

**PERSONAL DATA****First Name:** Mohammad**Last name:** Fallahi-Sichani**Current Position Title:** Associate Professor of Biomedical Engineering**Current Primary Affiliation:** University of Virginia School of Medicine**Address:** 415 Lane Rd, Building MR5, Room 2215, Charlottesville, VA 22903**Email:** fallahi@virginia.edu**Tel:** (434) 924-9950**Lab Webpage:** <https://fallahi-sichani-lab.com>**Twitter:** @MFallahiSichani**EDUCATION**

PhD in Chemical Engineering, University of Michigan, Ann Arbor, MI 04/2012

MSc in Chemical Engineering, University of Michigan, Ann Arbor, MI 04/2009

Integrated BSc and MSc in Biotechnology, University of Tehran, Tehran, Iran 02/2007

**ACADEMIC APPOINTMENTS****University of Virginia (UVA), Charlottesville, VA**

(Tenured) Associated Professor, Department of Biomedical Engineering 07/2023 - Present

- Full Member, UVA Comprehensive Cancer Center 06/2020 - Present

- Faculty Member, Molecular and Cellular Basis of Disease Graduate Program 06/2020 - Present

(Tenure-Track) Assistant Professor, Department of Biomedical Engineering 06/2020 - 06/2023

**University of Michigan, Ann Arbor, MI**

(Tenure-Track) Assistant Professor, Department of Biomedical Engineering 05/2017 - 05/2020

- Core Member, Rogel Cancer Center 05/2017 - 05/2020

- Affiliated Faculty Member, Department of Dermatology 01/2018 - 05/2020

**Harvard Medical School, Boston, MA**

Postdoctoral Fellow, Department of Systems Biology – Mentor: Peter Sorger 01/2012 - 04/2017

**University of Michigan, Ann Arbor, MI**

Graduate Student Research Assistant, Department of Chemical Engineering – 09/2007 - 12/2011

Mentors: Jennifer Linderman and Denise Kirschner

**HONORS AND AWARDS**

BMES Cell and Molecular Bioengineering (CMBE) Rising Star Award 2023

2022 Research Collaboration Award University of Virginia, 2022

NIH/NIGMS Maximizing Investigators' Research Award (MIRA) for Early-Stage Investigators 2019

Department of Defense CDMRP Career Development Award 2018

V Foundation for Cancer Research V Scholar Award 2017

American Association for Cancer Research (AACR) Scholar-in-Training Award 2015, 2016, 2017

NIH/NCI K99/R00 Pathway to Independence Award 2015

Life Sciences Research Foundation (LSRF) Postdoctoral Fellowship 2013

Distinguished Young Scholars Seminar Speaker University of Washington, 2012

Richard and Eleanor Towner Award for Outstanding PhD Research University of Michigan, 2011

Rackham Predoctoral Fellowship	University of Michigan, 2011
Phi Kappa Phi Graduate Award	2010
Rackham International Student Fellowship	University of Michigan, 2009
Ranked 1 <sup>st</sup> in the nation-wide entrance exam for Iranian universities among 450,000 participants	2001

## RESEARCH ACTIVITIES

### A. Areas of Research Interest:

Single Cell Pharmacology – Multi-parametric analysis of heterogeneous cellular responses to perturbations  
 Cancer Systems Biology – Adaptive regulation of tumor cell fate decisions  
 Computational Biology – Multi-scale modeling of bio-molecular networks and reactions

### B. Active Projects:

**R01-CA249229** 05/01/2021 – 04/30/2026  
 NIH/NCI PI: Fallahi-Sichani  
*Linking genetic, epigenetic and signaling mechanisms of oncogene addiction* Total Cost: \$1,789,319  
 The goal of this project is to build a network-level and single-cell understanding of the interactions between genetic, epigenetic and signaling mechanisms that define the state of BRAF oncogene dependency in BRAF-mutated tumor cells.

**R35-GM133404** 09/01/2019 – 07/31/2024  
 NIH/NIGMS PI: Fallahi-Sichani  
*Decoding the logic of cellular signaling through the integration of dynamic, single-cell and multiplexed methods* Total Cost: \$1,727,132  
 This research program seeks to understand how cells process dynamic information from combinations of tightly regulated signaling pathways to modulate downstream transcription factor dynamics, and how such dynamics coordinate both context-dependent and stimulus-specific responses to environmental changes.

**U54-CA274499** 09/01/2022 – 08/31/2027  
 NIH/NCI Co-PIs: Rohde and Fallahi-Sichani  
*High-Content Imaging & Analysis Core* Total Cost: \$1,659,385  
 The High-Content Imaging & Analysis Core is an integral part of the NCI-funded [U54 Center for Cancer Systems Biology](#): Systems Analysis of Stress-adapted Cancer Organelles (SASCO). This shared Research Core provides the three projects of the U54 Center with resources to analyze different biological samples using specialized highly multiplexed high-content imaging methods and to extract quantitative data from the images.

**Melanoma Translational Research Team Pilot Project Award** 01/01/2023 – 12/31/2023  
 University of Virginia Comprehensive Cancer Center PI: Abbas  
*Pevonedistat in combination with MAPK inhibitors for the treatment of cutaneous melanoma* Co-I: Fallahi-Sichani  
 Total Cost: \$50,000  
 This project tests the preclinical efficacy of pharmacological induction of re-replication with pevonedistat, in combination with MAPK inhibitors, in blocking melanoma cells *in vitro* and *in vivo*.

### C. Completed Projects:

**3 Cavaliers Seed Grant Program** 05/01/2021 – 04/30/2023  
 University of Virginia

*Dissecting the origins of heterogeneous cancer cellular interactions and responses to therapeutic perturbation*

Co-PIs: Shakeri, Dolatshahi,  
Fallahi-Sichani  
Total Cost: \$60,000

The goal of this project is to integrate highly multiplexed single-cell measurements with new computational methods to identify the dynamics of heterogeneous cancer cell subpopulations and predict their phenotypic response trajectories to cancer drug perturbations.

### **W81XWH1810427**

Department of Defense

*Defining and targeting novel epigenetic vulnerabilities in drug-resistant melanomas*

09/01/2018 – 12/14/2022

PI: Fallahi-Sichani

Total Cost: \$540,343

The goal of this project is to identify and target epigenetic vulnerabilities in genetically different NRAS and NF1-mutant melanomas.

### **Melanoma Research Grant**

The Harry J. Lloyd Charitable Trust

*Targeting Cell Plasticity to Overcome Resistance to Melanoma Therapies*

07/01/2021 – 06/30/2022

PI: Fallahi-Sichani

Total Cost: \$125,000

The goal of this project is to uncover the mechanistic role of KDM1A and KDM4B in determining melanoma tumor cell plasticity in differentiation state as well as the expression of cell adhesion and mechanical barrier genes as a mechanism of resistance to melanoma therapies.

