, San Antonio, TX.

184. A. Rocheleau (speaker), C. Wilson, S. Archer, and M.R. King, "Inquiry-Based Education of Fluid Mechanics Principles Using Hemodynamics," Biomedical Engineering Society 2014 Annual Meeting, October 22 – 25, 2014, San Antonio, TX.

185. D. Zhao (speaker), F. Bordeleau, J. Kohn, A. Zhao, B. Mason, M.J. Mitchell, M.R. King, and C.A. Reinhart-King, "Crosstalk of Physiological Mechanical Cues in Endothelial Cell Signaling," Biomedical Engineering Society 2014 Annual Meeting, October 22 – 25, 2014, San Antonio, TX.

186. M.J. Mitchell (speaker), C.A. Castellanos, and M.R. King, "Surfactant Functionalization Induces Robust, Differential Adhesion of Tumor Cells and Blood Cells to Charged Nanotube-Coated Biomaterials Under Flow," Fellow Award, 2015 Cellular and Molecular Bioengineering Conference, St. Thomas, USVI, January 6 – 10, 2015.

187. A. Mitrugno (speaker), K. Phillips, M.R. King, S. Chandrasekaran, P.K. Newton, P. Kuhn, C. Williams, and O.J.T. McCarty, "The thrombotic potential of circulating tumor microemboli," 2015 Congress of the International Society on Thrombosis and Haemostasis, June 20 – 25, 2015, Toronto, Canada.

188. M.J. Mitchell (speaker), C.A. Castellanos, and M.R. King, "Surfactant Functionalization Induces Robust, Differential Adhesion of Tumor Cells and Blood Cells to Charged Nanotube-Coated Biomaterials Under Flow," Society for Biomaterials 2015 Annual Meeting, Charlotte, NC, April 15 – 18, 2015.

189. A.D. Hughes, G. Marsh, R.E. Waugh, D.G. Foster, and M.R. King, "Halloysite nanotube coatings suppress leukocyte spreading," Biomedical Engineering Society 2015 Annual Meeting, Tampa, FL, October 7 – 10, 2015.

190. A.R. Rocheleau, T.M. Cao, T. Takatani, and M.R. King, "Comparison of human and mouse E-selectin binding to sialyl Lewis x: Theory and experiment," Biomedical Engineering Society 2015 Annual Meeting, Tampa, FL, October 7 – 10, 2015.

191. J. Li, B. Wun, S. Roy, Q. Wu, C. Sharkey, and M.R. King, "Platelet membrane-functionalized particles to target tumor cell-associated microthrombi for the prevention of lung metastasis," Biomedical Engineering Society 2015 Annual Meeting, Tampa, FL, October 7 – 10, 2015.

192. S. Chandrasekaran, M.F. Chan, J. Li, and M.R. King, "Super natural killer cells that target metastases in the tumor draining lymph nodes," Biomedical Engineering Society 2015 Annual Meeting, Tampa, FL, October 7 – 10, 2015.

193. M.J. Mitchell (speaker), C. Denais, M. Chan, Z. Wang, J. Lammerding, and M.R. King, "Lamin A/C deficiency reduces circulating tumor cells resistance to fluid shear stress," Biomedical Engineering Society 2015 Annual Meeting, Tampa, FL, October 7 – 10, 2015.

194. J.C. Kohn, D.W. Zhou, F. Bordeleau, A.L. Zhou, B.N. Mason, M.J. Mitchell, M.R. King, and C.A. Reinhart-King (speaker), "Matrix Stiffening Inhibits Endothelial Cell Nitric Oxide Production and Decreases Barrier Integrity in Response to Fluid Shear Stress," Biomedical Engineering Society 2015 Annual Meeting, Tampa, FL, October 7 – 10, 2015.

195. E.C. Wayne (speaker), S. Chandrasekaran, M.J. Mitchell, M.F. Chan, R.E. Lee, C.B. Schaffer, and M.R. King, "TRAIL-coated Leukocytes That Prevent the Bloodborne Metastasis of Prostate Cancer," Biomedical Engineering Society 2015 Annual Meeting, Tampa, FL, October 7 – 10, 2015.

