

Anukul T. Shenoy, Ph.D.

Post-Doctoral Associate,
Pulmonary Center- Mizgerd Lab,
Boston University School of Medicine
Contact: +1-512-517-1564
Email ID: shenoya@bu.edu
Personal website: <https://www.anukulshenoy2510.com/>

Birth Date: 10-25-1991
Gender: Male
Nationality: India
Visa status: H-1B

ADDRESS: 201, Mukta Apartments, Jairam Krishna CHS, Deshmukhwadi, Mithagar Road,
Mulund East, Mumbai 400081, Maharashtra, India

CURRENT ADDRESS: 21 Portina Road, Suite #2, Brighton, MA 02135

WORK ADDRESS: 72 East Concord Street, R205, Boston, MA 02118

EDUCATION

Ph.D. (Microbiology)

The University of Alabama at Birmingham, Birmingham, AL, USA
Thesis Project: Host-pathogen interactions during pneumococcal invasion
of the myocardium during Invasive pneumococcal disease. 2017
Advisor: Carlos J. Orihuela, Ph.D.

M.S. (Biotechnology)

Ramnarain Ruia College, The University of Mumbai, Mumbai, India
Thesis Project: Study of protein tyrosine phosphatase non-receptor type-2
(PTPN22) gene polymorphism in SLE patients from western
Indian population. 2014
Advisor: Vandana Pradhan, Ph.D., National Institute of Immunohematology
(NIIH), Mumbai, India

B.S. (Biotechnology)

Ramnarain Ruia College, The University of Mumbai, Mumbai, India 2012
Thesis Project: Cytotoxic activity of *Catharanthus roseus* plant extracts.
Advisor: Vinaya Mhatre, Ph.D., Ramnarain Ruia College of Science

POSITIONS HELD

Post-Doctoral Associate,

Pulmonary Center, Boston University School of Medicine, Boston, MA USA 2018 - present
Joseph Mizgerd Lab

Graduate Research Assistant,

The University of Alabama at Birmingham, Birmingham, AL, USA. 2015 - 2017
Carlos J. Orihuela, Ph.D. Lab

Graduate Research Assistant,

The University of Texas Health Science Center at San Antonio (UTHSCSA), San
Antonio, TX, USA. Carlos J. Orihuela, Ph.D. Lab) 2014 - 2015

Student Research Trainee,

National Institute of Immunohematology (NIIH), Mumbai, India. (The lab of Vandana
Pradhan, Ph.D.) 2013 - 2014

HONORS AND AWARDS

The American Thoracic Society 2019 Abstract Scholarship 2019
UAB Dept. of Microbiology David E. Wells Symposium Graduate Student Speaker 2017
The UAB Comprehensive Cardiovascular Center Travel Award 2017

The Hiramoto Travel Award, UAB Dept. of Microbiology	2017
The Richard and Mary Finkelstein Student Travel Grant, ASM	2016
Gail H. Cassell Microbiology Scholarship Endowment Award	2015,16,17
Sir Ratan Tata Trust National Merit Scholarship for academic excellence	2012,13,14
The University of Mumbai Late Smt. Gunwantiben K. Mehta Award	2009 - 2014
Ramnarain Ruia College Smt. Yamunabai Hirlekar Award	2013
Ramnarain Ruia College Kridabhushan Award	2011
Ramnarain Ruia College of Science Alumni Association Best Student Award	2010

PROFESSIONAL MEMBERSHIPS

American Association of Immunologists (AAI)	2018 - Present
American Thoracic Society (ATS)	2018 - Present
American Association for the Advancement of Science (AAAS)	2014 - Present
American Heart Association (AHA)	2019 - 2020
American Society of Microbiology (ASM)	2015 - 2018
American Society for Cell Biology (ASCB)	2017 - 2018
The Honor Society of Phi Kappa Phi	2016 - 2018

SCIENTIFIC SERVICE

Scientific Judge for poster presentation- Summer in Biomedical Sciences (SIBS) Undergraduate research program	2017
Graduate Speaker - 'How to Create the Perfect Poster' UAB Undergraduate Research Workshop.	2016-2017
Elected Chair, Gordon Research Seminar- Biology of Acute Respiratory Infections 2022	2022

AD HOC REVIEWER SERVICES

Nature Communications,
Scientific Reports,
PLOS One,
Gene (Elsevier),
Microorganisms,
BMC Pulmonary Medicine,
Infectious Disease Reports,
Biomedicines.