### **V Scholar Award**

V Foundation for Cancer Research

*Maximizing oncogene addiction in tumor cells by epigenetic modulation: pushing the limits of molecular targeted therapy*

11/01/2017 – 06/01/2021

PI: Fallahi-Sichani

Total Cost: \$200,000

The goal of this pilot project was to develop an understanding of epigenetic modulations that regulate the state of BRAF dependency in a tumor cell.

### **K99/R00-CA194163**

NIH/NCI

*Adaptive regulation of cancer cell fate following oncogene inhibition*

08/17/2015 – 04/30/2021

PI: Fallahi-Sichani

Total Cost: \$987,366

The goal of this project was to understand the biochemical rewiring mechanisms involved in adaptive resistance of BRAF-mutant cells to drugs that target the BRAF oncoprotein.

### **Turner-McConnell Fund for Drug Discovery**

University of Michigan Rogel Cancer Center

*Selective inhibition of NF1 loss-of-function driven oncogenic signaling*

05/01/2019 – 12/31/2020

PI: Fallahi-Sichani

Total Cost: \$50,000

The goal of this project was to investigate a potentially novel opportunity to target NF1-mediated oncogenesis in melanoma using a newly developed compound, MTX-216.

### **Elsa Pardee Foundation Research Award**

Elsa U. Pardee Foundation

*Targeting the origins of phenotype switching to overcome heterogeneous drug-resistant tumor cells*

01/01/2018 – 12/31/2018

PI: Fallahi-Sichani

Total Cost: \$203,350

The goal of this project was to develop computational models of transcriptional switching and phenotypic transitions during response of tumor cells to chemotherapies.

### **LSRF Postdoctoral Fellowship**

Life Sciences Research Foundation

*Regulation of apoptosis in an oncogene addiction setting*

8/01/2013 – 7/31/2016

PI: Fallahi-Sichani

Total Cost: \$180,000

This study combined high throughput, multiplex biochemical measurement and computational modeling to understand the regulation of apoptosis in a BRAF<sup>V600E</sup> oncogene addiction setting.

#### **D. Fellowships/Grants for Trainees:**

##### **Yonatan Degefu**

NIGMS T32 Systems & Biomolecular Data Sciences Training Program, University of Virginia 07/01/2023 – 06/30/2024

##### **Magda Bujnowska**

NCI T32 Cancer Research Training Program, University of Virginia 07/01/2023 – 06/30/2024

##### **You Gao**

NIGMS Administrative Supplement to Support Undergraduate Summer Research Experience, University of Virginia 05/15/2023 – 07/31/2023

##### **Doug Baumann**

Cancer Center Trainee Farrow Fellowship, University of Virginia 08/01/2020 – 07/31/2021

##### **Mehwish Khaliq**

NCI T32 Cancer Biology Training Postdoctoral Fellowship, University of Michigan 05/01/2018 – 04/30/2020

##### **Natacha Comandante-Lou**

Rackham International Student Fellowship, University of Michigan 01/01/2018 – 04/30/2018

##### **Cara Abecunas**

Rackham Merit Fellowship, University of Michigan 09/01/2019 – 04/30/2023

#### **PUBLICATIONS (GOOGLE SCHOLAR LIST)**

(#Corresponding author; Underlined co-authors are Fallahi-Sichani lab trainees; \*Equal contributions)

#### **A. Peer-Reviewed Research Articles:**

1. Abecunas C, Whitehead C, Ziemke E, Baumann DG, Frankowski-McGregor C, Sebolt-Leopold J, **Fallahi-Sichani M**<sup>#</sup>. Loss of NF1 in Melanoma Confers Sensitivity to SYK Kinase Inhibition. **Cancer Research**. 2023 Jan 18;83(2):316-331. doi: 10.1158/0008-5472.CAN-22-0883. PMID: 36409827; PMCID: PMC9845987.
2. Comandante-Lou N<sup>\*</sup>, Baumann DG<sup>\*</sup>, **Fallahi-Sichani M**<sup>#</sup>. AP-1 transcription factor network explains diverse patterns of cellular plasticity in melanoma cells. **Cell Reports**. 2022 Aug 2;40(5):111147. doi: 10.1016/j.celrep.2022.111147. PMID: 35926467; PMCID: PMC9395172.
3. Khaliq M, Manikkam M, Martinez ED, **Fallahi-Sichani M**<sup>#</sup>. Epigenetic modulation reveals differentiation state specificity of oncogene addiction. **Nature Communications**. 2021 Mar 9;12(1):1536. doi: 10.1038/s41467-021-21784-2. PMID: 33750776; PMCID: PMC7943789.
4. Comandante-Lou N, Khaliq M, Venkat D, Manikkam M, **Fallahi-Sichani M**<sup>#</sup>. Phenotype-based probabilistic analysis of heterogeneous responses to cancer drugs and their combination efficacy. **PLoS Computational Biology**. 2020 Feb 21;16(2):e1007688. doi: 10.1371/journal.pcbi.1007688. PMID: 32084135; PMCID: PMC7055924.
5. Shcherbina A, Larouche J, Fraczek P, Yang BA, Brown LA, Markworth JF, Chung CH, Khaliq M, de Silva K, Choi JJ, **Fallahi-Sichani M**, Chandrasekaran S, Jang YC, Brooks SV, Aguilar CA<sup>#</sup>. Dissecting Murine Muscle Stem Cell Aging through Regeneration Using Integrative Genomic Analysis. **Cell Reports**. 2020 Jul 28;32(4):107964. doi: 10.1016/j.celrep.2020.107964. PMID: 32726628; PMCID: PMC8025697.