196. Chandrasekaran, S., M.R. Chan, J. Li, and M.R. King, "Super natural killer cells that target metastases in the tumor draining lymph nodes," 2016 Cellular and Molecular Bioengineering (CMBE) and Advanced Biomanufacturing (ABioM) Joint Conference, New Orleans, LA, January 6 – 10, 2016.

197. Mitchell, M.J. (speaker), C. Denais, M. Chan, Z. Wang, J. Lammerding, and M.R. King, "Lamin A/C deficiency reduces circulating tumor cell resistance to fluid shear stress," 2016 Cellular and Molecular Bioengineering (CMBE) and Advanced Biomanufacturing (ABioM) Joint Conference, New Orleans, LA, January 6 – 10, 2016.

198. Grayson, K. (speaker), A.D. Hughes, M.J. Mitchell, S. Chandrasekaran, Y. Geng, J.R. Marshall, and M.R. King, "Circulating tumor cells: A diagnostic and therapeutic target in metastatic cancer," National Society of Black Engineers 42nd Annual Convention, Boston, MA, March 23 – 27, 2016.

199. M.J. Mitchell (speaker), C. Castellanos, and M.R. King, "Serum Albumin Controls Charge-Mediated Adhesion and Isolation of Cancer Cells and Leukocytes Under Flow," Biomedical Engineering Society 2016 Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

200. J.R. Marshall, Z. Mohamed (speaker), E. Messing, D. Sahasrabudhe, and M.R. King, "Efficacy of E-selectin/TRAIL Liposomes to Treat Patient Circulating Tumor Cells in Flowing Whole Blood," Biomedical Engineering Society 2016 Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

201. J.R. Marshall, A. Clinch, and M.R. King, "Shear resistance of circulating tumor cells with cancer-associated fibroblasts," Biomedical Engineering Society 2016 Annual Meeting, Minneapolis, MN, October 5 – 8, 2016.

202. M.J. Mitchell (speaker), C. Castellanos, and M.R. King, "Exploiting Serum Interactions with Cationic Biomaterials Enables Label-Free Circulating Tumor Cell Isolation," American Institute of Chemical Engineers 2016 Annual Meeting, San Francisco, CA, November 13 – 18, 2016.

203. T. Cao (speaker) and M.R. King, "DNA Netosis Engineered to Ensnare and Kill Disseminated Tumor Cells," Biomedical Engineering Society 2017 Annual Meeting, Phoenix, AZ, October 11 – 14, 2017.

204. Z. Zhang (speaker) and M.R. King, "Leukocytes as Mobile Carriers of Anti-Cancer Therapeutics via Bispecific Liposomes," Biomedical Engineering Society 2017 Annual Meeting, Phoenix, AZ, October 11 – 14, 2017.

205. E. Lederman and M.R. King, "Computational simulations of intermittent and repeated delivery of TRAIL apoptosis signal to neutralize tumor cells in the bloodstream," Biomedical Engineering Society 2017 Annual Meeting, Phoenix, AZ, October 11 – 14, 2017.

206. K.J. Anderson and M.R. King, "Adhesive dynamics simulations of hemodynamic transport and adhesion probability of multicellular aggregates in circulation," Biomedical Engineering Society 2017 Annual Meeting, Phoenix, AZ, October 11 – 14, 2017.

207. D. Liu (speaker) and M.R. King, "Super Natural Killer Cell-Mediated Targeted Therapy on Chemo-Resistant Cancer Cells," Biomedical Engineering Society 2017 Annual Meeting, Phoenix, AZ, October 11 – 14, 2017.

208. TRAIL-coated Leukocytes to Kill Tumor Cells in the Blood of Prostate Cancer Patients, N. Ortiz Otero (speaker), J. Marshall, E.M Messing, D.M. Sahasrabudhe, M.R. King, Society for Biomaterials 2018 Annual Meeting, Atlanta, GA, April 11 – 14, 2018.

209. Leukocytes as Mobile Carriers of Anti-Cancer Therapeutics via Bispecific Liposomes, Z Zhang (speaker), D Liu, N Ortiz-Otero, T Cao, M.R. King, Society for Biomaterials 2018 Annual Meeting, Atlanta, GA, April 11 – 14, 2018.

