

CURRICULUM VITAE

Sanchita Bhatnagar, Ph.D.

I. PERSONAL DATA

6044 Pinn Hall
1340 Jefferson Park Ave
Charlottesville, VA
Voice: 574-855-0259
Email: sb5fk@virginia.edu

University of Virginia School of Medicine
Biochemistry and Molecular Genetics
Charlottesville, VA 22908

II. EDUCATION

2003-2007: Ph.D., Department of Biological Sciences, University of Notre Dame, IN
2000-2002: M.Sc. Biotechnology, Panjab University, India
1996-1999: B.Sc. Biochemistry, University of Delhi, India

III. ACADEMIC APPOINTMENTS

2015-Present: *Assistant Professor*, Biochemistry and Molecular Genetics, University of Virginia School of Medicine, Charlottesville, VA
2016-Present: *Assistant Professor*, Neuroscience, University of Virginia School of Medicine, Charlottesville, VA
2015-Present: *Faculty*, Neuroscience Graduate Program, University of Virginia, VA
2015-Present: *Member*, University of Virginia Cancer Center, VA
2013-2015: *Instructor*, Department of Molecular, Cell and Cancer Biology, Howard Hughes Medical Institute and University of Massachusetts Medical School, Worcester, MA

IV. RESEARCH EXPERIENCE

2008-2013: *Postdoctoral Fellow*, Program in Gene Function and Expression, Howard Hughes Medical Institute, University of Massachusetts Medical School, Worcester, MA.
2007-2008: *James Hudson Brown-Alexander Brown Coxe Postdoctoral Fellow*, Department of Immunobiology, Yale University School of Medicine, New Haven, CT.
2003-2007: *Marilyn Jane Navari Graduate Student*, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN.

V. HONORS AND AWARDS

2020: METAvivor Translational Research Award
2019: Breast Cancer Research Breakthrough Award by US Department of Defense (DOD)
2017: Hartwell Individual Biomedical Research Award:
2017: Breast Cancer Research Breakthrough Award by US Department of Defense (DOD)
2014: Ramalingaswami Re-entry Fellowship, Ministry of Science and Technology, Government of India- *declined*

2008: James Hudson Brown-Alexander Brown Coxe Post-Doctoral Fellowship in Medical Sciences, Yale School of Medicine

2006: Marilyn Jane Navari Fellowship, University of Notre Dame, IN

2001: Graduate Aptitude Test in Engineering Fellowship by Indian Institute of Technology (IIT), Delhi, India

VI. PROFESSIONAL AFFILIATIONS

2015-Present: Member, American Association for Cancer Research

VII. TEACHING ACTIVITIES

A. Classroom, Seminar, or Teaching Laboratory

1. 2021(*Virtual*): CCIB2019-Genome Architecture and Dynamics, Graduate Program, University of Virginia School of Medicine. *Number of students-9; Hours-5.5 hrs.*
2. 2021(*Virtual*): MICR8044-Cancer Signaling and Therapeutics, Graduate Program, University of Virginia School of Medicine. *Number of students-10; Hours-4 hrs.*
3. 2021(*Virtual*): MICR8040-Fundamentals of Cancer Biology, Graduate Program, University of Virginia School of Medicine. *Number of students-10; Hours-4 hrs.*
4. 2021(*Virtual*): BIOC8151-*Course Co-Director*, Biochemistry Seminar Series, Graduate Program, University of Virginia School of Medicine. *Number of students-30; Hours-1 hr./week*
5. 2020: CCIB2019-Genome Architecture and Dynamics, Graduate Program, University of Virginia School of Medicine. *Number of students-9; Hours-5.5 hrs.*
6. 2020: MICR8044-Cancer Signaling and Therapeutics, Graduate Program, University of Virginia School of Medicine. *Number of students-10; Hours-4 hrs.*
7. 2020: MICR8040-Fundamentals of Cancer Biology, Graduate Program, University of Virginia School of Medicine. *Number of students-10; Hours-4 hrs.*
8. 2020: BIOC8151-*Course Co-Director*, Biochemistry Seminar Series, Graduate Program, University of Virginia School of Medicine. *Number of students-30; Hours-1 hr./week*
9. 2020: BIM6000-BIMS Graduate Course Final Oral Exam, University of Virginia School of Medicine. *Number of students-7; Hours-4 hrs.*
10. 2019: CCIB2019-Genome Architecture and Dynamics, Graduate Program, University of Virginia School of Medicine. *Number of students-9 Hours; 5.5 hrs.*
11. 2019: BIOC8151-*Course Co-Director*, Biochemistry Seminar Series, Graduate Program, University of Virginia School of Medicine. *Number of students-30; Hours-1 hr./week*

