Erica D. Pratt

Boston University
Department of Biomedical Engineering
44 Cummington Mall
Boston, MA 02215
email: epratt@bu.edu
telephone: 617-358-4338
website: ericaprattlab.com

ACADEMIC POSITIONS

Assistant Professor, Boston University
Moorman-Simon Interdisciplinary Career Development Professor — 2022 – present
Department of Biomedical Engineering — 2022 – present

Concurrent University Appointments
Division of Materials Science & Engineering — 2022 – present
Program in Molecular Biology, Cell Biology & Biochemistry — 2022 – present
Section of Hematology & Oncology, Chobanian & Avedisian School of Medicine — 2022 – present

EDUCATION / RESEARCH TRAINING

Postdoctoral Associate, Department of Biochemistry, Molecular Biology & Biophysics — 2018 – 2021
University of Minnesota Twin Cities, Minneapolis MN
Advisor: Laurie L. Parker, Ph.D.

Postdoctoral Associate, Department of Internal Medicine — 2015 – 2018
The University of Texas at MD Anderson Cancer Center, Houston, TX
University of Michigan Rogel Cancer Center, Ann Arbor, MI
Advisor: Andrew D. Rhim, M.D.

Ph.D. in Biomedical Engineering, Meinig School of Biomedical Engineering — 2008 – 2015
Cornell University, Ithaca, NY
Advisor: Brian J. Kirby, Ph.D.

B.S. in Mechanical Engineering and Biomedical Engineering (*double major)* — 2004 – 2008
Carnegie Mellon University, Pittsburgh PA
Advisor: Philip R. LeDuc, Ph.D.

AWARDS / HONORS

Moorman-Simon Interdisciplinary Career Development Professorship — 2022
University of Minnesota President's Postdoctoral Fellowship Program (*declined*) — 2021
University of Minnesota Targets of Cancer Training Program (T32 CA009138) — 2020
Momental Foundation Unfettered Research Grant — 2019
Cancer Disparities Research Network Early Career Scholarship, Travel Grant — 2019
NIH R33 Diversity Supplement (CA217780) — 2018
Gordon Conference on Liquid Biopsy in Cancer, Travel Grant — 2018
University of Michigan Cancer Biology Training Grant (T32 CA967622) — 2015
Edward A. Bouchet Graduate Honor Society, Fellow — 2014
Miniaturized Systems for Chemistry and Life Sciences (MicroTAS), Travel Grant — 2011
Cornell Physical Sciences in Oncology Center (PS-OC) Young Investigator's Award — 2012
Gordon Research Conference (GRC) on Bioanalytical Sensors, Travel Grant — 2010
Cornell Nanofabrication Facility (CNF) Annual Meeting, Poster Award — 2010
Sibley Graduate Research Conference, Poster Award — 2010
NSF Graduate Research Fellowship — 2009
Alfred P. Sloan Foundation Graduate Fellowship — 2008

PUBLICATIONS

* co-equal contribution; # corresponding author
Pubmed: https://www.ncbi.nlm.nih.gov/myncbi/erica.pratt.1/bibliography/public/
(*Google Scholar: 1218 citations, h-index: 9, i10-index: 8*)

[12] NE Widstrom*, M Perez*, **ED Pratt**, JL Heier, JF Blakenhorn, L Breidenbach, H Peterson, LL Parker. "Novel Bruton's Tyrosine Kinase (BTK) substrates for time-resolved luminescence assays" ***ACS Chemical Biology****,* 17 (6) 1328-1333 2022.

[11] RW Cowan, **ED Pratt**, JM Kang, J Zhao, JJ Wilhelm, M Abdulla, EM Qiao, LP Brennan, PJ Ulintz, MD Belling, AD Rhim. "Clinical severity does not increase pancreatic cancer-related mutational burden in patients with chronic pancreatitis" ***Clinical and Translational Gastroenterology****,* 12 (11) e00431 2021.

[10] S Jena*, NP Damayanti*, J Tan, **ED Pratt**, JMK Irudayaraj and LL Parker, "Multiplexable fluorescence lifetime imaging (FLIM) probes for Abl and Src-family kinases" ***Chemical Communications****,* 56 (87) 13409-13412 2020*.*

[9] **ED Pratt** #, RW Cowan, SL Manning, E Qiao, H Cameron, K Schradle, DM Simeone and DB Zhen, "Multiplex Enrichment and Detection of Rare *KRAS* Mutations in Liquid Biopsy Samples using Digital Droplet Pre-Amplification," ***Analytical Chemistry***, 91(12) 7516-7523 2019.