CO-CURRICULAR SERVICE

Guest on BU VitaminPhD Podcast- Understanding Racism in Higher Education (airs in 2021)	2020
Organizer, BU Pulmonary Center Social Justice Forum (BUPC-SJF)	2020 - present
Peer Mentor, BU Pulmonary Center Combined Clinical and Research Conference	2019 - present
Member, Boston University Pulmonary Center Conference Organizing Committee	2019 - present
Charter Vice President, ASM Chapter at UAB	2016 - 2017
Committee Member, Graduate Biomedical Student Outreach (GBSO) program	2016 - 2017
Microbiology Theme Representative to GBSO program	2016 - 2017
International Graduate Student Representative to UAB GBSO program.	2016 - 2017
Organizing Chair of the UAB GBSO International Student's Panel	2017

EXTRA-CURRICULAR SERVICE

Vice-president and Coach, UAB Swim Club	2017
Member, UAB Swim Club	2016 - 2017
Honorary Swimming Coach	2013 - 2014
Water safety Patrol Guard, Greater Mumbai Police Department, Mumbai, India	2007 - 2014

PEER MENTORSHIP EXPERIENCE

As a Postdoctoral Associate, Boston University School of Medicine (BUSM)

Aditya Ramanujan, Undergrad trainee (2019-present)- Recipient of Student Research Award at BU UROP
Neelou Etesami, MD-PhD Graduate Student (2019 - present)
Carolina Lyon De Ana, Graduate Student (2018 - present)
Emad Arafa, Graduate Student (2018 - present)
William Molina Arocho, Undergrad trainee (2018 - present)- Currently in UPenn Immunology PhD Program.
Kim Barker, Graduate Student (2018-20)
Alicia Wooten, Graduate Student (2018-19) - Now Asst. Professor at Gallaudet University for the Deaf.

As a Graduate Student, University of Alabama at Birmingham (UAB)

Jeremiah Bell, Post Bac trainee (2017)
Whitney Hinkle, Post Bac trainee (2016) - Currently in Auburn University College of Veterinary Medicine
Jeffrey Milner II, Post Bac trainee (2015-16) - Currently in UNC School of Medicine.

PUBLICATIONS

REVIEWS

1. **Shenoy AT**, and Orihuela CJ. Anatomical site-specific contributions of pneumococcal virulence determinants. *Pneumonia* 2016, 8:7 DOI: 10.1186/s41479-016-0007-9
2. **Shenoy AT**, and Pradhan V. DNA methylation and silencing of gene expression: role in pathogenesis of systemic lupus erythematosus. *Indian Jnl Biotechnol.* October 2017. Vol 16, pp 512-528

PUBLISHED RESEARCH ARTICLES

1. Gilley RP, González-Juarbe N, **Shenoy AT**, Reyes LF, Dube PH, Restrepo MI, Orihuela CJ. Infiltrated macrophages die of pneumolysin-mediated necroptosis following pneumococcal myocardial invasion. *Infect Immun.* 2016 Apr 22;84(5):1457-69. doi: 10.1128/IAI.00007-16.
2. **Shenoy AT***, Blanchette KA*, Gilley RP, Milner II JD, McClure E, Hinojosa CA, Ferreira DM, King SJ, Gordon SB, Tettelin H, and Orihuela CJ. Neuraminidase A- exposed galactose promotes *Streptococcus pneumoniae* biofilm formation during colonization. *Infect. Immun.* October 2016 vol. 84 no. 10 2922-2932.
3. Reyes LF, Restrepo MI, Hinojosa CA, Soni NJ, **Shenoy AT**, Gilley RP, Gonzalez-Juarbe N, Noda JR, Winter VT, de la Garza MA, Shade RE, Coalson JJ, Giavedoni LD, Anzueto A, and Orihuela CJ. A non-human primate model of severe pneumococcal pneumonia. *PLoS ONE.* November 2016 11(11): e0166092. doi: 10.1371/journal.pone.0166092
4. Ray C, **Shenoy AT**, Orihuela CJ, Gonzalez-Juarbe N. Killing of *Serratia marcescens* biofilms with chloramphenicol. *Ann Clin Microbiol Antimicrob.* 2017 Mar 29;16(1):19. doi: 10.1186/s12941-017-0192-2.
5. González-Juarbe N, Bradley KM, **Shenoy AT**, Gilley RP, Reyes LF, Hinojosa CA, Restrepo MI, Dube PH, Bergman MA, Orihuela CJ. Pore-forming toxin induced necroptosis is independent of death receptor signaling during bacterial pneumonia. *Cell Death Differ.* 2017 May;24(5):917-928. doi: 10.1038/cdd.2017.49.
6. Lizcano A*, Akula Suresh Babu R*, **Shenoy AT**, Saville AM, Kumar N, D'Mello A, Hinojosa CA, Gilley RP, Segovia J, Mitchell TJ, Tettelin H, and Orihuela CJ. Transcriptional organization of *psrP-secY2A2* and the impact of glycosyltransferase deletion on *PsrP* function. *Microbes Infect.* 2017 Apr 10. pii: S1286-4579(17)30043-6.
7. Spencer BL, Saad JS, **Shenoy AT**, Orihuela CJ, Nahm MH. Position of O-acetylation within the capsular repeat unit impacts the biological properties of pneumococcal serotypes 33A and 33F. *Infect Immun.* 2017 Apr 24. pii: IAI.00132-17. doi: 10.1128/IAI.00132-17.
8. Spencer BL, **Shenoy AT**, Orihuela CJ, Nahm MH. The pneumococcal serotype 15C capsule is partially O-acetylated and allows limited evasion of PPV23-elicited anti-serotype 15B antibodies. *Clin Vaccine Immunol.* 2017 Jun 21. pii: CVI.00099-17. doi: 10.1128/CVI.00099-17.

