**Curriculum Vitae**

**Zhi Sheng, PhD**

Assistant Professor

Virginia Tech Carilion Research Institute

2 Riverside Circle

Roanoke, VA 24016. USA

Work: 540-526-2042; Cell: 540-354-0389

**Education:**

1986-1992: Bachelor of Science, Shanghai Medical University (now Shanghai Medical College of Fudan University), Shanghai, P. R. China

1995-1998: Master of Biochemistry, Shanghai Medical University, Shanghai, P. R. China

1998-2005: Ph.D. of Molecular and Cell Biology, State University of New York Downstate Medical Center, Brooklyn, New York. USA

**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 in 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, Virginia Tech Carilion Research Institute (VTCRI), Roanoke, Virginia, USA

2012-present: Assistant Professor, Department of Biomedical Sciences and Pathobiology, College of Veterinary School, Virginia Tech, Blacksburg, Virginia, USA

2013-present: Assistant Professor, Department of Internal Medicine, Virginia Tech Carilion School of Medicine, Roanoke, Virginia, USA

2013-present: Assistant professor, Faculty of Health Science, Virginia Tech, Blacksburg, Virginia, USA

**Honors:**

Pardee Foundation Research Grant Award (2015-2016)

St Baldrick Foundation Medical Student Summer Fellowships awarded to the Sheng Laboratory from 2015 to 2017.

Scholar of the Week, Virginia Tech, 2015

**Professional Activities:**

Associate editor:

1. Frontiers in Oncology
2. Frontiers in Pharmacology

Leading guest editor:

Stem Cell International (Oct, 2016)

Ad hoc grant reviewer:

1. Canada Foundation for Innovation (since 2013)
2. Health Research Board Ireland (since 2015)
3. NIH Cancer Etiology study section (2015)
4. St. Baldrick Foundation (since 2016)
5. University of Leuven Belgium (2017)

Ad hoc paper reviewer:

1. ACS Applied Materials & Interfaces
2. BMB Reports
3. BMC Cancer
4. BMC Genomics
5. Clinical Science
6. eLife
7. Experimental Biology and Medicine
8. International Journal of Nanomedicine
9. Molecular Cancer Therapeutics
10. Oncogene
11. Oncotarget
12. Stem Cell International
13. Scientific Reports
14. Trends in Cancer
15. World Journal of Surgical Oncology

Professional membership:

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

**Advising & Mentoring:**

Postdoc trainees

1. Susan Murphy (2012-2015): Currently in Lee Moffitt Cancer Center.
2. Sujuan Guo (2012-present)

PhD candidates (as thesis advisor):

1. Robin Varghese (2012-2016), Genetics, Bioinformatics, and Computational Biology PhD program, Virginia Tech. Currently a postdoctoral fellow at Biocomplexity Institute of Virginia Tech.
2. Kevin Pridham (2014-present), Translational Biology, Medicine, and Health PhD program, Virginia Tech. 2015 American Association for Cancer Research Scholar-In-Training award receiver.

PhD candidates (rotation):

1. Alyssa Osimani (2014), Translational Biology, Medicine, and Health PhD program, Virginia Tech
2. Rebecca Brock (2016), Translational Biology, Medicine, and Health PhD program, Virginia Tech
3. Alissa Hendicks (2017), Translational Biology, Medicine, and Health PhD program, Virginia Tech

Medical Students (required completing a one-year research thesis work):

1. Elliot Pohlmann (2012-2015), Virginia Tech Carilion School of Medicine (VTCSOM). Currently a resident at the Department of Psychiatry of Virginia Commonwealth University. 2015 VTCSOM Research Distinction Award of Productivity receiver.
2. Sarah Young (2012-2016), VTCSOM. Currently a resident at the Department of Internal Medicine of Thomas Jefferson University. 2013 American Brain Tumor Association Summer Research Fellowship receiver. 2016 VTCSOM Research Distinction Award of Productivity and Distinction for Research Scholar.
3. Lily Pham (2012-2016), VTCSOM. Currently a resident at the Department of Neurology of Baylor College of Medicine.
4. Dylan Stanfield (2013-2017), VTCSOM.
5. Vivek Singh (2014-present), VTCSOM. 2015 St Baldrick Summer Medical Student Fellowship receiver.
6. Pratick Kanabur (2014-present), VTCSOM. 2015 American Academy of Neurology Summer Medical Student Fellowship receiver. 2016 VTCSOM Research Distinction Award receiver. 2016 St Baldrick Summer Medical Student Fellowship receiver. 2016 Alpha Omega Alpha Honor Medical Society Carolyn L. Kuckein Student Research Fellowship receiver.
7. Lamvy Le (2015-present), VTCSOM. 2017 St Baldrick Summer Medical Student Fellowship receiver.
8. Farah Shah (2016-present), VTCSOM. 2017 American Academy of Neurology Summer Medical Student Fellowship receiver
9. Abigail Winn (2016-present), VTCSOM