[8] AS Farrell, MM Joly, BL Allen-Petersen, PJ Worth, C Lanciault, D Sauer, J Link, C Pelz, LM Heiser, JP Morton, N Muthalagu, MT Hoffman, SL Manning, **ED Pratt**, ND Kendersky, N Egbukichi, TS Amery, MC Thoma, ZP Jenny, AD Rhim, DJ Murphy, OJ Sansom, HC Crawford, BC Sheppard, RC Sears, "MYC regulates ductal-neuroendocrine lineage plasticity in pancreatic ductal adenocarcinoma associated with poor outcome and chemoresistance", ***Nature Communications***, 8(1) 1728 2017.

[7] ES Antonarakis, ST Tagawa, G Galletti, D Worroll, K Ballman, M Vanhuyse, G Sonpavde, S North, C Albany, CK Tsao, J Stewart, A Zaher, T Szatrowski, W Zhou, A Gjyrezi, S Tasaki, L Portella, Y Bai, TB Lannin, S Suri, CN Gruber, **ED Pratt**, BJ Kirby, MA Eisenberger, DM Nanus, F Saad and P Giannakakou, "A Randomized Non-Comparative Phase II Trial of Early Switch from Docetaxel to Cabazitaxel or Vice Versa, with Integrated Biomarker Analysis, in Men with Chemotherapy-Naïve Metastatic Castration-Resistant Prostate Cancer," ***Journal of Clinical Oncology***, 35(28) 3181 2017.

[6] **ED Pratt**, A Stepansky, J Hicks and BJ Kirby, "Single-Cell Copy Number Analysis of Prostate Cancer Cells using GEDI Microdevices," ***Analytical Chemistry***, 88(22) 11013-11017 2014.

- Featured in *Chemical & Engineering News* (C&EN).

[5] WC Ruder, **ED Pratt**, NZD Brandy, DA LaVan, PR LeDuc and JF Antaki, "Calcium signaling is gated by a mechanical threshold in three dimensional environments," ***Scientific Reports***, 2 2012.

[4] WC Ruder, **ED Pratt**, S Bakhru, M Sitti, S Zappe, CM Cheng, JF Antaki and PR LeDuc, "Three-Dimensional Microfiber Devices that Mimic Physiological Environments to Probe Cell Mechanics and Signaling," ***Lab on a Chip***, 12(10) 1775-1779 2012.

- *Lab on a Chip* Top 10% article

[3] BJ Kirby, M Jodari, MS Loftus, **ED Pratt**, G Gakhar, JP Gleghorn, SM Santana, H Liu, JP Smith, VN Navarro, ST Tagawa, NH Bander, DM Nanus and P Giannakakou, "Functional characterization of circulating tumor cells with a prostate-cancer-specific microfluidic device," ***PLoS ONE***, 7(4) e35976 2012.

[2] **ED Pratt***, C Huang*, BG Hawkins, JP Gleghorn and BJ Kirby, "Rare cell capture in microfluidic devices," ***Chemical Engineering Science***, 66(7) 1508-1522 2011.

- Top Cited Paper for 2011 & 2012.

[1] JP Gleghorn, **ED Pratt**, D Denning, H Liu, NH Bander, ST Tagawa, DM Nanus, PA Giannakakou and BJ Kirby, "Capture of circulating tumor cells from whole blood of prostate cancer patients using geometrically enhanced differential immunocapture GEDI and a prostate-specific antibody," ***Lab on a Chip***, 10(1) 27-29 2010.

- Top Cited Paper for 2012.

PREPRINTS

[1] **ED Pratt**[#], DB Zhen, SL Manning, H Cameron, K Schradle, V Gunchick, RW Cowan, V Sahai DM Simeone and AD Rhim, "Ultra-low Input Circulating Tumor DNA Detection by MED-Amp in Early-Stage Pancreatic Cancer" ***bioRxiv****,* 2021. doi: https://doi.org/10.1101/2021.03.28.437388

INVITED PRESENTATIONS

TENURE TRACK

[24] **Tufts University** Genetics, Molecular & Cellular Biology Graduate Seminar Series 12/23
(upcoming) TBA