210. Natural Killer Cell Engineering for Therapeutic Targeting of Metastases in the Tumor Draining Lymph Nodes, Z Zhang (speaker), D Liu, J Greenlee, F Yu, N Ortiz-Otero, T Cao, M King, Society for Biomaterials 2018 Annual Meeting, Atlanta, GA, April 11 – 14, 2018.

211. DNA Netosis Engineered to Ensnare and Kill Tumor Cells, T Cao (speaker), MR King, D Liu, J Greenlee, F Yu, N Ortiz-Otero, T Cao, M King, Society for Biomaterials 2018 Annual Meeting, Atlanta, GA, April 11 – 14, 2018.

212. TRAIL-Conjugated Liposomes to Kill Chemoresistant Cancer Cells in the Lymph Nodes, J Greenlee (speaker), Z Zhang, F Yu, D Liu, M King, Society for Biomaterials 2018 Annual Meeting, Atlanta, GA, April 11 – 14, 2018.

213. Platelet-Based Delivery of Apoptosis Ligand TRAIL to Target and Kill Tumor Cells in the Circulation, N. Ortiz-Otero (speaker) and M.R. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

214. Regional Association of Leukocyte Subpopulation Infiltration in Primary and Metastatic Tumors in an Orthotopic Prostate Cancer Model, K. Grayson (speaker) and M. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

215. Stabilization of the Hinge Region in Human E-selectin Enhances Binding Affinity to Ligands Under Force, T. Cao (speaker) and M.R. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

216. Calcium Influx Enhances TRAIL-Mediated Apoptosis of Cancer Cells, J. Hope (speaker), E. Lederman, and M. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

217. Micelle-Encapsulated Liposomes for Dual Delivery of Synergistic Anti-Cancer Therapy, Z. Zhang (speaker), S.B. Hahn, and M.R. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

218. Engineered Multi-functional Molecule to Functionalize Immune Cells for Circulatory Tumor Cell Targeting, Z. Zhang (speaker) and M. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

219. DNA Netosis Engineered to Ensnare and Kill Disseminated Tumor Cells, T. Cao (speaker) and M.R. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

220. TRAIL-coated Leukocytes to Kill Circulating Tumor Cells in the Flowing Blood from Prostate Cancer Patients, N. Ortiz-Otero (speaker), J. Marshall, T. Subramanian, D.M. Sahasrabudhe, E.M. Messing, and M.R. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

221. Trail-Conjugated Liposomes that Kill Colorectal Cancer Metastases in the Lymph Nodes, J. Greenlee (speaker), Z. Zhang, D. Lui, F. Yu, and M. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

222. E-Cadherin Facilitates Breast Cancer Metastasis in Non-Motile Phenotypically Sorted Subpopulation, L.A. Hapach (speaker), S.P. Carey, Z.E. Goldblatt, T.M. Cao, D. Pokhriyal, J. Li, F. Bordeleau, M.R. King, and C.A. Reinhart-King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

223. Minimal Administration Of E-selectin-TRAIL Liposomes Has Therapeutic Benefits In A Mouse Model Of Metastatic Breast Cancer With Tumor Resection, N. Jyotsana (speaker), Z. Zhang, F. Yu, and M.R. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

224. TRAIL-coated Leukocytes Neutralize Tumor Cells in the Flowing Blood from Colorectal Cancer Patients, N. Ortiz-Otero, T. Subramanian, and M.R. King, Biomedical Engineering Society 2018 Annual Meeting, Atlanta, GA, October 16 – 20, 2018.

225. The establishment of a 4T1 breast cancer model for TRAIL immunotherapy studies, J.A. Dombroski, N. Jyotsana, Z. Zhang, and M.R. King, Society for Biomaterials 2019 Annual Meeting & Exposition, Seattle, WA, April 3-6, 2019.

226. Shedding Light on Fluorescent Microscopy and Targeted Drug Delivery, J. Dombroski, M. Lopez Cavestany and M. R. King, Society for Biomaterials 2019 Annual Meeting Education Challenge, Seattle, WA, April 3-6, 2019.