Undergraduate Students:

1. Karcy Grove (University of Clemson, 2012)
2. Angela Huang (Virginia Tech, 2013-2014)
3. Shaan Sharma (Virginia Tech, 2015-2016)
4. Anna Buhle (Virginia Tech, 2015-2016)
5. Bishal Paude (Virginia Tech, 2016)
6. Renee Fajardin (Virginia Tech MAOP, 2016)
7. Sarah Algino (Virginia Commonwealth University, 2015-2016)
8. Gabriel Lewis (Virginia Tech neuroSURF, 2017)

High School Students:

1. Vanessa Lin (Roanoke Valley Regional School, 2016-2017)

Thesis committee member for:

1. Haitham Elmarakeby (Ph.D., 2015-present, Thesis advisor: Lenwood Heather)
2. Hanaa Torkey (Ph.D., 2016-present, Thesis Advisior: Lenwood Heather)
3. Jill Ivey (Ph.D., 2015-2017)
4. Tuo-Xian Tang (Ph.D., 2016-present)
5. Cameron Varano (Ph.D., 2015-present)
6. Carly Winton, (Master. 2014-2016, graduated in 2016)

**Publications**

\*Denotes the correspondence author. Google Scholar (GS) Citation Metrics as of August 2017: Publications with citations: 20; Sum of times cited: 605; H-index: 14; i10Index: 16.

As of 2017, the total impact factor score of journals of 21 publications is 197.5. The average score is 9.4.

Peer-reviewed publications:

1. Young S, Liang Y, Varghese RT, Pham L, Pridham KJ, Guo S, Murphy S, Kelly DF, and Sheng Z\*. Casein kinase 1 epsilon regulates glioblastoma cell survival. Neuro-Oncology. 2017. Under review.
2. 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. Scientific Reports. 2017. Under review.
3. Pridham KJ, Le L, Guo S, Varghese RT, Algino S, Liang Y, Fajardin R, Rodgers CM, Simonds GR, Kelly DF, and Sheng Z\*. PIK3CB/p110β is a Selective Survival Factor for Glioblastoma. Neuro-Oncology (**IF: 7.8**). 2017. <https://doi.org/10.1093/neuonc/nox181>
4. Liang Y, Dearnaley W, Varano CA, Gilmore, BL, Alden N, Sheng Z and Kelly DF. Structural Analysis of BRCA1 Reveals Modification Hot Spot. Science Advances. 2017. 3 (9): e1701386. DOI: 10.1126/sciadv.1701386
5. 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 (**IF: 4.3**). 2017; 7: 43435. PMCID: 5338271.
6. Kanabur P, Guo S, Simonds GR, Kelly DF, Gourdie RG, and Sheng Z\*. Patient-derived glioblastoma stem cells respond differentially to targeted therapies. Oncotarget (**IF: 5.2**). 2016 Nov 16. doi: 10.18632/oncotarget.13415. PMID: 27863440. **Cited 2 times since 2016.**
7. Winton CE, Gilmore BL, Demmert AC, Karageorge V, Sheng Z, Kelly DF. [A microchip platform for structural oncology applications.](https://www.ncbi.nlm.nih.gov/pubmed/27583302) NPJ Breast Cancer. 2016;2. pii: 16016. Epub 2016 Jun 15. PubMed PMID: 27583302. **Cited 5 times since 2016.**
8. Varghese RT, Liang Y, Guan T, Franck CT, Kelly DF, Sheng Z\*. [Survival kinase genes present prognostic significance in glioblastoma.](https://www.ncbi.nlm.nih.gov/pubmed/26956052) Oncotarget (**IF: 5.2**). 2016 Apr 12;7(15):20140-51. PubMed PMID: 26956052. **Cited 6 times since 2016.**
9. 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.](http://www.ncbi.nlm.nih.gov/pubmed/26542214) Cancer Res (**IF: 9.1**). 2016 Jan 1;76(1):139-49. PubMed PMID: 26542214. **Cited 20 times since 2016.**
10. 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.](http://www.ncbi.nlm.nih.gov/pubmed/26395823) Sci Rep (**IF: 4.3**). 2015 Sep 23;5:14440. PubMed PMID: 26395823. **Cited 8 times since 2015.**
11. 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.](http://www.ncbi.nlm.nih.gov/pubmed/26022213) J Am Chem Soc (**IF: 13.9**). 2015 Jun 24;137(24):7881-8. PubMed PMID: 26022213. **Cited 13 times since 2015.**
12. Pohlmann ES, Patel K, Guo S, Dukes MJ, Sheng Z, Kelly DF. [Real-time visualization of nanoparticles interacting with glioblastoma stem cells.](http://www.ncbi.nlm.nih.gov/pubmed/25734907) Nano Lett (**IF: 12.7**). 2015 Apr 8;15(4):2329-35. PubMed PMID: 25734907. **Cited 15 times since 2015.**
13. 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.](http://www.ncbi.nlm.nih.gov/pubmed/25714620) Autophagy (**IF: 8.6**). 2015;11(3):560-72. PubMed PMID: 25714620. **Cited 26 times since 2015.**
14. 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.](http://www.ncbi.nlm.nih.gov/pubmed/25186176) Sci Transl Med (**IF: 16.8**). 2014 Sep 3;6(252):252ra121. PubMed PMID: 25186176. **Cited 44 times since 2014.**
15. 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.](http://www.ncbi.nlm.nih.gov/pubmed/24321384) Biochim Biophys Acta (**IF: 4.7**). 2014 Jan;1839(1):25-32. PubMed PMID: 24321384. **Cited 12 times since 2014.**
16. 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.](http://www.ncbi.nlm.nih.gov/pubmed/23430061) Apoptosis (**IF: 3.8**). 2013 Jul;18(7):825-35. PubMed PMID: 23430061. **Cited 16 times since 2013.**
17. 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.](http://www.ncbi.nlm.nih.gov/pubmed/22687197) Int J Radiat Oncol Biol Phys (**IF: 5.1**). 2013 Feb 1;85(2):321-8. PubMed PMID: 22687197. **Cited 26 times since 2013.**
18. 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.](http://www.ncbi.nlm.nih.gov/pubmed/22797726) Nat Genet (**IF: 28**). 2012 Jul 15;44(8):861-71. PubMed PMID: 22797726. **Cited 38 times since 2012.**
19. Sheng Z, Ma L, Sun JE, Zhu LJ, Green MR. [BCR-ABL suppresses autophagy through ATF5-mediated regulation of mTOR transcription.](http://www.ncbi.nlm.nih.gov/pubmed/21715304) Blood (**IF: 13.2**). 2011 Sep 8;118(10):2840-8. PubMed PMID: 21715304. **Cited 69 times since 2011.**
20. Sheng Z, Evans SK, Green MR. [An activating transcription factor 5-mediated survival pathway as a target for cancer therapy?](http://www.ncbi.nlm.nih.gov/pubmed/21311102) Oncotarget (**IF: 5.2**). 2010 Oct;1(6):457-60. PubMed PMID: 21311102. **Cited 19 times since 2010.**
21. 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.](http://www.ncbi.nlm.nih.gov/pubmed/20495567) Nat Med (**IF: 29.9**). 2010 Jun;16(6):671-7. PubMed PMID: 20495567. **Cited 117 times since 2010.**
22. Sheng Z, Wang SZ, Green MR. [Transcription and signalling pathways involved in BCR-ABL-mediated misregulation of 24p3 and 24p3R.](http://www.ncbi.nlm.nih.gov/pubmed/19229297) EMBO J (**IF: 9.8**). 2009 Apr 8;28(7):866-76. PubMed PMID: 19229297. **Cited 34 times since 2009.**
23. Sheng Z, Liang Y, Lin CY, Comai L, Chirico WJ. [Direct regulation of rRNA transcription by fibroblast growth factor 2.](http://www.ncbi.nlm.nih.gov/pubmed/16227592) Mol Cell Biol (**IF: 4.4**). 2005 Nov;25(21):9419-26. PubMed PMID: 16227592. **Cited 40 times since 2005.**
24. Sheng Z, Lewis JA, Chirico WJ. [Nuclear and nucleolar localization of 18-kDa fibroblast growth factor-2 is controlled by C-terminal signals.](http://www.ncbi.nlm.nih.gov/pubmed/15247275) J Biol Chem (**IF: 4.1**). 2004 Sep 17;279(38):40153-60. PubMed PMID: 15247275. **Cited 73 times since 2004.**
25. Sheng Z, Chang SB, Chirico WJ. [Expression and purification of a biologically active basic fibroblast growth factor fusion protein.](http://www.ncbi.nlm.nih.gov/pubmed/12597886) Protein Expr Purif (**IF: 1.4**). 2003 Feb;27(2):267-71. PubMed PMID: 12597886. **Cited 22 times since 2003.**