[23] **Jefferson Health's Sidney Kimmel Cancer Center** Seminar Series 11/23
(*upcoming*) "Integrating Liquid Biopsy and Multimodal Technologies for Cancer Monitoring"

[22] **Boston Medical Center** Cancer Center Grand Rounds 05/23
"Multimodal Tools for Noninvasive Cancer Monitoring"

[21] **Dana-Farber Cancer Institute** Hale Pancreatic Cancer Center 10/22
"Liquid Biopsy approaches in Pancreatic Cancer"

[20] **Northeastern University** Bioengineering Seminar Series 10/22
"Liquid Biopsy approaches in Pancreatic Cancer"

[19] **Gordon Research Conference** on Liquid Biopsy in Cancer (*meeting cancelled*) 06/22
"Multimodal Tools for Noninvasive Cancer Monitoring"

PRE-TENURE TRACK

[18] **University of Minnesota Masonic Cancer Center** Seminar Series 05/21
"Liquid Biopsy for Noninvasive *KRAS* Mutation Detection in Early-Stage Pancreatic Adenocarcinoma"

[17] **The Ohio State University** Biomedical Engineering Seminar Series 03/21
"Blood-Based Assays for Cancer"

[16] **University of Minnesota** Biomedical Engineering Seminar Series 02/21
"Blood-Based Assays for Cancer"

[15] **University of Massachusetts at Amherst** Biomedical Engineering Seminar Series 02/21
"Blood-Based Assays for Cancer"

[14] **University of Texas at Dallas** Bioengineering Seminar Series 02/21
"Blood-Based Assays for Cancer"

[13] **Boston University** Biomedical Engineering Seminar Series 02/21
"Blood-Based Assays for Cancer"

[12] **Tufts University** Biomedical Engineering Seminar Series 02/21
"Blood-Based Assays for Cancer"

[11] **University of Colorado Boulder** Chemical & Biomedical Engineering Seminar Series 02/21
"Blood-Based Assays for Cancer"

[10] **The Ohio State University** Mechanical and Aerospace Engineering Seminar Series 11/20
"Blood-Based Assays for Cancer"

[9] **University of Minnesota** Center for Genome Engineering 09/19
"Detection of oncogenic mutations in cell-free DNA using digital PCR"

[8] **Medical College of Milwaukee** Pancreatic Cancer Translational Science Symposium, 10/19
"Ultrasensitive detection of oncogenic mutations in liquid biopsy samples"

[7] **University of Minnesota** Gastrointestinal Cancer Translational Working Group 11/19
"Multiplex detection of rare oncogenic mutations in liquid biopsy samples"

[6] **AACR Pancreatic Cancer**: Advances in Science and Clinical Care 09/18
"Multiplex enrichment and detection of *KRAS* mutations in liquid biopsy samples using digital droplet pre-amplification" ****Invited Plenary Talk**

[5] **Gordon Research Conference** on Liquid Biopsy in Cancer, 08/18
" Quantitative High-Sensitivity Multiplex Detection of Rare KRAS Mutations in Liquid Biopsy Samples Using Digital Droplet PCR"

[4] **University of Minnesota** Biochemistry, Molecular Biology and Biophysics 05/18
"Liquid biopsy-based strategies for cancer detection and monitoring"

[3] **The Scripps Research Institute** Cell Biology 06/14
"Microfluidic nuclei extraction and whole-cell release of cancer cells from GEDI microdevices"

[2] **University of Michigan** Internal Medicine 06/14
"Microfluidic nuclei extraction and whole-cell release of cancer cells from GEDI microdevices"

[1] **World Circulating Tumor Cell Summit** 11/12
"Functional and genetic analysis of CTCs captured with GEDI microdevices"

CONFERENCES

(Presenter, † Ph.D. student, ‡ undergraduate student)

ORAL PRESENTATIONS

[6] C Skeen†, P Sitaram, J Sexton, S Tsai, **ED Pratt**, "Optimization and Expansion of Digital PCR Multiplexing for Rare Mutation Detection," in Proceedings of the Biomedical Engineering Society Fall Meeting (BMES), Seattle, WA, 2023.

[5] **ED Pratt**, RW Cowan, SL Manning, E Qiao, H Cameron, K Schradle, DM Simeone, DB Zhen, "Ultrasensitive Detection of Circulating Tumor DNA using Digital Droplet Pre-Amplification," in Proceedings of the Biomedical Engineering Society Fall Meeting (BMES), Atlanta, GA, 2019.