6. **Fallahi-Sichani M<sup>#</sup>**, Becker V, Izar B, Baker GJ, Lin JR, Boswell SA, Shah P, Rotem A, Garraway LA, Sorger PK<sup>#</sup>. Adaptive resistance of melanoma cells to RAF inhibition via reversible induction of a slowly dividing de-differentiated state. *Molecular Systems Biology*. 2017 Jan 9;13(1):905. doi: 10.15252/msb.20166796. PMID: 28069687; PMCID: PMC5248573.
7. Lin JR, **Fallahi-Sichani M**, Chen JY, Sorger PK<sup>#</sup>. Cyclic Immunofluorescence (CyclIF), A Highly Multiplexed Method for Single-cell Imaging. *Current Protocols in Chemical Biology*. 2016 Dec 7;8(4):251-264. doi: 10.1002/cpch.14. PMID: 27925668; PMCID: PMC5233430.
8. Tirosh I, Izar B, Prakadan SM, Wadsworth MH 2nd, Treacy D, Trombetta JJ, Rotem A, Rodman C, Lian C, Murphy G, **Fallahi-Sichani M**, Dutton-Regester K, Lin JR, Cohen O, Shah P, Lu D, Genshaft AS, Hughes TK, Ziegler CG, Kazer SW, Gaillard A, Kolb KE, Villani AC, Johannessen CM, Andreev AY, Van Allen EM, Bertagnolli M, Sorger PK, Sullivan RJ, Flaherty KT, Frederick DT, Jané-Valbuena J, Yoon CH, Rozenblatt-Rosen O, Shalek AK, Regev A<sup>#</sup>, Garraway LA<sup>#</sup>. Dissecting the multicellular ecosystem of metastatic melanoma by single-cell RNA-seq. *Science*. 2016 Apr 8;352(6282):189-96. doi: 10.1126/science.aad0501. PMID: 27124452; PMCID: PMC4944528.
9. Moerke N<sup>#</sup>, **Fallahi-Sichani M**. Reverse Phase Protein Arrays for Compound Profiling. *Current Protocols in Chemical Biology*. 2016 Sep 13;8(3):179-196. doi: 10.1002/cpch.9. PMID: 27622568; PMCID: PMC5613289.
10. Lin JR, **Fallahi-Sichani M**, Sorger PK<sup>#</sup>. Highly multiplexed imaging of single cells using a high-throughput cyclic immunofluorescence method. *Nature Communications*. 2015 Sep 24;6:8390. doi: 10.1038/ncomms9390. PMID: 26399630; PMCID: PMC4587398.
11. **Fallahi-Sichani M**, Moerke NJ, Niepel M, Zhang T, Gray NS, Sorger PK<sup>#</sup>. Systematic analysis of BRAF(V600E) melanomas reveals a role for JNK/c-Jun pathway in adaptive resistance to drug-induced apoptosis. *Molecular Systems Biology*. 2015 Mar 26;11(3):797. doi: 10.15252/msb.20145877. PMID: 25814555; PMCID: PMC4380931.
12. **Fallahi-Sichani M**, Honarnejad S, Heiser LM, Gray JW, Sorger PK<sup>#</sup>. Metrics other than potency reveal systematic variation in responses to cancer drugs. *Nature Chemical Biology*. 2013 Nov;9(11):708-14. doi: 10.1038/nchembio.1337. Epub 2013 Sep 8. PMID: 24013279; PMCID: PMC3947796.
13. **Fallahi-Sichani M**, Kirschner DE<sup>#</sup>, Linderman JJ<sup>#</sup>. NF- $\kappa$ B Signaling Dynamics Play a Key Role in Infection Control in Tuberculosis. *Frontiers in Physiology*. 2012 Jun 6;3:170. doi: 10.3389/fphys.2012.00170. PMID: 22685435; PMCID: PMC3368390.
14. **Fallahi-Sichani M**, Flynn JL, Linderman JJ<sup>#</sup>, Kirschner DE<sup>#</sup>. Differential risk of tuberculosis reactivation among anti-TNF therapies is due to drug binding kinetics and permeability. *Journal of Immunology*. 2012 Apr 1;188(7):3169-78. doi: 10.4049/jimmunol.1103298. Epub 2012 Feb 29. PMID: 22379032; PMCID: PMC3311778.
15. **Fallahi-Sichani M**, El-Kebir M, Marino S, Kirschner DE<sup>#</sup>, Linderman JJ<sup>#</sup>. Multiscale computational modeling reveals a critical role for TNF- $\alpha$  receptor 1 dynamics in tuberculosis granuloma formation. *Journal of Immunology*. 2011 Mar 15;186(6):3472-83. doi: 10.4049/jimmunol.1003299. Epub 2011 Feb 14. PMID: 21321109; PMCID: PMC3127549.
16. **Fallahi-Sichani M**, Schaller MA, Kirschner DE, Kunkel SL, Linderman JJ<sup>#</sup>. Identification of key processes that control tumor necrosis factor availability in a tuberculosis granuloma. *PLoS Computational Biology*. 2010 May 6;6(5):e1000778. doi: 10.1371/journal.pcbi.1000778. PMID: 20463877; PMCID: PMC2865521.
17. **Fallahi-Sichani M**, Linderman JJ<sup>#</sup>. Lipid raft-mediated regulation of G-protein coupled receptor signaling by ligands which influence receptor dimerization: a computational study. *PLoS One*. 2009 Aug 11;4(8):e6604. doi: 10.1371/journal.pone.0006604. PMID: 19668374; PMCID: PMC2719103.

18. Mohammadi Y, Soleimani M<sup>#</sup>, **Fallahi-Sichani M**, Gazme A, Haddadi-Asl V, Arefian E, Kiani J, Moradi R, Atashi A, Ahmadbeigi N. Nanofibrous poly(epsilon-caprolactone)/poly(vinyl alcohol)/chitosan hybrid scaffolds for bone tissue engineering using mesenchymal stem cells. *International Journal of Artificial Organs*. 2007 Mar;30(3):204-11. doi: 10.1177/039139880703000305. PMID: 17417759.
19. **Fallahi-Sichani M**, Soleimani M<sup>#</sup>, Najafi SM, Kiani J, Arefian E, Atashi A. In vitro differentiation of cord blood unrestricted somatic stem cells expressing dopamine-associated genes into neuron-like cells. *Cell Biology International*. 2007 Mar;31(3):299-303. doi: 10.1016/j.cellbi.2006.11.011. Epub 2006 Nov 19. PMID: 17196845.