Book chapters:

1. Sheng Z, Murphy SF, Guo S, Green MR. [A diphtheria toxin negative selection in RNA interference screening.](https://www.ncbi.nlm.nih.gov/pubmed/25030919) Methods Mol Biol. 2014;1176:59-72. PMID: 25030919.
2. Guo S, Pridham KJ, Sheng Z.\* [Detecting Autophagy and Autophagy Flux in Chronic Myeloid Leukemia Cells Using a Cyto-ID Fluorescence Spectrophotometric Assay.](https://www.ncbi.nlm.nih.gov/pubmed/27581142) Methods Mol Biol. 2016;1465:95-109. PubMed PMID: 27581142.
3. Demmert A.C,. Dukes M.J., Spillman M., McDonald S.M., Sheng Z., Mirsaidov U., Matsudaira P., Kelly D.F. (2016). Visualizing macromolecules in liquid at the nanoscale. In Ross (Ed): Liquid Cell Electron Microscopy, Cambridge University Press. In Press. PMID: N/A.

Meeting abstracts:

1. Pratik Kanabur and Zhi Sheng\*. (2017) Society of Neuro-Oncology’s 22nd annual meeting 2017, San Francisco.
2. Rose Robert, Kevin Pridham, Zhi Sheng, Samy Lamouille, Robert Gourdie, and Johan Foster. (2017) 254th ACS National Meeting & Exposition, Washington DC.
3. Jill Ivery, Zhi Sheng, and Scott Verbridge. (2017) Biomedical Engineering Society annual meeting 2017, Phoenix.
4. Vivek Singh, Robin Varghese, and Zhi Sheng\*. (2017) International Cancer Education Conference, Ohio.
5. Gabriel Lewis, Kevin Pridham, and Zhi Sheng\*. (2017) Virginia Tech Summer Undergraduate Research Symposium, Blacksburg.
6. Lamvy Le, Kevin Pridham, Sujuan Guo, and Zhi Sheng\*. (2017) Annual meeting of American Association for Cancer Research, Washington DC.
7. Lamvy Le, Kevin Pridham, Sujuan Guo, and Zhi Sheng\*. American Association of Neurology annual meeting 2017.
8. Kevin Pridham, Lamvy Le, Sujuan Guo, Robin Varghese, Renee Fajardin, Sarah Algino, Deborah Kelly, Yanping Liang, and Zhi Sheng\* (2017) Annual meeting of American Association for Cancer Research, Washington DC.
9. Scott Verbridge, Jill Ivey, Eduardo Latouche, Akanksha Kanitkar, Mike Sano, Zhi Sheng, John Rosmeisl, Rafael Davalos. (2016) Biomedical Engineering Society annual meeting, Minneapolis, Minnesota.
10. BL Gilmore, CE Winton, V Karageorge, Z Sheng, DF Kelly. (2016) Microscopy & Microanalysis meeting in Columbus, Ohio.
11. Boudreaux CE, Sheng Z, McDonald SM. (2016) 35th Annual Meeting of the American Society for Virology, Virginia Tech University, Blacksburg, VA
12. Z Sheng\*; S Guo; K Pridham; S Murphy; C Virbasius; B He; L Zhang; H Varmark; M Green. 2016 Keystone Symposia Conference. V1: Autophagy: Molecular and Physiological Mechanisms. Whistler, British Columbia
13. Pratik Kanabur and Zhi Sheng\*. (2016) American Association of Neurology annual meeting 2016.
14. Renee Fajardin, Kevin Pridham, Zhi Sheng\*. (2016) Virginia Tech Summer Undergraduate Research Symposium. Blacksburg, VA.
15. Robin T. Varghese, Yanping Liang, Chris Franck, and Zhi Sheng\* (2016) VirginiaBrainRx symposium, Richmond, Virginia.
16. Sujuan Guo, Kevin J Pridham, Susan Murphy, Ching-Man Virbasius, Michael R Green, and Zhi Sheng\*. VirginiaBrainRx symposium, Richmond, Virginia.
17. Kevin J. Pridham, Sujuan Guo, Zhi Sheng\*. (2016) Life Science Forum of Southwest Virginia. Roanoke, VA.
18. Lily Pham, Yanping Liang, Sujuan Guo, Susan Murphy and Zhi Sheng\*. 2016 Annual Research Symposium of Virginia Tech Carilion School of Medicine, Roanoke, VA.
19. Sarah Young, Yanping Liang, Susan Murphy, Sujuan Guo and Zhi Sheng\*. 2016 Annual Research Symposium of Virginia Tech Carilion School of Medicine, Roanoke, VA.
20. Kevin J. Pridham, Sujuan Guo, Zhi Sheng\*. (2015) AACR Special Conference on Noncoding RNAs and Cancer: Mechanisms to Medicines; Boston, MA.
21. Sujuan Guo, Kevin Pridham, Zhi Sheng\*. (2015) AACR Special Conference on Noncoding RNAs and Cancer: Mechanisms to Medicines; Boston, MA.
22. Pechacek J, McDonald PW, Sheng Z, McDonald SM, Boudreaux CE. (2015). 12th International Symposium on Double-stranded RNA Viruses, Goa, India
