

Curriculum Vitae

Zhi Sheng, PhD

Assistant Professor
Fralin Biomedical Research Institute at VTC
2 Riverside Circle
Roanoke, VA 24016. USA
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EDUCATION

- 1992: B.S. and MD in Forensic Medicine, Shanghai Medical University (now Shanghai Medical College of Fudan University), Shanghai, P.R. China
- 1998: M.S. in Biochemistry, Shanghai Medical University, Shanghai, P.R. China
- 2005: Ph.D. in Molecular and Cell Biology, State University of New York Downstate Medical Center, Brooklyn, New York. USA

HONORS & AWARDS

- 2015: Elsa U. Pardee Foundation Research Grant Award
- 2015: Virginia Tech Scholar of the Week
- 2015: St Baldrick Foundation Research Fellowship awarded to the Sheng Laboratory
- 2016: St Baldrick Foundation Research Fellowship awarded to the Sheng Laboratory
- 2017: St Baldrick Foundation Research Fellowship awarded to the Sheng Laboratory
- 2018: St Baldrick Foundation Research Fellowship awarded to the Sheng Laboratory
- 2018: Inaugural VTCSOM Research Domain Mentors Award
- 2020: St Baldrick Foundation Research Fellowship awarded to the Sheng Laboratory

RESEARCH & TEACHING POSITIONS

- 1992-1995: Assistant Professor
Department of Pathology, Anhui Medical University, Hefei, P. R. China
- 1992-1995: Clinical Pathologist
Department of Pathology, Affiliated Hospital of Anhui Medical University, Hefei, P. R. China
- 2005-2012: Postdoctoral Fellow
Dr. Michael Green's laboratory, Program in Gene Function & Expression (now Department of Molecular, Cell and Cancer Biology), University of Massachusetts Medical School, Worcester, Massachusetts, USA
- 2012-present: Assistant Professor
Fralin Biomedical Research Institute (former Virginia Tech Carilion Research Institute), Roanoke, Virginia, USA

- 2012-present: Assistant Professor
Department of Internal Medicine, Virginia Tech Carilion School of Medicine,
Roanoke, Virginia, USA
- 2012-2018: Assistant Professor
Department of Biomedical Sciences and Pathobiology, College of Veterinary
School, Virginia Tech, Blacksburg, Virginia, USA
- 2018-present: Assistant Professor
Virginia Tech Center for Drug Discovery, Virginia Tech, Blacksburg, Virginia, USA
- 2018-present: Member
Wake Forest Baptist Comprehensive Cancer Center, Winston Salem, North
Carolina, USA

RESEARCH SUPPORT

CURRENT

- R21CA245631, NIH-NCI MPI: Sheng and Kelly 12/01/2019 – 11/30/2021
Cryo-EM analysis of PI3K signaling complexes in glioblastoma
- St. Baldrick's Foundation Fellowship PI: Sheng; Fellow: Doshi 05/15/2020 – 12/31/2020
Role of PI3K catalytic isoforms on survival of pediatric glioblastoma
- R01CA227261, NIH-NCI PI: Kelly; Co-I: Sheng 04/01/2018 – 03/31/2023
Hot Spot Analysis of the Breast Cancer Susceptibility Protein
- R01CA219700, NIH-NCI PI: Kelly; Co-I: Sheng 07/01/2018 – 06/30/2023
Multi-scale Imaging of Breast Cancer Proteins during DNA Repair
- R41CA250874, NIH-NCI PI: Lamouille; Co-I: Sheng 07/01/2020 – 06/30/2021
Inhibition of breast cancer cell metastases using a connexin43 mimetic peptide
- R44CA195937, NIH-NCI PI: Grek; Co-I: Sheng 07/01/2018 – 06/30/2021
Novel therapeutic approach in treatment of glioblastoma using sustained deliver of connexin43 carboxy-terminal peptide encapsulated in biodegradable nanoparticles in combination with temozolomide
- R25NS105141, NIH-NINDS PI: Fox; Faculty: Sheng 01/01/2018 – 12/31/2023
Virginia Tech Carilion Research Institute Translational Neurobiology Summer Undergraduate Research Fellowship (neuroSURF)

PENDING

- R01NS117696, NIH-NINDS PI: Sheng 07/01/2021 – 06/30/2026
PI3K in glioblastoma invasion and progression
- R01NS123032, NIH-NINDS PI: Sheng 07/01/2021 – 06/30/2026
Connexin 43-mediated temozolomide resistance
- R21CA263384, NIH-NCI PI: Sheng 07/01/2021 – 06/30/2023
Targeting glioblastoma stem cells using a nanocarrier-delivered PI3Kbeta peptide
- R41CA261492, NIH-NCI PI: Sheng 04/01/2021 – 03/31/2022
New glioblastoma treatment using an exosome-loaded PI3K peptide