### **B. Invited Peer-Reviewed Review Articles:**

20. Khalilq M, **Fallahi-Sichani M<sup>#</sup>**. Epigenetic Mechanisms of Escape from BRAF Oncogene Dependency. *Cancers* (Basel). 2019 Oct 1;11(10):1480. doi: 10.3390/cancers11101480. PMID: 31581557; PMCID: PMC6826668.
21. Keenan AB, Jenkins SL, Jagodnik KM, Koplev S, He E, Torre D, Wang Z, Dohlman AB, Silverstein MC, Lachmann A, Kuleshov MV, Ma'ayan A<sup>#</sup>, Stathias V, Terryn R, Cooper D, Forlin M, Koleti A, Vidovic D, Chung C, Schürer SC, Vasiliauskas J, Pilarczyk M, Shamsaei B, Fazel M, Ren Y, Niu W, Clark NA, White S, Mahi N, Zhang L, Kouril M, Reichard JF, Sivaganesan S, Medvedovic M, Meller J, Koch RJ, Birtwistle MR, Iyengar R, Sobie EA, Azeloglu EU, Kaye J, Osterloh J, Haston K, Kalra J, Finkbiener S, Li J, Milani P, Adam M, Escalante-Chong R, Sachs K, Lenail A, Ramamoorthy D, Fraenkel E, Daigle G, Hussain U, Coye A, Rothstein J, Sareen D, Ornelas L, Banuelos M, Mandefro B, Ho R, Svendsen CN, Lim RG, Stocksdales J, Casale MS, Thompson TG, Wu J, Thompson LM, Dardov V, Venkatraman V, Matlock A, Van Eyk JE, Jaffe JD, Papanastasiou M, Subramanian A, Golub TR, Erickson SD, **Fallahi-Sichani M**, Hafner M, Gray NS, Lin JR, Mills CE, Muhlich JL, Niepel M, Shamu CE, Williams EH, Wrobel D, Sorger PK, Heiser LM, Gray JW, Korkola JE, Mills GB, LaBarge M, Feiler HS, Dane MA, Bucher E, Nederlof M, Sudar D, Gross S, Kilburn DF, Smith R, Devlin K, Margolis R, Derr L, Lee A, Pillai A. The Library of Integrated Network-Based Cellular Signatures NIH Program: System-Level Cataloging of Human Cells Response to Perturbations. *Cell Systems*. 2018 Jan 24;6(1):13-24. doi: 10.1016/j.cels.2017.11.001. Epub 2017 Nov 29. PMID: 29199020; PMCID: PMC5799026.
22. Kirschner DE<sup>#</sup>, Hunt CA, Marino S, **Fallahi-Sichani M**, Linderman JJ<sup>#</sup>. Tuneable resolution as a systems biology approach for multi-scale, multi-compartment computational models. *Wiley Interdisciplinary Reviews - Systems Biology and Medicine*. 2014 Jul-Aug;6(4):289-309. doi: 10.1002/wsbm.1270. Epub 2014 May 9. PMID: 24810243; PMCID: PMC4102180.

### **C. Invited Book Chapters:**

23. Comandante-Lou N, **Fallahi-Sichani M<sup>#</sup>**. Models of Cancer Drug Discovery and Response to Therapy, In Wolkenhauer O (Ed.), *Systems Medicine: Integrative, Qualitative and Computational Approaches*. Academic Press, 2021. ISBN 9780128160787. doi: 10.1016/B978-0-12-801238-3.11356-X.
24. **Fallahi-Sichani M**, Marino S, Flynn JL, Linderman JJ<sup>#</sup>, Kirschner DE<sup>#</sup>. A systems biology approach for understanding granuloma formation and function in tuberculosis, In McFadden J, Beste D, Kierzek A (Ed.), *Systems biology of tuberculosis*. Springer, 2013. ISBN 978-1-4614-4966-9. doi: 10.1007/978-1-4614-4966-9\_7.
25. Marino S, **Fallahi-Sichani M**, Linderman JJ, Kirschner DE<sup>#</sup>. Mathematical models of anti-TNF therapies and their correlation with tuberculosis, In Pathak Y, Benita S (Ed.), *Antibody-mediated drug delivery systems: Concepts, Technology and Applications*. John Wiley and Sons, 2012. ISBN 978-0-470-61281-1. doi: 10.1002/9781118229019.ch5.

**CONFERENCE ABSTRACTS**

(All abstracts were presented, #Corresponding author, \*Presenting co-author, Underlined co-authors are Fallahi-Sichani lab trainees)

**A. Oral Presentations:**

1. Lou NC, Baumann D, **Fallahi-Sichani M\*\***. AP-1 transcription factor network controls diverse patterns of cell state plasticity. Biomedical Engineering Society (BMES) – Cell and Molecular Bioengineering Conference 2023, Indian Wells, CA.
2. Abecunas C\*, Whitehead C, Ziemke E, Baumann D, Frankowski-McGregor C, Sebolt-Leopold J, **Fallahi-Sichani M#**. Systematic analysis uncovers SYK dependency in NF1<sup>LoF</sup> melanoma cells. Biomedical Engineering Society (BMES) Annual Meeting 2022, San Antonio, TX.
3. Lou NC\*, Baumann D, **Fallahi-Sichani M#**. AP-1 Transcription Factor Network Explains Diverse Patterns of Cellular Plasticity in Melanoma. Biomedical Engineering Society (BMES) Annual Meeting 2022, San Antonio, TX.
4. Abecunas C\*, Whitehead C, Ziemke E, Sebolt-Leopold J, **Fallahi-Sichani M#**. Multi-targeted kinase inhibitor MTX-216 exploits dependency on SYK to selectively block NF1<sup>LoF</sup> melanomas. Biomedical Engineering Society (BMES) Annual Meeting 2021, Orlando, FL.
5. Lou NC\*, Baumann D, **Fallahi-Sichani M#**. The AP-1 Transcription Factor Network Links Heterogeneity in Melanoma Differentiation State to the Diversity of MAPK Inhibitor-Induced Adaptive Responses. Biomedical Engineering Society (BMES) Annual Meeting 2021, Orlando, FL.
6. Khalig M, Manikkam M, Martinez ED, **Fallahi-Sichani M\*\***. Epigenetic Modulation Extends the Oncogene Addiction Paradigm on the Basis of Tumor Cell Differentiation State. Biomedical Engineering Society (BMES) Annual Meeting 2020 (Virtual Conference).
7. Lou NC\*, Baumann D, **Fallahi-Sichani M#**. The AP-1 Transcription Factor Network Links Heterogeneity in Melanoma Differentiation State to the Diversity of MAPK Inhibitor-Induced Adaptive Responses. Biomedical Engineering Society (BMES) Annual Meeting 2020 (Virtual Conference).
8. Abecunas C\*, Whitehead C, Ziemke E, Sebolt-Leopold J, **Fallahi-Sichani M#**. Unveiling the mechanism of action of MTX-216 in overcoming drug resistance in NF1-mutant melanomas. Biomedical Engineering Society (BMES) Annual Meeting 2020 (Virtual Conference).
9. Abecunas C\*, Whitehead C, Leopold J, **Fallahi-Sichani M#**. Selective inhibition of NF1 loss-of-function driven oncogenic signaling in melanomas. Biomedical Engineering Society (BMES) Annual Meeting 2019, Philadelphia, PA.
10. Lou NC\*, Venkat D, **Fallahi-Sichani M#**. Probabilistic phenotype metrics for characterizing heterogeneous tumor cell drug responses and their combined interactions. Biomedical Engineering Society (BMES) Annual Meeting 2019, Philadelphia, PA.
11. **Fallahi-Sichani M\*\***. Maximizing oncogene addiction in tumor cells by epigenetic modulation: Pushing the limits of molecularly targeted therapy. International Conference on Epigenetics and Bioengineering, 2017, Miami, FL.
12. **Fallahi-Sichani M\***, Becker V, Izar B, Baker GJ, Lin JR, Boswell SA, Garraway LA, Sorger PK#. Single-cell analysis reveals an adaptive, slowly-dividing, de-differentiated, drug-resistant cell state selectively inhibitable by drug combinations. American Association for Cancer Research (AACR) Precision Medicine Series: Opportunities and Challenges of Exploiting Synthetic Lethality in Cancer, 2017, San Diego, CA.