23. Pechacek J, McDonald PW, Sheng Z, McDonald SM. (2015). 34th Annual Meeting of the American Society for Virology, Western University, Ontario, Canada.
24. Lily Pham, Yanping Liang and Zhi Sheng\*. (2015) The 67th American Association of Neurology Annual Meeting, Washington Convention Center in Washington, DC.
25. Sarah Young, Yanping Liang, Susan Murphy, Sujuan Guo and Zhi Sheng\*. (2015) The 67th American Association of Neurology Annual Meeting took place April 18-25, 2015, at the Walter E. Washington Convention Center in Washington, DC.
26. Robin T. Varghese, Yanping Liang, Chris Franck, and Zhi Sheng\* 2015 Annual Retreat of Virginia Tech Carilion Research Institute, Roanoke, VA.
27. Sujuan Guo, Kevin Pridham, Zhi Sheng\*. 2015 Annual Retreat of Virginia Tech Carilion Research Institute, Roanoke, VA.
28. Kevin J. Pridham, Sujuan Guo, Zhi Sheng\*. (2015) Virginia Tech TBMH graduate program open house. Blacksburg, VA.
29. Elliot Pohlmann, Susan Murphy, Debbie Kelly, Zhi Sheng\*. 2015 Annual Research Symposium of Virginia Tech Carilion School of Medicine, Roanoke, VA.
30. Murphy, S. F., Varghese, R. T., Lamouille, S., Guo, S., Pridham, K. J., Kanabur, P., Osimani, A. M., Sharma, S., Jourdan, J., Rodgers, C. M., Simonds, G. R., Gourdie, R. G., and Sheng, Z\*. 2014 Cancer Stem Cell Conference, Cleveland, OH.
31. Sujuan Guo, Yanping Liang, Susan F Murphy, Angela Huang, Haihong Shen, Deborah F Kelly, Pablo Sobrado, and Zhi Sheng\*. 2014 Annual Retreat of Virginia Tech Carilion Research Institute, Roanoke, VA.
32. Murphy, S. F., Varghese, R. T., Lamouille, S., Guo, S., Pridham, K. J., Kanabur, P., Osimani, A. M., Sharma, S., Jourdan, J., Rodgers, C. M., Simonds, G. R., Gourdie, R. G., and Sheng, Z\*. 2014 Annual Retreat of Virginia Tech Carilion Research Institute, Roanoke, VA.
33. Zhi Sheng\*, Sujuan Guo, Susan Murphy, Hanne Varmark, Amy Virbasius, and Michael Green. (2014) Clinical and Translational Science Institute at Children’s National and Virginia Tech Research Day. Washington, DC.
34. Boris Kiselev, [Jianyuan Zhang](http://ma.ecsdl.org/search?author1=Jianyuan+Zhang&sortspec=date&submit=Submit), Susan Murphy, [Tinghui Li](http://ma.ecsdl.org/search?author1=Tinghui+Li&sortspec=date&submit=Submit), Zhi Sheng\* and [Harry C Dorn](http://ma.ecsdl.org/search?author1=Harry+C+Dorn&sortspec=date&submit=Submit). (2014) 225th Electrochemical Society meeting.
35. Tinghui Li, Susan Murphy, Kanwarpal Bakshi, Steven LaConte, Zhi Sheng\*, and Harry Dorn. (2014) 12th international nanomedicine & drug delivery symposium. Chapel Hill, NC.
36. Leyuan Ma, Yi Shan, Robert Bai, Liting Xue, Christopher A. Eide, Jianhong Ou, Lihua J. Zhu, Lloyd Hutchinson, Jan Cerny, H. Jean Khoury, Zhi Sheng, Brian J. Druker, Shaoguang Li, Michael Green. The American Society of Hematology 2014 annual meeting.
37. Lily Pham, Yanping Liang, Sujuan Guo, Susan Murphy and Zhi Sheng\*. (2014) 19th Annual Scientific Meeting of the Society for Neuro-Oncology, Miami, Florida.
38. Sarah Young, Yanping Liang, Susan Murphy, Sujuan Guo and Zhi Sheng\*. (2014) 19th Annual Scientific Meeting of the Society for Neuro-Oncology, Miami, Florida.
39. Elliot Pohlmann, Susan Murphy, Debbie Kelly, Zhi Sheng\*. (2014) 105th Annual Meeting of the American Association for Cancer Research; San Diego, CA.
40. Sujuan Guo, Yanping Liang, Susan F Murphy, Angela Huang, Haihong Shen, Deborah F Kelly, Pablo Sobrado, and Zhi Sheng\*. (2014) Keystone symposia Autophagy: Fundamentals to Disease (E2), Austin, Texas
41. Zhi Sheng\*, Sujuan Guo, Susan Murphy, Hanne Varmark, Amy Virbasius, and Michael Green. (2013) American Association of Cancer Research 104th Annual Meeting 2013; Washington, DC
42. Weatherbee J, Sheng Z, Moser P, and Ross A. (2012) 24th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics. European Org Res & Treatment Canc (EORTC), Dublin, IRELAND.
43. Sheng Z and Green MR. (2010). Annual meeting of American Society for Cell Biology, San Francisco, CA.