R41CA012358, NIH-NCI PI: Varghese; Co-I: Sheng 04/01/2021 – 03/31/2022
A novel multigene expression panel as a molecular diagnostic test for glioblastoma

COMPLETED

R01 NIH-NCI PI: Kelly; Co-I: Sheng 07/09/2015 – 06/30/2020
Tunable Microchip Sorting of BRCA1 Nuclear Assemblies

R21 NIH-NCI PI: Sheng 02/01/2018 – 03/31/2020
Selectively targeting a PI3K subunit to overcome temozolomide resistance and treat recurrent glioblastoma

R41 NIH/NCI PI: Lamouille; Co-I: Sheng 09/01/2017 – 08/31/2019
Therapeutic disruption of Connexin43-mediated microtubule regulation to target glioblastoma cancer stem cells

St. Baldrick's Foundation Fellowship PI: Sheng; Fellow: Shah 05/15/2018 – 08/15/2018
Using PIK3CB and Connexin-43 Inhibition to Sensitize Pediatric Glioblastoma Cells to Temozolomide

Commonwealth Research Commercialization Funds, Virginia Biosciences Health Research Corp
 MPI: Sheng and Gourdie 12/01/2015 – 05/31/2018
Clinical Trial of New Drug in Dogs to Treat Brain Cancer in Humans

NIH/ODPI: PI: Friedlander; Faculty: Sheng 09/20/2013 – 05/31/2018
Mentorship and Development Program for Biomedical Trainees

R43 SBIR NIH/NCI MPI: Sheng and Lamouille 07/01/2015 – 04/30/2018
Novel Therapeutic Approach in Treatment of Glioblastoma Using Sustained Delivery of Connexin43 Carboxy-Terminal Peptide Encapsulated in Biodegradable Nanoparticles in Combination with Temozolomide

R21 NIH/NCI PI: Verbridge; Co-I: Sheng 02/01/2015 – 01/31/2018
Targeted Electric Field Therapy of Malignant Infiltrative Glioma

St. Baldrick's Foundation Fellowship PI: Sheng; Fellow: Le 05/15/2017 – 08/15/2017
PIK3CB inhibitors selectively block survival of pediatric glioblastoma cells

St. Baldrick's Foundation Fellowship PI: Sheng; Fellow: Kanabur 06/01/2016 – 08/31/2016
Developing a Novel Combinational Therapy Using Temozolomide and a Connexin 43 Blocker to Treat Glioblastoma

Elsa U. Pardee Foundation RG PI: Sheng 02/01/2015 – 01/31/2016
Converting ACT1, a CX43-targeting drug approved by the FDA, into a glioblastoma treatment

St. Baldrick's Foundation Fellowship PI: Sheng; Fellow: Singh 06/01/2015 – 08/21/2015
Using ACT1, a Connexin 43 Blocker, as a Therapeutic Agent against Glioblastoma Stem Cells

ABTA Fellowship PI: Sheng; Fellow: Young 05/15/2013 – 09/30/2013
Identification of novel therapeutic targets in glioblastoma multiforme stem cells

PUBLICATIONS

Pridham KJ, Shah F, Sheng KL, Guo S, Min L, Kanabur P, Lamouille S, Lewis G, Morales M, Jourdan J, Grek CL, Ghatnekar GG, Varghese R, Kelly, DF, Gourdie RG, **Sheng Z.**

Connexin 43 confers chemoresistance through activating PI3K. *BioRxiv*. 2020. Preprint DOI: 10.1101/2020.10.14.339275.

Solares M, Jonaid GM, Luqiu W, Liang, Y, Evans M, Dearnaley W, Sheng Z, Kelly D. Microchip-based structure determination of disease-relevant p53. **Analytical Chemistry**. 2020. In press.

Roberts R, Smyth J, Will J, Roberts P, Grek C, Ghatnekar G, **Sheng Z**, Gourdie R, Lamouille S, and Foster J. Development of PLGA nanoparticles for sustained release of a Connexin43 mimetic peptide to target glioblastoma cells. **Materials Science & Engineering C**. 2020. 108: 110191. DOI: <https://doi.org/10.1016/j.msec.2019.110191>.