13. **Fallahi-Sichani M\***, Becker V, Baker GJ, Boswell SA, Everley RA, Lin JR, Sorger PK#. Overcoming adaptive resistance and fractional response of cancer cells to targeted therapy. BMES (Biomedical Engineering Society) Annual Meeting 2016, Minneapolis, MN.
14. **Fallahi-Sichani M\***, Becker V, Boswell SA, Sorger PK#. Adaptive regulation of cancer cell fate following targeted inhibition of the oncogenic pathway. BMES (Biomedical Engineering Society) Annual Meeting 2015, Tampa, FL.
15. **Fallahi-Sichani M\***, Moerke NJ, Lin JR, Becker V, Boswell SA, Sorger PK#. Systematic Analysis of Adaptive resistance and fractional responses of melanoma cancer cells to RAF/MEK inhibition. AIChE (American Institute of Chemical Engineers) Annual Meeting 2015, Salt Lake City, UT.
16. **Fallahi-Sichani M\***, Moerke NJ, Niepel M, Zhang T, Gray NS, Sorger PK#. Systematic analysis of drug-induced adaptive responses in melanoma. BMES (Biomedical Engineering Society) Annual Meeting 2014, San Antonio, TX.
17. **Fallahi-Sichani M\***, Honarnejad S, Heiser LM, Gray JW, Sorger PK#. Comparing drug activity across cell line banks reveals systematic variation in properties other than potency. International Conference on Systems Biology of Human Disease (SBHD) 2013, Heidelberg, Germany.
18. **Fallahi-Sichani M\***, Honarnejad S, Heiser LM, Gray JW, Sorger PK#. Metrics other than potency reveal systematic variation in responses to cancer drugs. Library of Integrated Network-based Cellular Signatures (LINCS) Symposium 2013, Broad Institute, Cambridge, MA.
19. **Fallahi-Sichani M\***, Kirschner DE, Linderman JJ#. A systems biology approach to identify immune targets that control tuberculosis granuloma function. AIChE (American Institute of Chemical Engineers) Annual Meeting 2011, Minneapolis, MN.
20. **Fallahi-Sichani M\***, Kirschner DE, Linderman JJ#. The dynamics of TNF signaling control tuberculosis granuloma formation. The 5<sup>th</sup> Annual q-bio Conference on Cellular Information Processing, August 2011, Santa Fe, NM.
21. **Fallahi-Sichani M\***, El-Kebir M, Marino S, Kirschner DE, Linderman JJ#. Experimental and mathematical approaches to multi-scale analysis of tumor necrosis factor-regulated immune response to tuberculosis. AIChE (American Institute of Chemical Engineers) Annual Meeting 2010, Salt Lake City, UT.
22. Harris LA\*, Hogg JS, **Fallahi-Sichani M**, Linderman JJ, Kirschner DE, Faeder JR#. A novel computational architecture for construction and execution of modular, multi-scale, multi-algorithm dynamical models. AIChE (American Institute of Chemical Engineers) Annual Meeting 2010, Salt Lake City, UT.
23. **Fallahi-Sichani M\***, Schaller MA, Kirschner DE, Kunkel SL, Linderman JJ#. Model-based analysis and quantitative measurement of key components of tumor necrosis factor trafficking in a tuberculosis granuloma. AIChE (American Institute of Chemical Engineers) Annual Meeting 2009, Nashville, TN.
24. **Fallahi-Sichani M\***, Linderman JJ#. Regulation of G-protein signaling by receptor organization: The role of dimerization and lipid rafts. BMES (Biomedical Engineering Society) Annual Meeting 2008, St. Louis, MO.

## **B. Poster Presentations:**

1. Tang A\*, Degefu Y, **Fallahi-Sichani M#**. The Role of miRNAs and Their Target Genes in Differentiation State of Thyroid Carcinomas. Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS) 2022, Anaheim, CA.
2. Abecunas C\*, Whitehead C, Ziemke E, Baumann D, Frankowski-McGregor C, Sebolt-Leopold J, **Fallahi-Sichani M#**. Systematic analysis uncovers SYK dependency in NF1<sup>LoF</sup> melanoma cells.



Systems Approaches to Cancer Biology (SACB) Meeting 2022, Marine Biological Laboratory, Woods Hole, MA.