Manuscripts in preparation:

1. Pridham K, Guo S, Varghese RT, and Sheng Z.\* A long noncoding RNA regulates autophagy in cancer.
2. Guo S, Pridham K, Murphy SF, and Sheng Z.\* KRAS regulates autophagy and imatinib sensitivity.
3. Guo S, Pridham K, and Sheng Z.\* Polo-like kinase 1 regulates autophagy maturation and imatinib sensitivity.
4. Pridham K, Guo S, and Sheng Z.\* Connexin 43 selectively activates PIK3CB/AKT1 signaling in glioblastoma.
5. Pridham K, Varghese R, and Sheng Z.\* The divergent role of PI3K catalytic subunits in glioblastoma.
6. Sheng K, Pridham K, Lamouille S, and Sheng Z.\* Importazol exhibits cytotoxicity to glioblastoma cells.

**Invited Talks**

2011, In house seminar series, Department of Cancer Biology, University of Massachusetts Medical School. Worcester, MA, USA. Title: Identification of a novel survival pathway in glioblastoma.

2013, Research in progress seminar, Department of Biological Sciences and Pathobiology, Virginia Tech. Blacksburg, VA, USA. Title: Understanding And Targeting Autophagy In Cancer.

2013, Virginia Cancer Registry Seminar Series. Roanoke, VA, USA. Title: Finding a cure for brain cancer.

2014, Research in progress seminar, Department of Biological Sciences and Pathobiology, Virginia Tech. Blacksburg, VA, USA. Targeting Glioblastoma: New Therapeutics and Diagnostics.

2016, Plenary talk at the World Congress on Cancer Research & Therapy meeting. Miami, FL, USA. Title: Identification of new biomarkers that predict the risk of glioblastoma recurrence.

2017, Invited talk at the 2nd International Cancer Study and Therapy Conference. Baltimore, MD, USA. Title: Developing precision therapies for glioblastoma by targeting glioblastoma stem cells.

2017, Molecular and Cell Biology seminar series, State University of New York Downstate Medical Center. Title: Divergent roles of PI3K isoforms in glioblastoma.

2017, Invited seminar, College of Medicine, Shezen University (Shenzhen China). Title: Delineating cancer cell survival using RNAi screens.