Alden NA, Varano AC, Dearnaley WJ, Solares MJ, Luqiu WY, Liang Y, Sheng Z, McDonald SM, Damiano J, McConnell J, Dukes M, and Kelly DF. Cryo-EM-on-a-Chip: Custom-designed Substrates for the 3D Analysis of Macromolecules. **SMALL**. 2019. 15(21):e1900918. DOI: 10.1002/smll.201900918. PMID: 30963664.

Ivey JW, Wasson EM, Alinezhad E, Kanitkar A, **Sheng Z**, DavalosRV, Verbridge SS. Characterization of ablation thresholds for 3D-cultured patient-derived glioma stem cells in response to high-frequency irreversible electroporation. **Research**. 2019. 2019 (1):8081315. DOI: 10.34133/2019/8081315

Sheng KL, Pridham KJ, **Sheng Z**, Lamouille S, and Varghese RT. Functional blockade of small GTPase RAN inhibits glioblastoma cell viability. **Front Oncol**. 2019. 8, 662. DOI: 10.3389/fonc.2018.00662. Pubmed PMID: 30671385

Liang Y, Dearnaley1 WJ, Alden NA, Bucaro MS, Gilmore BL, Pridham KJ, Varano CA, **Sheng Z**, Alli E, and Kelly DF. Correcting errors in the BRCA1 warning system. **DNA Repair**. 2019. 73, 120-128. DOI: 10.1016/j.dnarep.2018.11.009. Pubmed PMID: 30503669.

Varghese RT, Young S, Pham L, Liang Y, Pridham KJ, Guo S, Murphy S, Kelly DF, and **Sheng Z**. Casein kinase 1 epsilon regulates glioblastoma cell survival. **Sci Rep**. 2018. 8 (1), 13621. DOI: 10.1038/s41598-018-31864-x. Pubmed PMID: 30206363.

Grek, CL, **Sheng Z**, Naus CC, Sin WC, Gourdie RG, and Ghanekar GG. Novel approach to temozolomide resistance in malignant glioma: connexin43-directed therapeutics. **Curr Opin Pharmacol**. 2018. 41, 79-88. DOI: 10.1016/j.coph.2018.05.002. Pubmed PMID: 29803991.

Guo S, Pridham KJ, Murphy SF, Virbasius CM, He. B, Zhang L, Varmark H, Green MR, and **Sheng Z**. A large-scale RNA interference screen identifies genes that regulate autophagy at different stages. **Sci Rep**. 2018. 8 (1), 2822. DOI: 10.1038/s41598-018-21106-5. Pubmed PMID: 29434216.

Pridham KJ, Le L, Guo S, Varghese RT, Algino S, Liang Y, Fajardin R, Rodgers CM, Simonds GR, Kelly DF, and **Sheng Z**. PIK3CB/p110 β is a Selective Survival Factor for Glioblastoma. **Neuro Oncol**. 2018. 20 (4), 494-505. DOI:10.1093/neuonc/nox181. Pubmed PMID: 29016844.

Pridham KJ, Varghese RT, and **Sheng Z**. The role of class IA phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunits in glioblastoma. **Front Oncol**. 2017. 7, 312. DOI: 10.3389/fonc.2017.00312. Pubmed PMID: 29326882.

Winton CE, Gilmore BL, Tanner JR, Varano AC, **Sheng Z**, Kelly DF. Tunable substrates improve imaging of viruses and cancer proteins. **Micros Today**. 2017;25(4):22-7. DOI: 10.1017/S1551929517000657. Pubmed PMID: 29056883.

Liang Y, Dearnaley W, Varano CA, Gilmore, BL, Alden N, **Sheng Z** and Kelly DF. Structural Analysis of BRCA1 Reveals Modification Hot Spot. **Sci Adv.** 2017. 3 (9): e1701386. DOI: 10.1126/sciadv.1701386. Pubmed PMID: 28948225.

Gilmore, BL, Liang Y, Winton CE, Patel K, Karageorge V, Varano CA, Dearnaley W, **Sheng Z** and Kelly DF. Molecular Analysis of BRCA1-BARD1 in Human Breast Cancer Cells Under Oxidative Stress. **Sci Rep.** 2017; 7, 43435. DOI: 10.1038/srep43435. Pubmed PMID: 28262780.

Kanabur P, Guo S, Simonds GR, Kelly DF, Gourdie RG, and **Sheng Z.** Patient-derived glioblastoma stem cells respond differentially to targeted therapies. **Oncotarget.** 2016. 7 (52), 86406-86419. DOI: 10.18632/oncotarget.13415. Pubmed PMID: 27863440.

Winton CE, Gilmore BL, Demmert AC, Karageorge V, **Sheng Z,** Kelly DF. A microchip platform for structural oncology applications. **NPJ Breast Cancer.** 2016, 2. DOI: 10.1038/npjbcancer.2016.1. Pubmed PMID: 27583302.