- 12.2019: MICR8044-Cancer Signaling and Therapeutics, Graduate Program, University of Virginia School of Medicine. *Number of students-13; Hours-4 hrs.*
- 13.2019: BIM6000-BIMS Graduate Course, University of Virginia School of Medicine. *Number of students-30; Hours-1 hr./week*
- 14.2019: MICR8040-Fundamentals of Cancer Biology, Graduate Program, University of Virginia School of Medicine. *Number of students-12; Hours-4 hrs.*
- 15.2018: MICR8040-Fundamentals of Cancer Biology, Graduate Program, University of Virginia School of Medicine. *Number of students-10; Hours-4 hrs.*
- 16.2018: CCIB2019-Genome Architecture and Dynamics, Graduate Program, University of Virginia School of Medicine. *Number of students-9; Hours-5.5 hrs.*
- 17.2018: BIOC8014-Chromatin Biology, Graduate Program, University of Virginia School of Medicine. *Number of students-12; Hours-4 hrs.*
- 18.2018: BIOC8151-Course Co-Director, Biochemistry Seminar Series, Graduate Program, University of Virginia School of Medicine. *Number of students-30; Hours-1 hr./week*
- 19.2017: CCIB2019-Genome Architecture and Dynamics, Graduate Program, University of Virginia School of Medicine. *Number of students-11; Hours-5.5 hrs.*
- 20.2017: MICR8040-Fundamentals of Cancer Biology, Graduate Program, University of Virginia School of Medicine. *Number of students-9; Hours-5.5 hrs.*
- 21.2017: BIOC8014-Chromatin Biology, Graduate Program, University of Virginia School of Medicine. *Number of students-12; Hours-4 hrs.*

B. Clinical Teaching

1. 2020: Cells to Society: An Introduction- Medical Student Program, University of Virginia School of Medicine. *Number of students-8; Hours-4 hrs.*
2. 2019: CBC44-DNA damage and Repair, Medical Student Program, University of Virginia School of Medicine. *Number of students~150; Hours-2 hrs.*
3. 2019: DNA damage and Repair, Medical Student Program, University of Virginia School of Medicine. *Number of students~150; Hours-2 hrs.*
4. 2019: Alcohol Metabolism, Medical Student Program, University of Virginia School of Medicine. *Number of students-9; Hours-3 hrs.*
5. 2019: Medical Student Training Program Journal Club, Medical Student Program, University of Virginia School of Medicine. *Number of students-12; Hours-2 hrs.*
6. 2019: Alcohol Metabolism, Medical Student Program, University of Virginia School of Medicine. *Number of students-9; Hours-3 hrs.*

7. 2018: Medical Student Training Program Journal Club, Medical Student Program, University of Virginia School of Medicine. *Number of students-12; Hours-2 hrs.*
8. 2018: CBC44-DNA damage and Repair, Medical Student Program, University of Virginia School of Medicine. *Number of students~150; Hours-2 hrs.*
9. 2018: Alcohol Metabolism, Medical Student Program, University of Virginia School of Medicine. *Number of students-9; Hours-3 hrs.*
10. 2017: CBC44-DNA damage and Repair, Medical Student Program, University of Virginia School of Medicine. *Number of students~150; Hours-2 hrs.*
11. 2017: Alcohol Metabolism, Medical Student Program, University of Virginia School of Medicine. *Number of students-9; Hours-3 hrs.*

VIII. PAPERS PUBLISHED OR IN PRESS

A. Peer Reviewed

1. Piotr Przanowski, Song Lou, Tanmoy Mondal, Rachisan Djiake, Caroline Conlan, Guru Shivange, Kun Xing, Benjamin Morris, Jacqueline Lehmann-Che, Marty Mayo, Jogender Tushir-Singh and Bhatnagar S. Oncogenic TRIM37 links chemoresistance and metastatic fate in triple negative breast cancer. Oncogenic TRIM37 links chemoresistance and metastatic fate in triple negative breast cancer. *Cancer Research*. 2020 Aug27: *canres.1459.2020*. doi: 10.1158/0008-5472.CAN-20-1459. PMID: 32855208.
2. Hyeong-Min Lee, M. Bram Kuijer, Ellen P. Clark, Megumi Aita, Nerea Ruiz-Blanes, Lorena Galliano, Agnieszka Kokot, Noah Sciaky, Jeremy M. Simon, Bhatnagar S, Bryan L. Roth, Benjamin D. Philpot, Andrea Cerase. A small-molecule screen reveals a role for the JAK-STAT pathway in *MeCP2* reactivation and X-chromosome inactivation maintenance. *Journal of Neurodevelopmental Disorder*. 2020 Nov 10; 12(1). PMID: 33172406
3. Przanowski P, Wasko U, Zheng Z, Yu J, Zhu LJ, McConnell MJ, Tushir-Singh J, Green MR and Bhatnagar S. Pharmacological reactivation of inactive X-linked *Mecp2* in cerebral cortical neurons of living mice. *Proc Natl Acad Sci U S A*. 2018 Jul 16. pii: 201803792. doi: 10.1073/pnas.1803792115. PMCID: PMC30012595.
4. Shivange G, Carol K, Przanowski P, Perry J, Haggert R, Jones J, Koska C, Stelow EB, LumLG, Mayo M, Petrova Y, Landen CN, Ravichandaran KS, Bhatnagar S and Singh JT. A Single Agent Dual Specificity Targeting of FOLR1 and DR5 as an Effective Strategy for Ovarian Cancer. *Cancer Cell*. 2018 PMCID: PMC30107179.
5. Przanowski P, Zheng Z, Wasko U, and Bhatnagar S. A Non-Random Mouse Model for Pharmacological Reactivation of *Mecp2* on the Inactive X Chromosome. *Journal of Visualized Experiments*, 2019, May 22;(147). doi: 10.3791/59449. PMID:31180354
6. miR-206 family is important for mitochondrial and muscle function, but not essential for