[4] **ED Pratt**, DB Zhen, SL Manning, H Cameron, K Schradle, V Gunchick, RW Cowan, V Sahai, DM Simeone and A. D. Rhim, "Multiplex enrichment and detection of *KRAS* mutations in liquid biopsy samples using digital droplet pre-amplification," in AACR Special Conference on Pancreatic Cancer: Advances in Science and Clinical Care, Boston, MA, 2018.

[3] **ED Pratt**, DB Zhen, SL Manning, H Cameron, K Schradle, V Gunchick, RW Cowan, V Sahai, DM Simeone and A. D. Rhim, "Quantitative High-Sensitivity Multiplex Detection of Rare *KRAS* Mutations in Liquid Biopsy Samples using Picodroplet Digital PCR," in Gordon Research Conference on Liquid Biopsy for Cancer, South Hadley, MA 2018.

[2] **ED Pratt**, JP Gleghorn, M Loftus, M Jodari, SM Santana, JP Smith, A Stepansky, P Giannakakou, J Hicks, D Nanus, AD Rhim, B Stanger, and BJ Kirby, "Functional and genetic analysis of CTCs captured with GEDI microdevices," in World Circulating Tumor Cell Summit, Boston, MA, 2012.

[1] JP Gleghorn, S Santana, **ED Pratt**, M Loftus, M Jodari-Karimi, N Bander, D Nanus, P Giannakakou and BJ Kirby, "Cancer cell assays by use of immunocapture, subcellular imaging, and cell release in GEDI microdevices," in Proceedings of the Biomedical Engineering Society Fall Meeting (BMES), Austin, TX, 2010.

POSTER PRESENTATIONS

[23] M Eltze†, L Gliford†, JL Heier, SJ Joseph, LL Parker, **ED Pratt**, "Cancer-specific SRC activity profiling using exogenous artificial peptide probes," in Proceedings of the Biomedical Engineering Society Fall Meeting (BMES), Seattle, WA, 2023.

[22] S Jena, O Bastidas, **ED Pratt**, S Allendorf, B Cizubu and LL Parker, "Developing and Characterizing FLIM Probes to Detect Subcellular Tyrosine Kinase Activity," in 15th US Human Proteome Organization (HUPO) Annual Conference, Rockville, MD 2019.

[21] **ED Pratt**, A Londoño, E Qiao, L. Brennan, DM Simeone, P Ulintz, M. Samuels and Andrew, "Prediction of histologic grade of precancerous cystic lesions using picodroplet PCR-enabled targeted sequencing," in AACR Special Conference on Pancreatic Cancer: Advances in Science and Clinical Care, Orlando, FL 2016.

[20] RW Cowan, **ED Pratt**, J Wilhelm, M Abdulla, E Qiao, L Brennan, P Ulintz, M Bellin and AD Rhim, "Patients with severe chronic pancreatitis contain widespread and numerous pancreatic cancer-

related somatic variants as detected by picodroplet-enabled targeted sequencing," in AACR Special Conference on Pancreatic Cancer: Advances in Science and Clinical Care, Orlando, FL 2016.

[19] R Bergman, RS Kwon, **ED Pratt**, D Li, C Reader, RW Cowan and AD Rhim, "Noninvasive acoustic cavitation (histotripsy) transiently enhances tumor perfusion and alters immune response," in AACR Special Conference on Pancreatic Cancer: Advances in Science and Clinical Care, Orlando, FL 2016.

[18] ST Tagawa, G Galletti, ES Antonarakis, S Tasaki, A Gjyrezi, D Worroll, L Portella, BJ Kirby, J Stewart, A Zaher, F Saad, M Vanhuyse, S Suri, TB Lannin, C Gruber, **ED Pratt**, G Sonpavde, MA Eisenberger, DM Nanus and P Giannakakou, "Screening and baseline analysis of circulating tumor cell CTC counts and androgen receptor AR localization with clinical characteristics of men with metastatic castration-resistant prostate cancer mCRPC in TAXYNERGY," in European Cancer Congress 2015, Vienna, Austria, 2015.