Varghese RT, Liang Y, Guan T, Franck CT, Kelly DF, **Sheng Z.** Survival kinase genes present prognostic significance in glioblastoma. **Oncotarget.** 2016. 7(15), 20140-51. DOI: 10.18632/oncotarget.7917 PubMed PMID: 26956052.

Murphy SF, Varghese RT, Lamouille S, Guo S, Pridham KJ, Kanabur P, Osimani AM, Sharma S, Jourdan J, Rodgers CM, Simonds GR, Gourdie RG, **Sheng Z.** Connexin 43 inhibition sensitizes chemoresistant glioblastoma cells to temozolomide. **Cancer Res.** 2016. 76(1), 139-49. DOI: 10.1158/0008-5472.CAN-15-1286. PubMed PMID: 26542214.

Guo S, Pridham KJ, **Sheng Z.** Detecting Autophagy and Autophagy Flux in Chronic Myeloid Leukemia Cells Using a Cyto-ID Fluorescence Spectrophotometric Assay. **Methods Mol Biol.** 2016. 1465, 95-109. DOI: 10.1007/978-1-4939-4011-0_9. PubMed PMID: 27581142.

Demmert AC, Dukes MJ, Spillman M, McDonald SM, **Sheng Z,** Mirsaidov U, Matsudaira P, Kelly DF. Visualizing macromolecules in liquid at the nanoscale. 2016. In Ross (Ed): **Liquid Cell Electron Microscopy.** Cambridge University Press.

Gilmore BL, Winton CE, Demmert AC, Tanner JR, Bowman S, Karageorge V, Patel K, **Sheng Z,** Kelly DF. A Molecular Toolkit to Visualize Native Protein Assemblies in the Context of Human Disease. **Sci Rep.** 2015 5, 14440. DOI: 10.1038/srep14440. PubMed PMID: 26395823.

Li T, Murphy S, Kiselev B, Bakshi KS, Zhang J, Eltahir A, Zhang Y, Chen Y, Zhu J, Davis RM, Madsen LA, Morris JR, Karolyi DR, LaConte SM, **Sheng Z,** Dorn HC. A New Interleukin-13 Amino-Coated Gadolinium Metallofullerene Nanoparticle for Targeted MRI Detection of Glioblastoma Tumor Cells. **J Am Chem Soc.** 2015. 137(24), 7881-7888. PubMed PMID: 26022213.

Pohlmann ES, Patel K, Guo S, Dukes MJ, **Sheng Z,** Kelly DF. Real-time visualization of nanoparticles interacting with glioblastoma stem cells. **Nano Lett.** 2015. 15(4), 2329-35. DOI: 10.1021/nl504481k. PubMed PMID: 25734907.

Guo S, Liang Y, Murphy SF, Huang A, Shen H, Kelly DF, Sobrado P, **Sheng Z.** A rapid and high content assay that measures cyto-ID-stained autophagic compartments and estimates autophagy flux with potential clinical applications. **Autophagy.** 2015. 11(3), 560-72. DOI: 10.1080/15548627.2015.1017181. PubMed PMID: 25714620.

Sheng Z, Murphy SF, Guo S, Green MR. A diphtheria toxin negative selection in RNA interference screening. **Methods Mol Biol.** 2014. 1176, 59-72. DOI: 10.1007/978-1-4939-0992-6_6. PMID: 25030919.

Ma L, Shan Y, Bai R, Xue L, Eide CA, Ou J, Zhu LJ, Hutchinson L, Cerny J, Khoury HJ, **Sheng Z**, Druker BJ, Li S, Green MR. A therapeutically targetable mechanism of BCR-ABL-independent imatinib resistance in chronic myeloid leukemia. **Sci Transl Med**. 2014. 6(252), 252ra121. DOI: 10.1126/scitranslmed.3009073. PubMed PMID: 25186176.

Jang HN, Lee M, Loh TJ, Choi SW, Oh HK, Moon H, Cho S, Hong SE, Kim do H, **Sheng Z**, Green MR, Park D, Zheng X, Shen H. Exon 9 skipping of apoptotic caspase-2 pre-mRNA is promoted by SRSF3 through interaction with exon 8. **Biochim Biophys Acta**. 2014. 1839(1), 25-32. DOI: 10.1016/j.bbarm.2013.11.006. PubMed PMID: 24321384.