**Courses Taught**

1. TBMH graduate program, Course Title: TBMH 5024 (8 credits) Fundamentals of Cancer, Lecture taught: LnRNA, Autophagy, and Cancer, 02/08/2017, Credit hours: 2 hours lecture.
2. TBMH graduate program, Course Title: TBMH 5024 (8 credits) Fundamentals of Cancer, Lecture taught: Cancer Molecular Genetics and Epigenetics, 02/06/2017, Credit hours: 2 hours lecture
3. TBMH graduate program, Course Title: TBMH 5024 (8 credits) Genetics and Precision Medicine, Lecture taught: Cancer Stem Cells, 02/10/2016, Credit hours: 2 hours lecture.
4. TBMH graduate program, Course Title: TBMH 5024 (8 credits) Genetics and Precision Medicine, Lecture taught: LnRNA, Autophagy, and Cancer, 01/28/2016, Credit hours: 2 hours lecture.
5. TBMH graduate program, Course Title: TBMH 5024 (8 credits) Genetics and Precision Medicine, Lecture taught: Cancer Molecular Genetics and Epigenetics, 01/27/2016, Credit hours: 2 hours lecture
6. TBMH graduate program, Course Title: TBMH 5024 (8 credits) Fundamentals of Cancer, Lecture taught: Molecular genetics of cancer, 01/27/2015 – 01/28/2015, Credit hours: 4 hours lecture.
7. TBMH graduate program, Course Title: TBMH 5004 (8 credits) Translational, Biology, Medicine, and Health, Lecture taught: Brain Tumor section, 10/27/2014 – 10/30/2014, Credit hours: 8 hours lecture. Role: Section leader/Lecturer.
8. 2012-2017, 30 min Research live lecture for ~40 medical students at Virginia Tech Carilion School of Medicine VTCSOM every year.
9. 2013-2017, Research Domain Evaluation, VTCSOM medical students research project evaluation.
10. 2013-2017, Methods in Logic, VTCSOM/ Translational, Biology, Medicine, and Health (TBMH) graduate student literature discussion.
11. Virginia Tech Carilion Research Insttitue Neuro-SURF undergraduate summer research program lecture, 2017

**Professional service:**

1. Virginia Tech Carilion Research Institute (VTCRI) cancer faculty search committee, 2013
2. VTCRI immunology and infectious disease faculty search committee, 2014
3. VTCRI glia biology faculty search committee, 2015-2016
4. Virginia Tech Carilion School of Medicine (VTCSOM) teaching faculty search committee, 2016
5. VTCRI nomination committee for frontiers in biomedical science seminar series, 2013
6. Virginia-Maryland College of Veterinary Medicine (VMCVM) department chair periodic review committee, 2015
7. TBMH graduate program course development committee, 2013

**Sponsored research and other grant awards**

Current:

1. Virginia Tech Carilion Research Institute Startup Fund, PI: Zhi Sheng

Duration: 02/01/2012 – 06/30/2019; Effort: 6.0 calendar

Title: Delineating cancer cell survival

Role: PI

1. NIH-NCI-RO1, PI: Kelly

Duration: 07/09/2015 – 06/30/2020; Effort: 1.80 calendar

Title: Tunable Microchip Sorting of BRCA1 Nuclear Assemblies

Role: Co-I

1. NIH/NCI, SBIR, PI: Samy Lamouille

Duration: 07/01/2015 – 04/30/2018; Effort: 0.24 calendar

Title: Novel Therapeutic Approach in Treatment of Glioblastoma Using Sustained Delivery of Connexin43 Carboxy-Terminal Peptide Encapsulated in Biodegradable Nanoparticles in Combination with Temozolomide

Role: Co-I

1. NIH/NCI, STTR, PI: Robert Gourdie

Duration: 07/01/2017 – 08/31/2018; Effort: 0.36 calendar

Therapeutic disruption of Connexin43- mediated microtubule regulation to target glioblastoma cancer stem cells

Role: Co-I

1. NIH/NCI -R21, PI: Scott Verbridge

Duration: 02/01/2015 – 01/31/2018; Effort: 0.02 calendar

Targeted Electric Field Therapy of Malignant Infiltrative Glioma

Role: Co-I

1. NIH/OD, PI: Mike Friedlander

Duration: 09/20/2013 – 08/31/2018; Effort: 0.12 calendar

Title: Mentorship and Development Program for Biomedical Trainees

Role: Key Personnel

Completed:

1. St Baldrick Medical Student Fellowship to the Sheng Laboratory, PI: Zhi Sheng

Duration: 07/01/2017-08/31/2017

Role: PI

1. Commonwealth Research Commercialization Funds

MPI: Robert Gourdie and Zhi Sheng

Duration: 07/01/2014 – 12/31/2016

1. Commonwealth Health Research Board

PI: Deborah Kelly; Co-I: Zhi Sheng

Duration: 07/01/2014 – 06/30/2016

1. Pardee Foundation Research Grant

PI: Zhi Sheng

Duration: 02/01/2015 – 01/31/2016

1. St Baldrick Medical Student Fellowship to the Sheng Laboratory

PI: Zhi Sheng

Duration: 07/01/2016-08/31/2016

1. Carolyn L. Kuckein Student Research Fellowship (Alpha Omega Alpha Honor Medical Society) to the Sheng Laboratory

PI: Zhi Sheng

Duration: 07/01/2016-08/31/2016

1. St Baldrick Medical Student Fellowship to the Sheng Laboratory, $5,000

PI: Zhi Sheng

Duration: 07/01/2015-08/31/2015

1. American Academy of Neurology Summer Medical Student Fellowship awarded to the Sheng Laboratory

PI: Zhi Sheng

Duration: 07/01/2015-08/31/2015

1. American Brain Tumor Foundation Summer Medical Student Fellowship awarded to the Sheng Laboratory

PI: Zhi Sheng

Duration: 07/01/2013-08/31/2013

Pending:

1. NIH-NINDS-RO1, PI: Zhi Sheng

Duration: 07/01/2018 – 06/30/2023; Effort: 6.0 calendar

Title: The role of connexin 43 carboxyl terminus in glioblastoma disease progression

Role: PI

1. NIH-NCI-RO1, PI: Zhi Sheng

Duration: 04/01/2018 – 03/31/2023; Effort: 6.00 calendar

Title: Autophagy-regulating long intergenic noncoding RNA and drug sensitivity

Role: PI

1. NIH-NINDS-RO1, PI: Zhi Sheng

Duration: 04/01/2018 – 03/31/2023; Effort: 6.00 calendar

Title: Molecular interpretation of a PI3K catalytic subunit in glioblastoma

Role: PI

1. NIH-NCI –R21, PI: Zhi Sheng

Duration: 04/01/2018 – 03/31/2020; Effort: 3.00 calendar

Title: Selectively targeting a PI3K subunit to overcome temozolomide resistance and treat recurrent glioblastoma

Role: PI

Status: scored 27 with 9 percentile last round; resubmitted and pending for review

1. NIH-NCI-R01, PI: Kelly

Duration: 04/01/2018 – 03/31/2023; Effort: 1.20 calendar

Title: Hot Spot Analysis of the Breast Cancer Susceptibility Protein

Role: Co-I

1. NIH-NCI-R01, PI: Kelly

Duration: 07/09/2015 – 06/30/2020 1.20 calendar

Title: Multi-scale imaging and detection of oxidative damage to breast cancer proteins

Role: Co-I

1. DOD-BRCP, PI: Kelly

Duration: 10/01/2018 – 09/30/2021; Effort: 0.96 calendar

Title: Hot spot determinants in BRCA1-related cancers

Role: Co-I

1. NIH-NINDS-R25, PI: Fox

Duration: 01/01/2018 – 12/31/2022; Effort: 0.06 calendar

Title: Virginia Tech Carilion Research Institute Translational Neurobiology Summer Undergraduate Research Fellowship (VTCRI neuroSURF)

Role: Program Faculty

**Patent Applications and Disclosures**

Patent applications:

1. 06/16/2014, an application for International Patent Application Serial No. PCT/US2014/042528 has been filed. Invention title: Methods for Therapeutic Targeting Cancer Stem cells. Inventors: Zhi Sheng and Robert Gourdie.
2. 03/13/2015, an application for United States Letters Patent Serial No. 62/132,588 has been filed. Invention title: A Rapid and High Content Assay that Measures Cyto-ID-Stained Autophagic Compartments and Estimates Autophagy Flux with Potential Clinical Applications. Inventors: Zhi Sheng.
3. 04/08/2015, an application for United States Letters Patent Serial No. 62/144,387 has been filed. Invention title: Methods for Personalized Medicine: GBM Diagnosis and Treatment. Inventors: Zhi Sheng, Robert Gourdie, Samy Lamouille, Robin Varghese.

Disclosures:

VTIP 15-083, The application of NOTCH1 as a Biomarker for Glioblastoma Stem Cells. Inventors: Zhi Sheng and Deborah Kelly.

**Outreach**

2016 Judge, Regional Science Fair, Poster presentations/10 students

2016 Judge, Roanoke Valley Governor School Science Project Forum, Poster presentations/8 students

2012 Virginia Cancer Registration Association Conference, ~50 cancer survivors