[17] ST Tagawa, G Galletti, ES Antonarakis, S Tasaki, A Gjyrezi, D Worroll, L Portella, BJ Kirby, J Stewart, A Zaher, F Saad, M Vanhuyse, S Suri, TB Lannin, C Gruber, **ED Pratt**, G Sonpavde, MA Eisenberger, DM Nanus and P Giannakakou, "Baseline analysis of circulating tumor cell CTC enumeration and androgen receptor AR localization in men with metastatic castration-resistant prostate cancer mCRPC in TAXYNERGY," in 2015 American Society of Clinical Oncology ASCO Annual Meeting, Chicago, IL 2015.

[16] **ED Pratt**, A Stepansky, J Hicks and BJ Kirby, "Single-Cell Copy Number Analysis of Prostate Cancer Cells Captured with GEDI Microdevicess," in Gordon Research Conference on Rare Cells in Circulation, South Hadley, MA, 2014.

[15] JP Smith, JP Gleghorn, ME Godla, C Huang, TB Lannin, **ED Pratt**, SM Santana, FI Thege, and BJ Kirby, "Circulating tumor cell (CTC) cancer biomarkers using geometrically enhanced differential immunocapture (GEDI) microdevices," in Society for Lab Automation and Screening, (San Diego, CA), 2014.

[14] **ED Pratt**, M Blattner, A Stepansky, H Liu, N. Bander, M. Rubin, J Hicks and B. Kirby, "Microfluidic Nuclei Extraction from Circulating Tumor Cells for Genetic Analyses," in Proceedings of the Biomedical Engineering Society Fall Meeting (BMES), Atlanta, GA, 2012.

[13] **ED Pratt**, S Santana, JP Gleghorn, H Liu, N. Bander, D Nanus, P Giannakakou and BJ Kirby, "Circulating tumor cell release by use of novel immunocapture chemistry in GEDI microdevices," in Proceedings from 2011 MicroTAS Meeting, Seattle, WA, 2011.

[12] M Jodari-Karimi, M Loftus, J Gleghorn, G Gakhar, **ED Pratt**, S Tagawa, N Bander, P Giannakakou, B Kirby, and D Nanus, "Capture and analysis of prostate cancer circulating tumor cells (CTCs) by use of geometrically enhanced differential immunocapture (GEDI)," in Genitourinary Cancers Symposium, (Orlando, FL), 2011.

[11] M Loftus, M Jodari-Karimi, G Gakhar, **ED Pratt**, S Santana, M Rubin, N Bander, V Navarro, S Tagawa, B Kirby, D Nanus, and P Giannakakou, "Molecular and functional analysis of circulating tumor cells in castrate resistant prostate cancer using a geometrically enhanced microfluidic device based on PSMA immunocapture," in 102nd annual AACR meeting, (Orlando, FL), 2011.

[10] C Vos, **ED Pratt**, M Jodari-Karimi, M Loftus, S Tagawa, B Kirby, D Nanus, and P Giannakakou, "Mechanism of action and resistance of cabazitaxel in castration-resistant prostate cancer (CRPC)," in 102nd annual AACR meeting, (Orlando, FL), 2011.

[9] **ED Pratt**, JP Gleghorn, SM Santana, M Loftus, M Jodari-Karimi, N. Bander, D Nanus, P Giannakakou and BJ Kirby, "Cancer cell assays by use of immunocapture, subcellular imaging, and cell release in GEDI microdevices," in Gordon Research Conference on Bioanalytical Sensors, New London, NH, 2010.

[8] M Loftus, J Gleghorn, **ED Pratt**, N Bander, D Nanus, B Kirby, and P Giannakakou, "Analysis of circulating tumor cells from castrate-resistant prostate cancer patients captured via a microfluidic device using the prostate specic membrane antigen antibody," in Proceedings of the 101st American Association for Cancer Research Annual Meeting (AACR), (Washington DC), 2010.

[7] JP Gleghorn, **ED Pratt**, M Loftus, B Levy, N Bander, D Nanus, P Giannakakou, and BJ Kirby, "High eciency capture of circulating tumor cells from patient blood using geometrically enhanced

differential immunocapture," in Proceedings from 2009 MicroTAS Meeting, (Jeju, South Korea), 2009. [Podium Presentation].

[6] W Ruder, **ED Pratt**, T Cassino, J Huard, J Antaki, and P LeDuc, "Examining links between oscillatory calcium signal transduction and stem cell phenotype," in Proceedings of the Biomedical Engineering Society Fall Meeting (BMES), (St Louis, MO), 2008.