Oh Hk, Lee E, Jang HN, Lee J, Moon H, **Sheng Z**, Jun Y, Loh TJ, Cho S, Zhou J, Green MR, Zheng X, Shen H. hnRNP A1 contacts exon 5 to promote exon 6 inclusion of apoptotic Fas gene. **Apoptosis**. 2013. 18(7), 825-35. DOI: 10.1007/s10495-013-0824-8. PubMed PMID: 23430061.

Den RB, Kamrava M, **Sheng Z**, Werner-Wasik M, Dougherty E, Marinucchi M, Lawrence YR, Hegarty S, Hyslop T, Andrews DW, Glass J, Friedman DP, Green MR, Camphausen K, Dicker AP. A phase I study of the combination of sorafenib with temozolomide and radiation therapy for the treatment of primary and recurrent high-grade gliomas. **Int J Radiat Oncol Biol Phys**. 2013. 85(2), 321-8. DOI: 10.1016/j.ijrobp.2012.04.017. PubMed PMID: 22687197.

Zhang H, Peng C, Hu Y, Li H, **Sheng Z**, Chen Y, Sullivan C, Cerny J, Hutchinson L, Higgins A, Miron P, Zhang X, Brehm MA, Li D, Green MR, Li S. The Blk pathway functions as a tumor suppressor in chronic myeloid leukemia stem cells. **Nat Genet**. 2012. 44(8), 861-71. DOI: 10.1038/ng.2350. PubMed PMID: 22797726.

Sheng Z, Ma L, Sun JE, Zhu LJ, Green MR. BCR-ABL suppresses autophagy through ATF5-mediated regulation of mTOR transcription. **Blood**. 2011. 118(10), 2840-8. DOI: 10.1182/blood-2010-12-322537. PubMed PMID: 21715304.

Sheng Z, Evans SK, Green MR. An activating transcription factor 5-mediated survival pathway as a target for cancer therapy? **Oncotarget**. 2010. (6), 457-60. DOI: 10.18632/oncotarget.100914. PubMed PMID: 21311102.

Sheng Z, Li L, Zhu LJ, Smith TW, Demers A, Ross AH, Moser RP, Green MR. A genome-wide RNA interference screen reveals an essential CREB3L2-ATF5-MCL1 survival pathway in malignant glioma with therapeutic implications. **Nat Med**. 2010. 16(6), 671-7. DOI: 10.1038/nm.2158. PubMed PMID: 20495567.

Sheng Z, Wang SZ, Green MR. Transcription and signaling pathways involved in BCR-ABL-mediated misregulation of 24p3 and 24p3R. **EMBO J**. 2009. 28(7), 866-76. DOI: 10.1038/emboj.2009.35. PubMed PMID: 19229297.

Sheng Z, Liang Y, Lin CY, Comai L, Chirico WJ. Direct regulation of rRNA transcription by fibroblast growth factor 2. **Mol Cell Biol**. 2005. 25(21), 9419-26. DOI: 10.1128/MCB.25.21.9419-9426.2005. PubMed PMID: 16227592.

Sheng Z, Lewis JA, Chirico WJ. Nuclear and nucleolar localization of 18-kDa fibroblast growth factor-2 is controlled by C-terminal signals. **J Biol Chem**. 2004. 279(38), 40153-60. DOI: 10.1074/jbc.M400123200. PubMed PMID: 15247275.

Sheng Z, Chang SB, Chirico WJ. Expression and purification of a biologically active basic fibroblast growth factor fusion protein. **Protein Expr Purif**. 2003. 27(2), 267-71. PubMed PMID: 12597886.

PATENT APPLICATIONS AND DISCLOSURES

- 2014: Patent application PCT/US2014/042528. Inventors: Sheng and Gourdie. **Methods for Therapeutic Targeting Cancer Stem cells.**
- 2015: IP application 62/132,588. Inventors: Sheng. **A Rapid and High Content Assay that Measures Cyto-ID-Stained Autophagic Compartments and Estimates Autophagy Flux with Potential Clinical Applications.**
- 2015: IP application 62/144,387. Inventors: Sheng, Gourdie, Lamouille, Varghese. **Methods for Personalized Medicine: GBM Diagnosis and Treatment.**
- 2015: Patent application VTIP 15-083. Inventors: Sheng and Kelly. **The application of NOTCH1 as a Biomarker for Glioblastoma Stem Cells.**
- 2019: IP application VTIP 19-060 TH 222204-8540. Inventors: Sheng and Pridham. **INVENTION OF A NOVEL PI3K DRUG.**
- 2019: Patent application 14/909,674. Inventors: Sheng, Gourdie. **Methods of treating a cancer through targeted disruption of alpha connexin 43-zonula occludens-1 (zo-1) interaction.**
- 2020: IP application 63/090,140. Inventors: Sheng, Gourdie, Pridham, and Jourdan. **P110beta targeting peptides, formulations, and uses thereof.**
- 2020: IP application 63/071,689. Inventors: Sheng, Gourdie, Pridham, and Jourdan. **Act1 and act11 peptide variant combination therapies for treatment of disease.**
- 2020: IP application 63/071,689. Inventors: Sheng, Gourdie, Pridham, and Jourdan. **Act1 peptide combination therapy for glioblastoma**