3. Tang A\*, Degefu Y, **Fallahi-Sichani M<sup>#</sup>**. The Role of miRNAs and Their Target Genes in Differentiation State of Thyroid Carcinomas. Biomedical Engineering Society (BMES) Annual Meeting 2022, San Antonio, TX.
4. Quesada Camacho LF\*, **Fallahi-Sichani M<sup>#</sup>**. Differentiation state-specific patterns of histone modifications uncover new epigenetic vulnerabilities in melanoma. NCI Junior Investigator Annual Meeting (Virtual), 2022.
5. Khalig M, Manikkam M, Martinez ED, **Fallahi-Sichani M<sup>#</sup>**. An integrative screen to identify epigenetic modulators of phenotypic heterogeneity in cancer cells. Keystone Symposium on Modern Phenotypic Drug Discovery: From Chemical Biology to Therapeutics 2022, Denver, CO.
6. Abecunas C\*, Whitehead C, Leopold J, **Fallahi-Sichani M<sup>#</sup>**. Selective Inhibition of NF1 Loss-of-Function Driven Oncogenic Signaling in Melanomas. American Association for Cancer Research (AACR) Annual Meeting 2020, San Diego, CA.
7. Lou NC\*, Venkat D, **Fallahi-Sichani M<sup>#</sup>**. Phenotypic Kinetic Metrics to Characterize Cancer Cell Drug Response. Biomedical Engineering Society (BMES) Annual Meeting 2018, Atlanta, GA.
8. Khalig M\*, Manikkam M, **Fallahi-Sichani M<sup>#</sup>**. Single-cell multiplex signature of histone modifications regulated by histone-modifying enzymes in BRAFV600E-mutant melanoma cells. Cancer Biology Program Retreat, University of Michigan, 2018, Ann Arbor, MI.
9. **Fallahi-Sichani M\***, Becker V, Izar B, Baker GJ, Lin JR, Boswell SA, Garraway LA, Sorger PK<sup>#</sup>. Single-cell analysis reveals an adaptive, transiently heritable, slowly dividing, drug-resistant state inhibitable by drug combinations. American Association for Cancer Research (AACR) Annual Meeting 2017, Washington, DC.
10. **Fallahi-Sichani M\***, Moerke NJ, Niepel M, Zhang T, Gray NS, Sorger PK<sup>#</sup>. Single-cell analysis of adaptive resistance and fractional responses of melanoma cells to RAF/MEK inhibition. American Association for Cancer Research (AACR) Annual Meeting 2015, Philadelphia, PA.
11. **Fallahi-Sichani M\***, Moerke NJ, Niepel M, Zhang T, Gray NS, Sorger PK<sup>#</sup>. Systematic analysis of drug-induced adaptive responses in melanoma. The FEBS-EMBO 2014 Conference, Paris, France.
12. **Fallahi-Sichani M\***, Honarnejad S, Heiser LM, Gray JW, Sorger PK<sup>#</sup>. Metrics other than potency reveal systematic variation in responses to cancer drugs. American Association for Cancer Research (AACR) Annual Meeting 2014, San Diego, CA.
13. **Fallahi-Sichani M\***, Moerke NJ, Dastur A, Benes CH, Sorger PK<sup>#</sup>. A systems pharmacology approach to understanding differential responsiveness of melanoma cancer cells to BRAF inhibition. Biomedical Engineering Society (BMES) Annual Meeting 2013, Seattle, WA.
14. **Fallahi-Sichani M\***, Moerke NJ, Dastur A, Benes CH, Sorger PK<sup>#</sup>. A systems biology approach to understanding differential phenotypic outcome of BRAF(V600E) inhibition in melanoma cells. American Association for Cancer Research (AACR) Annual Meeting 2013, Washington, DC.
15. **Fallahi-Sichani M\***, Sorger PK<sup>#</sup>. Multi-parametric analysis of dose-response behavior in cancer cells. Library of Integrated Network-based Cellular Signatures (LINCS) 2012 Consortium Meeting, NIH, Bethesda, MD.
16. **Fallahi-Sichani M\***, El-Kebir M, Marino S, Kirschner DE, Linderman JJ<sup>#</sup>. Multi-scale modeling of tumor necrosis factor-regulated granuloma formation in tuberculosis. Biomedical Engineering Society (BMES) Annual Fall Meeting 2010, Austin, TX.

17. **Fallahi-Sichani M\***, Schaller MA, Kirschner DE, Kunkel SL, Linderman JJ#. Toward a multi-scale model of tumor necrosis factor regulated immune response to tuberculosis. Systems Biology Symposium 2009, Ann Arbor, MI.
18. **Fallahi-Sichani M\***, Schaller MA, Kunkel SL, Linderman JJ#. Quantification of processes that control tumor necrosis factor availability in a tuberculosis granuloma. The CMPI Symposium on Multi-Scale Modeling of Host/Pathogen Interactions 2009, Pittsburgh, PA.

## **INVITED LECTURES AND SYMPOSIUM PRESENTATIONS**

### **A. Invited as a UVA Faculty Member (2020-Present):**

1. Genome Sciences Seminar Series, Center for Public Health Genomics, University of Virginia, December 2023.
2. Voices for Victory program panel, V Foundation for Cancer Research, Middleburg, VA, April 2023.
3. Systems Approaches to Cancer Biology (SACB) Meeting, Marine Biological Laboratory, Woods Hole, MA, October 2022.
4. Center for Biosystems Science and Engineering, Indian Institute of Science, Bangalore, India, October 2022.
5. Melanoma and Skin Cancer Center of Excellence, Moffitt Cancer Center, April 2022.
6. Department of Biochemistry and Molecular Genetics, University of Virginia, April 2022.
7. Institute for Computational Medicine Distinguished Seminar Series, Johns Hopkins University, November 2021.
8. Cancer Biology Program, University of Virginia Cancer Center, November 2021.
9. Quantitative Systems Biology Center, Vanderbilt University, January 2021.
10. Department of Pathology, University of Virginia, December 2020.
11. Department of Biomedical Engineering, Purdue University, September 2020
12. Department of Microbiology, Immunology and Cancer Biology, University of Virginia, September 2020.

### **B. Invited as a Univ. of Michigan Faculty Member (2017-2020):**

13. Department of Biomedical Engineering, University of Virginia, August 2019.
14. Rogel Cancer Center Basic Science Retreat, University of Michigan, June 2019.
15. Department of Bioengineering, University of Maryland, College Park, November 2018.
16. Cancer Biology Program Retreat, University of Michigan, September 2017.

### **C. Invited as a Postdoctoral Fellow (2012-2017):**

17. Department of Systems Biology, University of Texas MD Anderson Cancer Center, May 2016.
18. Department of Chemical and Biological Engineering, Northwestern University, March 2016.
19. Department of Bioengineering, University of California, San Diego, February 2016.
20. Institute for Molecular Engineering, University of Chicago, February 2016.
21. Department of Biomedical Engineering, University of North Carolina and North Carolina State University, February 2016.
22. Department of Bioengineering, University of Washington, Seattle, February 2016.
23. Department of Chemical and Biomolecular Engineering, Johns Hopkins University, February 2016.
24. BioFrontiers Institute, University of Colorado, Boulder, January 2016.
25. School of Chemical and Biomolecular Engineering, Georgia Tech, Atlanta, January 2016.
26. Department of Biomedical Engineering, University of Michigan, Ann Arbor, January 2016.
27. Department of Developmental and Cell Biology, University of California, Irvine, January 2016.
28. Department of Biomedical Engineering, Rensselaer Polytechnic Institute, Troy, NY, November 2015.
29. 13<sup>th</sup> Annual Discovery on Target Meeting (Quantitative Systems Pharmacology track), Boston, MA, September 2015.

30. Conference on "Targeting Cancer Cell Proliferation & Metabolism Networks", Mathematical Biosciences Institute (MBI), Ohio State University, March 2015.

#### **D. Invited as a PhD Student (2007-2012):**

1. Distinguished Young Scholars Summer Seminar Series, Department of Chemical Engineering, University of Washington, Seattle, July 2012.
2. Department of Mathematics, University of British Columbia, Vancouver, March 2011.