[5] W Ruder, ED Pratt, N Brandy, D LaVan, P LeDuc, and J Antaki, "Multimodal perturbation of intracellular Ca^{2+} using dorsal cell adhesion," in 52nd Annual Meeting of the Biophysical Society and 16th IUPAB International Biophysics Congress, (Long Beach, CA), 2007.

[4] W Ruder, **ED Pratt**, N Brandy, D LaVan, P LeDuc, and J Antaki, "Investigation of calcium mechanotransduction by quasi 3-d microber mechanical stimulation of cells," in Proceedings of the ASME Summer Bioengineering Conference, (Marco Island, FL), 2008.

[3] W Ruder, **ED Pratt**, N Brandy, D LaVan, P LeDuc, and J Antaki, "Stretch-activated calcium signal propagation following mechanical stimulation of focal adhesions," in Proceedings of the ASME Summer Bioengineering Conference, (Keystone, CO), 2007.

[2] I Cohen, M Buckley, S Gerbode, **ED Pratt**, and J Keeling, "Epitaxial growth of thin colloidal films in presence of depletant," in American Physical Society March Meeting (APS), (Denver, CO), 2007.

[1] W Ruder, **ED Pratt**, N Brandy, D LaVan, P LeDuc, and J.Antaki, "Probing intracellular Ca^{2+} signaling through mechanical stimulation of focal adhesion complexes," in Proceedings of the Biomedical Engineering Society Fall Meeting (BMES), (Los Angeles, CA), 2007.

TEACHING

TENURE TRACK

Instructor

Device Diagnostics and Design (ENG BE 428), Boston University [4 cr.] Spring 2023
Project-based course developing fundamentals of the design aspects of biomedical devices and diagnostics. Students identify design needs, evaluate possible solutions, build prototypes and analyze failure modes and their effects.

Guest Lecturer

Molecular Bioengineering (ENG BE 605/505), Boston University 2022
Critical Literature Review (ENG BE 792), Boston University 2022

PRE-TENURE TRACK

Guest Lecturer

Microfluidics in Biology and Medicine (BMEN 5321), University of Minnesota, Twin Cities 2020
Physics of Micro- and Nanoscale Fluid Mechanics (MAE 5240), Cornell University 2009

Teaching Assistant

Introductory Fluid Mechanics (MAE 3230), Cornell University 2014
Cancer for Engineers and Physicists (MAE/BME 6840), Cornell University 2013
Physics of Micro- and Nanoscale Fluid Mechanics (MAE 5240), Cornell University 2009

RESEARCH ADVISING

TENURE TRACK

Doctoral Students

Loran Gliford, Boston University, Molecular Biology, Cell Biology & Biochemistry 2023 – present
Awards: Synthetic Biology & Biotechnology Training Program (T32GM130546), 2023
Maren Eltze, Boston University, Biomedical Engineering 2022 – present

Colin Skeen, Boston University, Biomedical Engineering 2022 – present

Undergraduate Students

Terry Chen, Biomedical Engineering 2023 – present
Awards: STEM Pathways Undergraduate Research Program, 2023

Hanhminh Nguyen, Biomedical Engineering 2023 – present
Awards: Undergraduate Research Opportunities Program Grant, 2023

Nicholle Weir-Shack, Biology 2022 – present
Awards: ARROWS Student Lab Manager Program, 2022

Kate Lee, Biomedical Engineering 2022 – 2023
Now: Manufacturing Process Engineer, ZOLL Medical

Summer Interns

Jackelyn Merida, New Mission High School 07/23 – 08/23
STEM Pathways High School Student Research Experience

Graduate Rotation Students

Florence Guerina, Molecular Biology, Cell Biology & Biochemistry 2023
Loran Gliford, Molecular Biology, Cell Biology & Biochemistry 2023
Jack Cardini, Biomedical Engineering 2022
Maren Eltze, Biomedical Engineering 2022
Colin Skeen, Biomedical Engineering 2022
Dhimiter Cobani, Biomedical Engineering 2022

PRE-TENURE TRACK

Undergraduate Students

Julia Sexton, University of Minnesota, Twin Cities, Biochemistry 2019 – 2021
Awards: Undergraduate Research Opportunities Program Grant
Current: Medical student, University of Minnesota Medical School

Blanche Cizubu, University of Minnesota, Twin Cities, Biochemistry 2019
Current: Laboratory Assistant, Duke University

Huda Adam, University of Minnesota, Twin Cities, Biology 2018 – 2019
Current: User Experience Designer, HealthPartners