INVITED TALKS

- 2011: University of Massachusetts Medical School, Massachusetts, USA. **Identification of a novel survival pathway in glioblastoma.**
- 2013: Virginia Tech, Virginia, USA. **Understanding and targeting autophagy in cancer.**
- 2013: Virginia Cancer Registry, Virginia, USA. **Finding a cure for brain cancer.**
- 2014: Virginia Tech, Virginia, USA. **Targeting Glioblastoma: New Therapeutics and Diagnostics.**
- 2016: World Congress on Cancer Research & Therapy meeting, Florida, USA. **Identification of new biomarkers that predict the risk of glioblastoma recurrence.**
- 2017: 2nd International Cancer Study and Therapy Conference, Maryland, USA. **Developing precision therapies for glioblastoma by targeting glioblastoma stem cells.**
- 2017: State University of New York Downstate Medical Center, New York, USA. **Divergent roles of PI3K isoforms in glioblastoma.**
- 2017: Shenzhen University, Shenzhen, P.R. China. **Delineating cancer cell survival using RNAi screens.**
- 2020: Surgical Ground Rounds, Carilion Clinic, Roanoke, Virginia, USA. **Translational precision medicine for glioblastoma.**
- 2020: MD Anderson Cancer Center, Neuro-Oncology Seminar Series. Houston, Texas, USA. Virtual Talk. **Translational biology for glioblastoma: Developing novel glioblastoma therapies.**

PROFESSIONAL ACTIVITIES

JOURNAL EDITING

2018-present: Frontiers in Oncology
2018-2020: Frontiers in Pharmacology
2016: Stem Cell International

GRANT REVIEWING

2013-2019: Canada Foundation for Innovation
2015-2019: Health Research Board Ireland
2015: NIH Cancer Etiology study section
2016-present: St. Baldrick Foundation
2017: University of Leuven Belgium
2018: The brain tumor charity
2018-2019: The Research Foundation Flanders at Belgium
2018-2019: NIH CSR grant review study
2019: Mohammed Bin Rashid university of medicine and health sciences,
Collaborative Research Award

MEETING ABSTRACT REVIEWING

2019: International conference on bioinformatics and biomedicine

JOURNAL/BOOK REVIEWING

ACS Applied Materials & Interfaces
BMB Reports
BMC Cancer
BMC Genomics
Cancers
Cell Physiology and Biochemistry
Clinical Science
Ebiomedicine
eLife
Elsevier (book proposal review)
Experimental Biology and Medicine
International Journal of Cancer
International Journal of Molecular Science
International Journal of Nanomedicine
Journal of Cancer
Molecular Cancer Therapeutics
Oncogene
Oncogenesis
Oncotarget
Stem Cell International
Scientific Reports
Theranostics
Trends in Cancer
World Journal of Surgical Oncology

PROFESSIONAL MEMBERSHIP

American Society for Cell Biology
American Association for Cancer Research
American Association for the Advancement of Science (AAAS)
The New York Academy of Sciences
American Society for Cell Biology
Sigma Xi, The Scientific Research Society

PROFESSIONAL SERVICE AT VIRGINIA TECH

2013: VTCRI cancer faculty search committee
2013: VTCRI nomination committee for frontiers in biomedical science seminar series
2013: TBMH graduate program course development committee
2014: VTCRI immunology and infectious disease faculty search committee
2015: VTCRI glia biology faculty search committee
2015: VMCVM department chair periodic review committee
2015: VTCRI glia biology faculty search committee
2016: VTCSOM medical teaching faculty search committee
2019: Organizing committee for FBRI seminar series of pioneer of biomedical research
2015: FBRI glia biology faculty search committee
2020: Organizing committee for FBRI seminar series of pioneer of biomedical research