227. Cell Surface Vimentin as a Target for Liposome-Based TRAIL Delivery to Metastatic Cancer Cells, M. Lopez Cavestany, Z. Zhang, and M.R. King, Society for Biomaterials 2019 Annual Meeting & Exposition, Seattle, WA, April 3-6, 2019.

228. Cancer Associated Fibroblasts (CAFs) Confer Shear Resistance to Circulating Tumor Cells, A.B. Clinch, N. Ortiz Otero, J.R. Marshall, and M.R. King, Society for Biomaterials 2019 Annual Meeting & Exposition, Seattle, WA, April 3-6, 2019.

229. Piezo1 Sensitizes Cancer Cells to TRAIL-Mediated Apoptosis Through Mitochondrial Perturbation, J. Hope, W. Wang, C. Reinhart-King, and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

230. Tumor Nano-Lysates as a Vaccine for Triple-Negative Breast Cancer in Vivo, J. Dombroski, N. Jyotsana, Z. Zhang, and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

231. TRAIL-ing a Chemoresistant Phenotype: TRAIL Applications as an Adjuvant for Oxaliplatin-Resistant Colorectal Cancer, J. Greenlee and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

232. E-Selectin-TRAIL Conjugates for Anti-Metastasis Therapy in the Circulation, Z. Zhang, S.B. Hahn, S. Patel, and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

233. Micelle-in-Liposomes for Dual Delivery of Synergistic Anti-Metastatic Therapy, Z. Zhang, S. Patel, S.B. Hahn, and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

234. Characterization of Cell Surface Vimentin for Metastatic Cancer Cell Targeting, M. Lopez Cavestany and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

235. Stretch-Activated Cation Channel Opening is Essential for Cancer Cell Survival in High Shear Stress Environments, J. Hope, A. Clinch, and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

236. Shedding Light on Fluorescent Microscopy and Targeted Drug Delivery, J. Dombroski, M. Lopez Cavestany and M. R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

237. The Role of Endoplasmic Reticulum Stress in Taxane-Sensitization of Castration-Resistant Prostate Cancer Cells to TNF-Related Apoptosis Inducing Ligand (TRAIL) Mediated Apoptosis, K. Grayson and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

238. Coordinated Release of TRAIL and Hydrophobic Sensitizer with Co-Solvent Hydrogel for Local Drug Delivery of Prostate Cancer, J. Patel, K. Grayson, Z. Zhang, M.R. King and E. Barker, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

239. Efficient Targeting of Triple Negative Breast Cancer Metastasis via E-Selectin TRAIL Liposome Therapy, N. Jyotsana, Z. Zhang, L.E. Himmel, F. Yu and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

240. Micellar Curcumin and Liposomal TRAIL Synergize to Promote Tumor Cell Death, Z. Zhang, S. Patel and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

241. Fine-Tuning of Leukocytes Functionalization by Liposomes to Target Cancer Cells in the Circulation, Z. Zhang, M. Lopez Cavestany, S. Durbha and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

242. In Vitro Efficacy of TNF Related Apoptosis Inducing Ligand Conjugated Nanoparticles to Kill Cancer Cells, T. Subramanian, J. Greenlee, N. Ortiz-Otero and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

243. E-Cadherin Enables Metastasis in Non-Motile Phenotypically Sorted Breast Cancer Subpopulation, L. Hapach, S.P. Carey, Z.E. Goldblatt, I. Richardson, T.M. Cao, N. Ortiz-Otero, M.R. King and C.A. Reinhart-King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

244. Spatial Distribution and Density of Tumor-Infiltrating Leukocytes Armed with TRAIL in an Orthotopic Prostate Cancer Model, K. Grayson, L. Himmel and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

245. Matrix Stiffness Induces Epithelial to Mesenchymal Transition Through Increased Piezo1 Expression, M. Lopez Cavestany, J. Hope, S. Schwager, C. Reinhart-King and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

246. Engineering Hematopoietic Stem Cells for Functional Delivery of Full Length TRAIL, N. Jyotsana and M.R. King, Biomedical Engineering Society 2019 Annual Meeting, Philadelphia, PA, October 16 – 19, 2019.