Julia Wang, Cornell University, Bioengineering and Biomedical Engineering 2011 – 2012
Awards: Cornell Engineering Learning Initiatives Grant
Current: Principal Scientist at Pfizer

SERVICE

PROFESSIONAL SERVICE

Biomedical Engineering Society (BMES)

Session Chair, "Representation in BME Research and Data for Health Equity I" 2023
Session Chair, "Novel Strategies for Cancer Detection, Diagnosis, and Prognosis" 2023
Session Chair, "Microengineered Models of Tumor-Stromal Interactions" 2022
Reviewer, BMES Annual Meeting general abstract submissions 2022

Gordon Research Conference (GRC) on Liquid Biopsy for Cancer

Co-Chair, Gordon Research Seminar on Liquid Biopsy for cancer (*inaugural elected chair*) 2018
Co-Organizer, Power Hour™ forum on barriers to inclusivity 2018
Discussion Leader, "Circulating Tumor Cells: New Technologies and Applications" 2016

Other Professional Service

Discussion Leader, "Clinical Applications Toward Personalized Detection and Therapy," GRC Physical Science of Cancer 2023

Ad Hoc Reviewer, *ACS Sensors, Analytical Chemistry, Communications Biology, Molecular Therapy – Oncolytics, Translational Research*

Professional Memberships

BME Underrepresented Needs in Technology & Engineering (BME UNITE) 2022 – present
US Human Proteome Organization (US-HUPO) 2019 – present
American Association for Cancer Research (AACR) 2016 – present
Biomedical Engineering Society (BMES) 2009 – present

LEADERSHIP ROLES

Co-Organizer, BME UNITE (Underrepresented Needs in Technology & Engineering) Future Faculty Seminar: *showcases candidates from underrepresented backgrounds.* 2023

Member, New PI Slack Advisory Board 2023 – present

Creator, Biomedical Engineering Tenure Track Jobs List 2022 – present

The database is an open-access crowdsourced repository of tenure track or equivalent opportunities in Biomedical Engineering. In the two years since its launch, the jobs database now includes over 300 unique positions and receives over 700 visitors per month. Most submitted opportunities are intended for early-career faculty, primarily at the assistant professor rank.

UNIVERSITY/DEPARTMENTAL

Member, Biomedical Engineering PhD Admissions Committee 2023
Member, Biomedical Engineering PhD Admissions Committee 2022

Doctoral Prospectus and Thesis Committees

Chair, Juan Montezco (Advisors: Alexander Green & Mark Grinstaff), Biomedical Engineering 2023
Member, Jing Zhang (Advisor: Ji-Xin Cheng), Biomedical Engineering 2023
Member, Aviva Borison (Advisor: Wilson Wong), Biomedical Engineering 2022
Member, Joshua Dupaty (Advisor: Catherine Klapperich), Biomedical Engineering 2022

OUTREACH

Mentor, Black in Cancer Mentorship Program (*Sponsored by Cancer Research UK and Fred Hutch Cancer Center*) 2021– present

The six-month program connects mentors with scholars for post-undergrad and STEM career support. *2 mentees total*.

Panelist, LGBTQIA+ Faculty Panel hosted by Out in STEM (oSTEM) & Graduate Women in Science and Engineering (GWISE) 2023

Focus Scientist, University of Minnesota BIOL 1806: Nature of Life 2021
Focus Scientist, University of Colorado Boulder MCEN:4228 Mechanics of Cancer 2020
Focus Scientist, University of Minnesota BIOL 1806: Nature of Life 2020
Mentor, #Black2Class outreach in support of rising black and STEM scholars 2020

ADDITIONAL CAREER DEVELOPMENT

National Center for Faculty Development & Diversity (NCFDD) Faculty Success Program. 12-week, online program combining empirically tested methods to improve research productivity through intense accountability, coaching, and peer support. 05/23 – 08/23

UCSF Summer Grant Writing Workshop. Online program designed to prepare new grant writers in proposal development, submission and peer review process. 05/23 – 07/23

Research Leadership Development, Atkisson Training Group 05/21 – 07/21
Evidence-based program tailored for academia to cultivate leadership skills in research and scholarship, with a specific focus on leading collaborative teams.

Edge for Scholars Online Grant Writing Workshop, 12-week online program for new grant writers with bi-monthly office hours with grant writing professional Sarah Dobson. 11/19– 02/20