TEACHING

2020: TBMH, Genetics and Precision Medicine (8 credits). Lecture: **Cancer Stem Cells**
2020: TBMH, Fundamentals of Cancer (8 credits). Lecture: **Cancer Molecular Genetics and Epigenetics**
2019: Fralin Biomedical Research Institute Neuro-SURF. Lecture: **Cancer Molecular Genetics and Precision Medicine**
2019: TBMH, Fundamentals of Cancer (8 credits). Lecture: **Cancer Molecular Genetics and Epigenetics**
2019: TBMH, Genetics and Precision Medicine (8 credits). Lecture: **Cancer Stem Cells**
2018: TBMH, Stem Cells and Regenerative Medicine (8 credits). Lecture: **Cancer Stem Cells**
2018: Research live lecture: **Precision/Personalize Medicine for Glioblastoma**
2018: Research Domain Evaluation. **VTCSOM medical students research project evaluation**
2018: Methods in Logic. **VTCSOM/TBMH graduate student literature discussion**
2018: Virginia Tech Carilion Research Institute (VTCRI, now Fralin Biomedical Research Institute) Neuro-SURF. Lecture: **Brain Cancer: Molecular Biology and Precision Medicine for Glioblastoma**
2018: VTCRI Neuro-SURF. Lecture: **Decoding Survival Genes to Treat Cancer**
2017: TBMH, Fundamentals of Cancer (8 credits). Lecture: **Cancer Molecular Genetics and Epigenetics**
2017: TBMH, Genetics and Precision Medicine (8 credits). Lecture: **Cancer Stem Cells**
2017: Research live lecture: **Understanding and Targeting Glioblastoma Stem Cells**
2017: Research Domain Evaluation. **VTCSOM medical students research project evaluation**
2017: Methods in Logic. **VTCSOM/ TBMH graduate student literature discussion**
2017: VTCRI Neuro-SURF. Lecture: **Brain Cancer: Molecular Biology and Precision Medicine for Glioblastoma**
2017: VTCRI Neuro-SURF. Lecture: **Decoding Survival Genes to Treat Cancer**
2016: TBMH. Stem Cells and Regenerative Medicine (8 credits). Lecture: **Cancer Stem Cells**
2016: TBMH, Genetics and Precision Medicine (8 credits). Lecture: **LnRNA, Autophagy, and Cancer**

- 2016: TBMH, Genetics and Precision Medicine (8 credits). Lecture: Cancer Molecular **Genetics and Epigenetics**
- 2016: Research live lecture: **Identification of New Biomarkers that Predict the Risk of Glioblastoma Recurrence**
- 2016: Research Domain Evaluation. **VTCSOM medical students research project evaluation**
- 2016: Methods in Logic. **VTCSOM/TBMH graduate student literature discussion**
- 2015: TBMH, Fundamentals of Cancer (8 credits). Lecture: **Molecular genetics of cancer**
- 2015: Research live lecture: **Finding New and Effective Therapeutic Targets for Cancer**
- 2015: Research Domain Evaluation, **VTCSOM medical students research project evaluation**
- 2015: Methods in Logic, **VTCSOM/TBMH graduate student literature discussion**
- 2014: TBMH, Gateway course (8 credits). Lecture: **Brain Tumor**
- 2014: Research live lecture: **New Therapeutics and Diagnostics for Glioblastoma**
- 2014: Research Domain Evaluation, **VTCSOM medical students research project evaluation**
- 2014: Methods in Logic, **VTCSOM/TBMH graduate student literature discussion**
- 2013: Research live lecture: **Targeting Autophagy for Therapeutic Intervention in Cancer**
- 2013: Research Domain Evaluation. **VTCSOM medical students research project evaluation**
- 2013: Methods in Logic, **VTCSOM/TBMH graduate student literature discussion**
- 2012: Research live lecture: **Finding a Cure for Brain Tumor**

ADVISING

POSTDOC TRAINEES

- Susan Murphy: 2012-2015, currently a research associate at Virginia Tech.
 Sujuan Guo: 2012-2016, Currently a senior scientist at Harvard University
 Kevin Pridham: 2018-2020.

PHD TRAINEES

- Robin Varghese: 2012-2016, Genetics, Bioinformatics, and Computational Biology PhD program, Virginia Tech. Currently an Assistant Professor at The Edward Via College of Osteopathic Medicine, Virginia USA.
- Kevin Pridham: 2014-2018, Translational Biology, Medicine, and Health PhD program, Virginia Tech. Currently a Postdoc Fellow at the Fralin Biomedical Research Institute. The receiver of 2015 Scholar-In-Training award from American Association for Cancer Research.
- Tian Fan: 2020-2021, Exchange visiting scholar from Najin University, Najin, China.