247. TRAILing chemoresistance: Oxaliplatin resistance sensitizes colorectal cancer to TRAIL via death receptor localization, J.D. Greenlee, N. Ortiz-Otero, T. Subramanian, K. Liu and M.R. King, AACR Annual Meeting, June 22 – 24, 2020, Virtual Meeting.

248. Fabrication and Characterization of Tumor Nano-Lysates as a Vaccine for Breast Cancer, J. Dombroski and M.R. King, Biomedical Engineering Society 2020 Annual Meeting, San Diego, CA, October 14-17, 2020.

249. Oxaliplatin Resistance in Colorectal Cancer Enhances TRAIL Sensitivity via Death Receptor 4 Upregulation and Localization Into Lipid Rafts, J. Greenlee and M.R. King, King, Biomedical Engineering Society 2020 Annual Meeting, San Diego, CA, October 14-17, 2020.

250. Matrix Stiffness Induces Epithelial-to-Mesenchymal Transition via Piezo1-Regulated Calcium Flux, M. Lopez-Cavestany and M.R. King, King, Biomedical Engineering Society 2020 Annual Meeting, San Diego, CA, October 14-17, 2020.

251. Taxanes Sensitize Prostate Cancer Cells to TRAIL-Induced Apoptotic Synergy Via Endoplasmic Reticulum Stress, K. Grayson (speaker), J. Hope, W. Wang, C. Reinhart-King, and M. King, 2nd AfroBiotech Conference 2020 (Virtual Meeting), American Institute of Chemical Engineers, October 26-28, 2020.

252. Metastatic Colorectal Cancer Cells Show Increased Resistance to Fluid Shear Stress-Induced Apoptosis, J. Greenlee (speaker), K. Liu, and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

253. Fabrication of ZnO Nanostructured Surfaces for the Enhanced Formation of Colorectal Cancer Spheroids, M. Lopez-Cavestany (speaker), K. Jayawardana, N.T. Reckhorn, A. Esteban Linares, D. Li, and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

254. Functionalization Of Leukocytes With Protein Conjugates To Target Cancer Cells In The Circulation, Z. Zhang (speaker) and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

255. Matrix Stiffness Induces Epithelial-to-Mesenchymal Transition Via Piezo1-Regulated Calcium Flux, M. Lopez-Cavestany (speaker), J. Hope, S.B. Hahn, N. Reckhorn, S. Schwager, J. VanderBurgh, C. Reinhart-King, and M.R. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

256. Development of Nanoscale Liposomes That Specifically Recognize and Neutralize SARS-CoV-2, Z. Zhang (speaker) and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

257. Oxaliplatin Resistance Sensitizes Colorectal Cancer to TRAIL via DR4 Lipid Raft Localization, J. Greenlee (speaker), M. Lopez-Cavestany, N. Ortiz-Otero, K. Liu, B. Cagir, and M.R. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

258. Tuning of SU8 Photolithography for Production of Microwell Structures for Colorectal Cancer Tumor Spheroid Growth, N. Reckhorn (speaker), M. Lopez-Cavestany, K. Jayawardana, and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

259. Fluid Shear Stress Enhances T Cell Activation Through Piezo1, J. Hope (speaker), J. Dombroski, R. Pereles, M. Lopez-Cavestany, J. Greenlee, S. Schwager, C. Reinhart-King, and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

260. Characterization and Immunogenicity of a Tumor Nano-Lysate Vaccine for Triple-Negative Breast Cancer, J. Dombroski (speaker), N. Jyotsana, D. Crews, Z. Zhang, and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

261. Dendritic Cell Activation is Enhanced with Fluid Shear Stress Stimulation, J. Dombroski (speaker), J. Hope, S. Rowland, and M. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

262. High throughput approach to study fluid shear stress mechanotransduction of circulating prostate cancer cells, A.R. Fabiano (speaker), S. Robbins, and M.R. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

263. Enhanced T Cell Activation via Fluid Shear Stress, N.S. Sarna (speaker), J.M. Hope, S. Desai, and M.R. King, NIH National Cancer Institute (NCI) Cancer Tissue Engineering Collaborative (TEC) Annual Meeting, Madison, WI, July 6-7, 2022.