#### **PROFESSIONAL MEMBERSHIPS**

Member, Cancer Systems Biology Consortium	2021 - Present
Member, American Association for Cancer Research (AACR)	2013 - Present
Member, Society for Biological Engineering	2011 - Present
Member, Biomedical Engineering Society (BMES)	2008 - Present
Member, American Institute of Chemical Engineers (AIChE)	2008 - Present

#### **OTHER PROFESSIONAL ACTIVITIES**

##### **A. Editorial Board Membership and Peer-Review Service:**

Associate Editor and Editorial Board Member, IET Systems Biology	2021 - Present
Peer-review for the following Research Journals: Nature Chemical Biology, Cell Reports, Nature Communications, Science Signaling, Biophysical Journal, Cancer Research, PLoS Computational Biology, Bioinformatics, British Journal of Cancer, Communications Biology, Journal of Theoretical Biology, European Journal of Pharmacology, PLoS ONE, IEEE/ACM Transactions on Computational Biology and Bioinformatics, Cell Communication and Signaling	2017 - Present

##### **B. Grant Review Panels:**

Temporary Member, NIH Study Section – Gene Regulation in Cancer (GRIC)	June 2023
integrated Translational Health Research Institute of Virginia (iTHRIV) Scholars Program	February 2023
Florida Department of Health Biomedical Research Programs Review Panel	October 2022
Florida Department of Health Biomedical Research Programs Review Panel	October 2021

##### **C. Conference Session Chair and Abstract Review Committees:**

Abstract Review Committee, Biomedical Engineering Society (BMES) Annual Meeting, Bioinformatics and Systems Biology Track	2017 - Present
Planning Committee, UVA Comprehensive Cancer Research Retreat	2023
Planning Committee, Commonwealth of Virginia Cancer Research Conference	2023
Platform Session Co-Chair, Biomedical Engineering Society (BMES) Annual Meeting (San Antonio, TX) – Session: "Multi-Scale Modeling"	2022
Platform Session Co-Chair, Biomedical Engineering Society (BMES) Annual Meeting (Virtual) – Session: "Computational Modeling of Cancer"	2020
Platform Session Co-Chair, Biomedical Engineering Society (BMES) Annual Meeting (Philadelphia, PA) – Session: "Computational Modeling of Cancer"	2019

Platform Session Co-Chair, Biomedical Engineering Society (BMES) Annual Meeting (Phoenix, AZ) – Session: “Computational Modeling of Cancer”	2017
Platform Session Chair, International Conference on Systems Biology of Human Disease (Boston, MA)	2016

## **TEACHING ACTIVITIES**

### **A. University of Virginia:**

<b>Systems Bioengineering (BME 4315/6315)</b> Role: Co-Instructor, Responsibility: 20%, Enrollment: 34	Spring 2023 (Jan-May)
<b>Bioreaction Kinetics (BME 4550)</b> Role: Primary Instructor, Responsibility: 100%, Enrollment: 57	Fall 2022 (Aug-Dec)
<b>Systems Bioengineering (BME 4315/6315)</b> Role: Co-Instructor, Responsibility: 20%, Enrollment: 28	Spring 2022 (Jan-May)
<b>Bioreaction Kinetics (BME 4550)</b> Role: Primary Instructor, Responsibility: 100%, Enrollment: 15	Fall 2021 (Aug-Dec)
<b>Systems Bioengineering (BME 4550/6315)</b> Role: Co-Instructor, Responsibility: 20%, Enrollment: 23	Spring 2021 (Jan-May)

### **B. University of Michigan:**

<b>Bioreaction Engineering and Design (BIOMEDE 321)</b> Role: Co-Instructor, Responsibility: 50%, Enrollment: 75	Winter 2020 (Jan-Apr)
<b>Bioreaction Engineering and Design (BIOMEDE 321)</b> Role: Primary Instructor, Responsibility: 100%, Enrollment: 54	Winter 2019 (Jan-Apr)
<b>Engineering Approaches to Cancer Biology (BIOMEDE 599)</b> Role: Co-Instructor, Responsibility: 50%, Enrollment: 8	Winter 2018 (Jan-Apr)

## **SUPERVISING AND MENTORING ACTIVITIES**

### **A. Research Staff:**

1. Mohan Manikkam (May 2022-Present)  
Research Specialist and Lab Manager

### **B. Visiting Faculty:**

1. Juan (Sebastian) Yakisich (June 2022-July 2022)  
Assistant Professor at Hampton University, Short-Term Research Initiative for Visiting Educators in Cancer (STRIVE-C), UVA Comprehensive Cancer Center

### **C. Postdoctoral Trainees:**

1. Shahab Azarfar (May 2022-April 2023)  
Co-mentored by Heman Shakeri (School of Data Science)  
**Project title:** Dissecting the origins of heterogeneous cancer cellular interactions and responses to therapeutic perturbation  
**Current position:** Research Associate at UVA School of Data Science
2. Mehwish Khaliq (November 2017-July 2022)

**Project title:** Elucidating the role of global histone modifications and histone-modifying enzymes in therapy-induced phenotype switching of melanoma

**Research award:** NCI T32 Cancer Biology Training Program (University of Michigan, 2018-2020)

**Presentation award(s):** 6th Annual Cancer Biology Retreat Best Poster Presentation Award (University of Michigan, 2018)

**Current position:** Senior Scientist at Dewpoint Therapeutics

3. Doug Bauman, (June 2018-October 2021)

**Project title:** Interrogating Induced Phenotypic Heterogeneity Through the AP-1 Gene Regulatory Network

**Research award:** UVA Cancer Center Trainee Fellowship (2020-2021)

**Presentation award(s):** People's Choice Postdoc180 Presentation Award (University of Michigan, 2019)

**Current position:** Senior Scientist at Dewpoint Therapeutics

#### **D. Doctoral Theses Directed:**

1. Kimberly Nguyen (Biochemistry and Molecular Genetics, Medical Scientist Training Program, joining in March 2023)

**Project title:** to be determined

2. Magda Bujnowska (Biochemistry and Molecular Genetics, Medical Scientist Training Program, 2022-Present)

**Project title:** Understanding and Targeting the Mechanisms of Melanoma Cell Plasticity

**Research award:** NCI T32 Cancer Research Training Program (University of Virginia, 2023-2024)

3. Yonatan Degefu (Biomedical Engineering, 2021-Present)

**Project title:** The role of AP-1 transcription factor network dynamics in cancer cell plasticity

**Research award:** NIGMS T32 Systems & Biomolecular Data Sciences Training Program (University of Virginia, 2023-2024)

4. Luisa Quesada (Biomedical Engineering, 2020-Present)

**Project title:** Identifying new therapeutic strategies in melanoma based on reprogramming of histone modification states