OTHER PHD OR MS TRAINEES (THESIS COMMITTEE OR LAB ROTATION)

- Carly Winton: 2014, Fralin Biomedical Research Institute, VT
 Alyssa Osimani: 2014, TBMH, VT
 Cameron Varano: 2014, Fralin Biomedical Research Institute, VT
 Jill Ivey: 2015, Department of Biomedical Engineering, VT
 Haitham Elmarakeby: 2015, Department of Computer Science, VT
 Bharath Sreekumar: 2015, Fralin Biomedical Research Institute, VT
 Rebecca Brock: 2016, TBMH, VT
 Hanaa Torkey: 2016, Department of Computer Science, VT
 Alissa Hendicks: 2017, TBMH, VT
 Maria Solares: 2018, TBMH, VT
 Min Oh: 2019, Department of Computer Science, VT
 Parham Ghassemi: 2020, The Bradley Department of Electrical and Computer Engineering,

	VT
Amanda Hensley:	2020, TBMH, VT
Christina Wheeler:	2020, TBMH, VT
Xiang Li:	2020, TBMH, VT
Shah Rukh	2020, TBMH, VT
Caroline de Jager.	2021, TBMH, VT

VTCSOM MEDICAL STUDENTS

Elliot Pohlmann:	2012-2015. A psychiatry resident at the Virginia Commonwealth University. The receiver of 2015 VTCSOM Research Distinction Award of Productivity.
Sarah Young:	2012-2016. An internal medicine resident at the Thomas Jefferson University. The receiver of 2013 American Brain Tumor Association Summer Research Fellowship receiver and 2016 VTCSOM Research Distinction Award of Productivity and Distinction for Research Scholar.
Lily Pham:	2012-2016. A urology resident at Baylor College of Medicine.
Dylan Stanfield:	2013-2017. An internal medicine resident at the University of Wisconsin.
Vivek Singh:	2014-2018. A radiology resident at the University of North Carolina Hospitals. The receiver of 2015 St Baldrick Summer Medical Student Fellowship.
Pratick Kanabur:	2014-2018. A urology resident at the Baylor College of Medicine. The receiver of 2015 American Academy of Neurology Summer Medical Student Fellowship, 2016 VTCSOM Research Distinction Award, 2016 St Baldrick Summer Medical Student Fellowship, and 2016 Alpha Omega Alpha Honor Medical Society Carolyn L. Kuckein Student Research Fellowship receiver.
Lamvy Le:	2015-2019. A plastic surgery resident at the University of Minnesota. The receiver of 2017 St Baldrick Summer Medical Student Fellowship.
Farah Shah:	2016-2020. The receiver of 2018 American Academy of Neurology Summer Medical Student Fellowship and 2018 St Baldrick Summer Medical Student Fellowship. An internal medicine resident at the University of California Los Angeles.
Abigail Winn:	2016-2020. An emergency medicine resident at the Hennepin County Medical Center.
Sam Plant:	2017-2021.
Kritika Chugh:	2018-2022.
Marc Fromherz:	2018-2020.
Yazdi Doshi:	2018-2020. The receiver of 2020 St Baldrick Summer Medical Student Fellowship.
Alexander Zhang:	2019-2023.
Shawna Bilton:	2019-2023.
Leah Huang:	2019-2023.
Alexander Zhang:	2019-2023.
Shawna Bilton:	2019-2023.
Leah Huang:	2019-2023.
Patrick Beck:	2020-2024
Kasen Hutching:	2020-2024
Liam Cleary:	2020-2024

OTHER TRAINEES

Karcy Grove:	2012. Undergraduate of University of Clemson.
Angela Huang:	2013-2014, Undergraduate of Virginia Tech.

Shaan Sharma: 2015-2016. Undergraduate of Virginia Tech.
Anna Buhle: 2015-2016. Undergraduate of Virginia Tech.
Sarah Algino: 2015-2017. Undergraduate of Virginia Commonwealth University.
Bishal Paud: 2016. Undergraduate of Virginia Tech.
Renee Fajardin: 2016. Undergraduate of Virginia Tech.
Vanessa Lin: 2016-2017. High school student of Roanoke Valley Regional School.
Gabriel Lewis: 2017. Undergraduate of Virginia Tech neuroSURF program.
Zach Yorke: 2018. Undergraduate of Virginia Tech MolVision.
Brady Simpson: 2018. Undergraduate of Virginia Tech MolVision.
Victoria Buskey: 2018. Undergraduate of Virginia Tech MolVision.
Nicholas Rhinesmith: 2018. Undergraduate of Virginia Tech.
Sundeep Dhanju: 2018. Medical student of The Edward Via College of Osteopathic Medicine.
Marc Morales: 2019. Undergraduate of Virginia Tech neuroSURF program
Liala Sofi: 2019-2020. High school student of Roanoke Valley Regional School.