myogenesis in vitro. Przanowska RK, Sobierajska E, Su Z, Jensen K, Przanowski P, Nagdas S, Kashatus JA, Kashatus DF, Bhatnagar S, Lukens JR, Dutta A. *FASEB J*. 2020 Jun;34(6):7687-7702. doi: 10.1096/fj.201902855RR. Epub 2020 Apr 11. PMID: 32277852

7. Venkatesan AM, Vyas R, Gramann AK, Dresser K, Gujja S, Bhatnagar S, Chhangawala S, Gomes CBF, Xi HS, Lian CG, Houvras Y, Edwards YJK, Deng A, Green M, Ceol CJ. Ligand-activated BMP signaling inhibits cell differentiation and death to promote melanoma. 2017; *Journal of Clinical Investigation*. 128(1) 294-308.

8. Bhatnagar S, Claude G, Chamberlain L, Ou J, Zhu X, Tushir JS, Virbasius CM, Lin L, Zhu LJ, Wajapeyee N and Green MR. TRIM37 is a new histone H2A ubiquitin ligase and breast cancer oncoprotein. *Nature* 2014 Dec 4;516(7529):116-20. PMID: PMC4269325

9. Bhatnagar S, Zhu X, Ou J, Lin L, Chamberlain L, Zhu LJ, Wajapeyee N, Green MR. Genetic and pharmacological reactivation of the mammalian inactive X chromosome. *Proc Natl Acad Sci U S A*. 2014 Sep 2;111(35):12591-8. PMID: PMC4156765.

10. Schorey JS and Bhatnagar S. Exosome function: from tumor immunology to pathogen biology. *Traffic* 2008 Jun;9(6):871-81. PMID: PMC3636814

11. Bhatnagar S and Schorey JS. Exosomes released from infected macrophages contain *Mycobacterium avium* glycopeptidolipids and are proinflammatory. *J Biol Chem*. 2007 Aug 31;282(35):25779-89. PMID: PMC3636815

12. Bhatnagar S, Shinagawa K, Castellino FJ and Schorey JS. Exosomes released from macrophages infected with intracellular pathogens stimulate a proinflammatory response in vitro and in vivo. *Blood* 2007 Nov 1;110(9):3234-44. PMID: PMC2200902

13. Bhatnagar S and Schorey JS. Elevated mitogen-activated protein kinase signaling and increased macrophage activation in cells infected with a glycopeptidolipid-deficient *Mycobacterium avium*. *Cellular Microbiology* 2006 Jan; 8(1): 85-9

14. Krzywinska E, Bhatnagar S, Sweet L, Chatterjee D and Schorey JS. *Mycobacterium avium* 104 deleted of the methyltransferase D gene by allelic replacement lacks serotype-specific glycopeptidolipids and shows attenuated virulence in mice. *Molecular Microbiology* 2005; 56(5): 1262-73.

B. Books and/or Chapters

1. Waśko U, Zheng Z and Bhatnagar S. Visualization of *Xist* long non-coding RNA with a Fluorescent CRISPR/Cas9 system. *Methods in Molecular Biology*. 2019; 1870:41-50. doi: 10.1007/978-1-4939-8808-2_3. PMID: 30539545.

2. Tushir-Singh J and Bhatnagar S. In vitro assay to study histone ubiquitination during transcriptional regulation. *Methods in Molecular Biology*. Volume 1507:235-244.2017.

C. Short Communications

1. Targeting Her2 beyond breast cancer. Bhatnagar S and Tushir-Singh J. *Molecular and Cellular Oncology*, 2019, Mar 20;6(3):1571984. PMID:31131305.