264. Enhanced T Cell Activation via Fluid Shear Stress, N.S. Sarna (speaker), J.M. Hope, S. Desai, and M.R. King, Biomedical Engineering Society 2021 Annual Meeting, Orlando, FL, October 6 – 9, 2021.

265. Evaluating the Mechanisms of Yoda1 Sensitization of TRAIL-Mediated Apoptosis in Glioblastoma Cells. S.H. Desai (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

266. Accessing Superhydrophobic Microwell Arrays Devices for High-Throughput Culture of 3D Cancer Models. T. Nguyen (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

267. Fabrication of Superhydrophobic Microwell Array Devices for High Throughput Culture of 3D Cancer Models. M. Lopez-Cavestany (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

268. Applying Ultrasound to Mechanically Sensitize Prostate Cancer Cells to TRAIL-Mediated Apoptosis. A.R. Fabiano (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

269. Stimulation Via Cone-and-Plate Flow Device Activates Dendritic Cells. S.J. Rowland (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

270. Production of a Tunable CTC Cluster in vitro Model via a Superhydrophobic Microwell Array Device. O. Wright (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

271. Control of Ultra-Thick SU8 Photolithography Structures for Production of Tumor Spheroids. N. Reckhorn (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

272. Multiplex Approach to Study Circulating Prostate Cancer Cell Mechanotransduction Under Shear Stress. A.R. Fabiano (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

273. Piezo-1 Regulated Calcium Flux is Modulated by Matrix Stiffness, Controlling EMT in Prostate Cancer Cells. M. Lopez-Cavestany (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

274. Mesenchymal Phenotype in Migratory Cancer Cell Subpopulations Enhance Fluid Shear Stress Resistance. I. Ortiz (speaker)… M.R. King, C.A. Reinhart-King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

275. Chemical Activation of Piezo1 to Enhance TRAIL-induced Apoptosis in Glioblastoma Cells. S. Knoblauch (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

276. Neutralization of SARS-CoV-2 by Extracting the Spikes Using Engineered Liposomes. Z. Zhang (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

277. Nanoscale Vesicles Derived from Engineered Cell Membranes for Tissue-Specific Drug Delivery. Z. Zhang (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

278. Piezo1 Mechano-Activation is Augmented by Resveratrol and Differs Between Colorectal Cancer Cells of Primary and Metastatic Origin. J.D. Greenlee (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

279. Enhanced and Sustained T Cell Activation Over Time via Fluid Shear Stress Exposure. N.S. Sarna (speaker)… M.R. King, Biomedical Engineering Society 2022 Annual Meeting, San Antonio, TX, October 13 – 15, 2022.

280. Tunable Superhydrophobic Microwell Array Devices for High-Throughput Culture of 3D Cancer Models. M. Lopez Cavestany (speaker), K. Jayawardana, O.A. Wright, N.T. Reckhorn, T. Nguyen, D.P. Briggs, C.P. P. Collier, D.S. Koktysh, A.E. Linares, D. Li, and M.R. King. Materials Research Society Spring Meeting, San Francisco, CA, April 10 – 13, 2023.

281. Selective Functionalization of Leukocyte Subpopulations with E-Selectin Liposomes. S. Shibuya (speaker), Z. Zhang, J. Dombroski, and M.R. King, National Conference on Undergraduate Research, UW-Eau Claire, WI, April 13-15, 2023.

282. Dual affinity nanoparticles for the transport of therapeutics from carrier cells to target cells under physiological flow conditions. M. Lopez Cavestany (speaker), O. Wright, A. Cassidy, and M.R. King, Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

283. Leveraging T cell mechanotransduction for enhanced and sustained ex vivo activation. N.S. Sarna (speaker), S.H. Desai, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

284. Characterization of macrophage polarization states following shear stress exposure. N.M. Curry (speaker), N. Sarna, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

285. The growing trend of colorectal cancer during pregnancy: A computational study of prolactin signaling and cancer aggressiveness. M. Lopez Cavestany (speaker), O. Wright, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