**Presentation award(s):** NCI Junior Investigator Meeting Poster Presentation Award (2022)

5. Cara Abecunas (Biomedical Engineering, 2018-2023)

**Project title:** Systems pharmacology approaches to selectively target drug-resistant melanomas driven by NF1 loss-of-function mutations

**Research award:** Rackham Merit Fellowship (University of Michigan, 2019-2023)

**Presentation award(s):** Cancer Biology Program Best Trainee Presentation and Travel Award (UVA Cancer Center, 2022)

6. Natacha Comandante-Lou (Biomedical Engineering, 2017-2022)

**Project title:** A Systems Approach to Overcome Tumor-cell Heterogeneity in Drug Response: Metrics and Mechanisms.

**Research award(s):**

- Rackham International Student Fellowship (University of Michigan, 2018)

- Richard and Eleanor Towner Prize for Distinguished Academic Achievement Award (University of Michigan, 2022)

**Current position:** Postdoctoral Fellow at Columbia University Irving Medical Center

#### **E. Doctoral Thesis Committees Served On:**

##### **As Committee Chair:**

1. Alekhya Kandoor (Biomedical Engineering, 2022-Present), Mentor: Kristen Naegle
2. Lionel Watkins (Biomedical Engineering, 2022-Present), Mentor: Jeff Saucerman
3. Joseph Ficarrotta (Biomedical Engineering, 2022-Present), Mentor: Jason Papin
4. Tor Breza (Biomedical Engineering, 2021-Present), Mentor: Richard Price

**As Committee Member:**

5. Bingjie Xue (Biomedical Engineering, 2023-Present), Mentor: Nathan Sheffield
6. Nathan LeRoy (Biomedical Engineering, 2023-Present), Mentor: Nathan Sheffield
7. Caroline Riedstra (Micro-, Immuno- and Cancer Biology, 2022-Present), Mentor: Andrew Dudley
8. Andrew Miller (Biomedical Engineering, 2022-Present), Mentor: Tom Barker
9. Rob Barnes (Biomedical Engineering, 2021-Present), Mentor: Sepideh Dolatshahi
10. Grace Bingham (Biomedical Engineering, 2021-Present), Mentor: Tom Barker
11. Sam Crowl (Biomedical Engineering, 2021-Present), Mentor: Kristen Naegle
12. Gabrielle Martinez (Biomedical Engineering, 2021-Present), Mentor: Kristen Naegle
13. Armita Salahi (Electrical Engineering, 2021-2022), Mentor: Nathan Swami
14. Taylor Marohl (Biomedical Engineering, 2021-Present), Mentor: Kevin Janes
15. Alexys Riddick (Experimental Pathology, 2021-Present), Mentor: Hui Zong
16. Mackenzie Grubb (Biomedical Engineering, 2021-Present), Mentor: Steven Caliarì
17. Stephen Carney (Cancer Biology, 2018-2021), Mentor: Maria Castro

**F. Master Students Advised:**

1. Haolong Huang (Biomedical Engineering, 2019)  
**Project title:** The relationship between NGFR state heterogeneity and ERK pathway reactivation in MAPK inhibitor treated BRAF<sup>V600E</sup> melanoma cells  
**Current position:** Chemical Engineering PhD Student at University of Michigan

**G. Undergraduate Research Students Advised:****University of Virginia BME Program:**

1. You Gao (Biomedical Engineering and Computer Science, Spring 2023-Present)  
**Research award:** NIGMS Administrative Supplement for Undergraduate Summer Research Experience (Summer 2023)
2. Jonathan Daniel (Biomedical Engineering, Summer 2020)  
**Current position:** BME Graduate Student at Johns Hopkins University
3. Melody Chiang (Biomedical Engineering, Summer 2020)  
**Current position:** Medical Student at University of Michigan Medical School
4. Isabella Posey (Biomedical Engineering, Summer 2020)  
**Current position:** BME Graduate Student at Cornell University

**NSF REU in Multi-Scale Systems Bioengineering and Biomedical Data Sciences:**

1. Gina Chea (Bioengineering, George Mason University, Summer 2023)
2. Anna Tang (Applied mathematics, University of Utah, Summer 2022)

**UVA School of Medicine Summer Research Internship Program:**

3. Ariana Caraballo Soler (Molecular and Cellular Biology, University of Puerto Rico, Summer 2022)

**University of Michigan:**

4. Divya Venkat (Biochemistry, 2018-2019)  
**Current position:** Medical Student at Wayne State University School of Medicine

**H. Additional Rotation PhD Students:**

1. Alice Luanpaisanon (Biomedical Engineering, Fall 2022)
2. Jeffrey Hsu (Medical Scientist Training Program, Summer 2022)
3. Caitlin Jagla (Biomedical Sciences Graduate Program, Fall 2021)
4. Stephen Lees (Biomedical Engineering, Fall 2021)
5. Connor Moore (Biomedical Engineering, Fall 2021)
6. Paul DeCostanza (Biomedical Engineering, Fall 2021)
7. Joseph Ficarrotta (Biomedical Engineering, Fall 2020)
8. Catalina Alvarez Yela (Biomedical Engineering, Fall 2020)
9. Christina Lee (Biomedical Engineering, Fall 2018)
10. Lauren Bailey (Cancer Biology, Fall 2018)

**I. Faculty Advocate for BME Graduate Students:**

1. Ryann Boudreau (Biomedical Engineering, 2021-2022)
2. Rob Barnes (Biomedical Engineering, 2020-2021)

**ACADEMIC SERVICE AND LEADERSHIP POSITIONS****A. University of Virginia:****1) UVA Department of Biomedical Engineering (BME)**

Chair, BME Seminar Committee	2022 - Present
Member, BME Graduate Program Committee	2021 - Present
Member, BME Graduate Admissions Committee	2020 – 2021

**2) UVA School of Medicine**

Executive Committee Member, T32 Cancer Research Training Program (CRTP)	2022 - Present
Director of Assessment and Follow-up, T32 Cancer Research Training Program (CRTP)	2022 - Present

**3) UVA Comprehensive Cancer Center**

Basic Science Lead, Melanoma Translational Research Team	2020 - Present
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**B. University of Michigan:****1) University of Michigan Department of Biomedical Engineering (BME)**

Member, BME Team for Diversity, Equity, & Inclusion in STEM departments	2019
Member, BME Graduate Admissions Committee	2017 - 2020
Member, BME Summer Undergraduate Research in Engineering (SURE) Committee	2018 - 2020

**2) University of Michigan Medical School**

Member, Medical School Basic Science Research IT Committee	2019 - 2020
Member, Admissions Committee, T32 Cancer Biology Doctoral Program	2018 - 2020
Member, Michigan Postdoctoral Pioneer Program (MP3) Review Committee	2019 - 2020