286. Mesenchymal Phenotype Confers Mechanical Resistance to Fluid Shear Stress in Migratory Breast Cancer Subpopulations. I. Ortiz (speaker), J. Greenlee, W. Wang, K. Young, P. Taufalele, V. Dunagan, M. Lopez Cavestany, M.R. King, and C. Reinhart-King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

287. Fluid Shear Stress Mechanotransduction Enhances Dendritic Cell Activation. S. Rowland, J.A. Dombroski, A.R. Fabiano, S. Knoblauch, J. Hope, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

288. Chemical Activation of Piezo1 to Enhance TRAIL-induced Apoptosis in Glioblastoma Cells. S. Knoblauch (speaker), J. Dombroski, S.H. Desai, N.S. Sarna, J. Hope, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

289. Tunable Superhydrophobic Microwell Array Devices for High-Throughput Culture of 3D Cancer Models. M. Lopez Cavestany (speaker), O. Wright, K. Jayawardana, N. Reckhorn, T. Nguyen, A.E. Linares, D. Briggs, D. Li, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

290. Multiplex Method to Investigate Circulating Tumor Cell Mechanotransduction Under Shear Stress. A.R. Fabiano (speaker), S.C. Robbins, J.A. Dombroski, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

291. Immunogenicity of a Tumor Nano-Lysate Vaccine for Triple-Negative Breast Cancer. S. Knoblauch (speaker), J. Dombroski, A.R. Fabiano, S. Rowland, K. Gibson-Corley, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

292. In Situ Therapeutic Engineering of the Immune Cell Surface. Z. Zhang (speaker) and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

293. Ultrasound Mechanotherapy to Non-invasively Sensitize Prostate Tumors to TRAIL-Mediated Apoptosis. A.R. Fabiano (speaker), M.W. Newman, J.A. Dombroski, J. Kusunose, C. Caskey, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

294. Prolactin Protein Essential or Mammary Gland Production in Females Sensitizes Colorectal Cancer Cells to TRAIL-mediated Apoptosis. A.T. Carter (speaker), M. Lopez Cavestany, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

295. Examining the Apoptotic Mechanism of Piezo1 Activation and TRAIL Sensitization in Glioblastoma Cells. S.H. Desai (speaker), N.S. Sarna, S. Knoblauch, J.A. Dombroski, and M.R. King. Biomedical Engineering Society 2023 Annual Meeting, Seattle, WA, October 11 – 14, 2023.

296. Isolation of circulating tumor cell clusters from whole blood using a microfluidic approach. E. Aalaei (speaker) and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

297. Enhanced and Sustained T Cell Activation, Proliferation, and Cytotoxicity in Response to Fluid Shear Stress. N.S. Sarna (speaker), B. Kaufman, and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

298. Circulating Tumor Cell Dynamics in Patients Undergoing Pluvicto Therapy for Metastatic Prostate Cancer. N.S. Sarna (speaker), K. Schaffer, P. Hurley, and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

299. Modeling T Cell Calcium Dynamics and Downstream Activation Signaling in Response to Fluid Shear Stress. N.S. Sarna (speaker) and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

300. Temporal Calcium Dynamics of Chemically-Activated Piezo1 in T Cells. B. Kaufman (speaker), N.S. Sarna, and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

301. Control of TRAIL Avidity on the Surface of Nanoscale Liposomes via Lipid Phase Separation. Z. Zhang (speaker) and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

302. Surface Engineering of Circulating Immune Cells to Promote Tumor Infiltration by Tunneling Tumor-Defending Collagen. Z. Zhang (speaker) and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

303. Nanostructured Cell Culture Device for Modeling Circulating Tumor Cell Clusters. A.T. Carter (speaker), M. Lopez-Cavestany, and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

304. Metastatic Cancer Cell Clusters Subjected to Physiological Fluid Shear Stresses – Survival, Proliferation, and Aggression Enhancement in Aggregates. A.T. Carter (speaker) and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

305. High-Throughput Method to Investigate Tumor Cell and Primary Cell Mechanotransduction Under Physiological Shear Stress. A. Fabiano (speaker) and M.R. King, Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

306. Non-invasive Ultrasound Mechanotherapy Sensitizes Prostate Tumors to TRAIL-Induced Apoptosis. A. Fabiano (speaker), Malechy, C. Caskey, and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

307. Chemical Activation of Piezo1 and Combination Therapies Enhance TRAIL-induced Apoptosis in Glioblastoma. A. Fabiano (speaker), S. Knoblauch, and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

308. Differential Effects of Fluid Shear Stress on Macrophage Functionality and Polarization. N.M. Curry (speaker) and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

309. Cellular Automata Simulation of Prostate Cancer: Understanding Macrophage-Driven Tumor Dynamics. N.M. Curry (speaker) and M.R. King. Biomedical Engineering Society 2024 Annual Meeting, Baltimore, MD, August 23 – 26, 2024.

310. LLM-Powered Citation Diversity Analysis for Behavioral Health Research Equity. M.S. Cantu (speaker) and M.R. King. AI in Health Conference, Houston, TX, September 22 – 25, 2025.

311. Age and Sex as Biological Variables in Ex Vivo CD3/CD28-Mediated T Cell Activation. B Kaufman (speaker), E Sikavitsas, and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

312. Effects of Fluid Shear Stress on Primary M2 Macrophage Functionality and Polarization. N Curry (speaker), A Fabiano, and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

313. Effects of Oxygen Microenvironments on TRAIL-induced Apoptosis in Mechanically-Stimulated Prostate Cancer Cells. E Aalaei (speaker) and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

314. TRAIL-mediated mechanotransduction in cancer cells and immune cell activation enabled by a multiplex, high-throughput system. A Fabiano (speaker), S Knoblauch, J Dombroski, and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

315. Highly Selective Targeting of Circulating Neutrophils for Cellular Drug and Gene Delivery. Z Zhang (speaker) and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

316. Analyze Smarter, Not Harder: Generating Publication-Ready Citation Diversity Reports with LLMs. MS Cantu (speaker) and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

317. MediaMaxxing: Culture of Prostate Cancer Cells Under Normoxic and Hypoxic Conditions Using Bovine Platelet Lysate as an Alternative Growth Supplement. E Aalaei (speaker) and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

318. Reusable Superhydrophobic Array Devices for Modeling Physiologically Relevant Microenvironments of Circulating Tumor Cells. E Aalaei (speaker), J Largoza, J Deng and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

319. Human-based high-throughput systems for disease state modeling, mechanotransductive response screening, and use in disease prognostication. A Carter (speaker), M Lopez-Cavestany, O Wright, N Reckhorn and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

320. Cyclical Shear Stress Selectively Primes Monocytes Toward a Hybrid Immunomodulatory State. N Curry (speaker), NS Sarna, A Fabiano and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

321. The Effects of Shear and Acoustic Forces on B Cell Activation. D Ghazanfari (speaker) and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

322. Stochastic Tau-Leaping Gillespie Modeling of Apoptosis Using PhysiCell Demonstrates TRAIL–Fluoxetine Synergy in Glioblastoma. S Lu (speaker), NS Sarna, AC Luo, S Desai and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

323. Calcium Responses Induced by Focused Ultrasound Applied to Prostate Cancer Cells. L Ren (speaker) and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

324. Surface-Modified T cells to Engineer Immune Cell Infiltration through 3D Collagen. Z Zhang (speaker) and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

325. Applying Ultrasound to Mechanically and Noninvasively Sensitize Prostate Tumors to TRAIL-Mediated Apoptosis in Vivo. A Fabiano (speaker), M Newman, J Dombroski, S Knoblauch, K Gibson-Corley, B Kaufman, L Ren, C Caskey and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

326. Modeling Physiologically Relevant Microenvironments for Circulating Tumor Cells via the Superhydrophobic Array Device. J Largoza (speaker), E Aalaei and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.

327. Genomic, Proteomic, and Functional Validation of CRISPR/Cas9 Knockouts in Mammalian Cell Lines. T Yasir (speaker), M Cantu, A Fabiano and MR King. Biomedical Engineering Society 2025 Annual Meeting, San Diego, CA, October 8 – 12, 2025.