9. **Shenoy AT**, Brissac T, Gilley RP, Kumar N, Gonzalez-Juarbe N, Wang Y, Hinkle WS, Daugherty SC, Shetty AC, Ott S, Tallon LJ, Deshane J, Tettelin H, and Orihuela CJ. *Streptococcus pneumoniae* in the heart subvert the host response through biofilm-mediated resident macrophage killing. PLOS Pathogens. 2017 Aug 25 ;13(8): doi: 10.1371/journal.ppat.1006582
10. Brissac T, **Shenoy AT**, Patterson LA, Orihuela CJ. Cell invasion and pyruvate oxidase derived H₂O₂ are critical for *Streptococcus pneumoniae* mediated cardiomyocyte killing. Infect Immun. 2017 Oct 23. pii: IAI.00569-17. doi: 10.1128/IAI.00569-17.
11. **Shenoy AT***, Beno SM*, Brissac T, Bell JW, Novak L, and Orihuela CJ. Severity and properties of cardiac damage caused by *Streptococcus pneumoniae* are strain dependent. PLOS One. 2018 Sep 14. 13(9): e0204032
12. **Shenoy AT***, Wasserman GA*, Arafa EI, Wooten AK, Smith NMS, Martin IMC, Jones MR, Quinton LJ, and Mizgerd JP. Lung CD4+ resident memory T cells remodel epithelial responses to accelerate neutrophil recruitment during pneumonia. *Mucosal Immunol* 2020 Mar;13(2):334-343. doi: 10.1038/s41385-019-0229-2.
13. Guillon A, Arafa EI, Barker KA, Belkina AC, Martin I, **Shenoy AT**, Wooten AK, Lyon De Ana C, Dai A, Labadorf A, Hernandez Escalante J, Doms H, Blasco H, Traber KE, Jones MR, Quinton LJ, and Mizgerd JP. Pneumonia recovery reprograms the alveolar macrophage pool. *JCI Insight*. 2020. doi.org/10.1172/jci.insight.133042.
14. Wooten AK, **Shenoy AT**, Arafa EI, Akiyama H, Martin IMC, Jones MR, Quinton LJ, Gummuluru S, Bai G, Mizgerd JP. Unique Roles for *Streptococcus pneumoniae* Phosphodiesterase 2 in Cyclic di-AMP Catabolism and Macrophage Responses. *Front Immunol*. 2020 Mar 31;11:554. doi: 10.3389/fimmu.2020.00554.
15. Beno SM, Riegler AN, Gilley RP, Brissac T, Wang Y, Kruckow KL, Jadapalli JK, Wright GM, **Shenoy AT**, Stoner SN, Restrepo MI, Deshane JS, Halade GV, Gonzalez-Juarbe N and Orihuela CJ. Necroptosis inhibition prevents long-term cardiac damage during pneumococcal pneumonia and invasive disease. *J Infect Dis*. 2020 Nov 9;222(11):1882-1893. doi: 10.1093/infdis/jiaa295.

FEATURED JOURNAL COVER PAGES

1. **Shenoy AT**, and Orihuela CJ. False-colored transmission electron micrograph of *Streptococcus pneumoniae* serotype 4 strain, TIGR4. Cover image of *Clinical and Vaccine Immunology*. April 2017, Volume 24, Issue 4.

FOR MORE UP-TO-DATE PUBLICATION RECORD:

<https://pubmed.ncbi.nlm.nih.gov/?term=Anukul+Shenoy&sort=date&size=20>

PRESENTATIONS

INVITED SPEAKER

1. Division of Pulmonary and Critical Care Medicine at Brigham and Women's Hospital. Boston, Massachusetts. January 2021. (*Upcoming*)
2. Research Center for Respiratory Diseases INSERM, University of Tours, France. December 2020.
3. S.P. Mandali's Ramnarain Ruia College Department of Biotechnology- Invited Guest Lecture. Mumbai, India. June 2019.
4. National Institutes of Health- Geroscience Group Tissue Resident Immune Cells Post-Doc Symposium. Bethesda, Maryland. June 2019.
5. Division of Pulmonary and Critical Care Medicine at Brigham and Women's Hospital. Boston, Massachusetts. January 2019.

ORAL PRESENTATIONS (Only first author talks included)

1. The Boston University Evans Department of Medicine Research Day 2020. November 2020.
Second Place - Basic Research Award

2. Boston University Pulmonary Immunology Group Seminar series. July 2019.
3. Boston University Pulmonary Center Work-in-Progress Seminar series. March 2019.
4. The Boston University Evans Department of Medicine Research Day 2018. October 2018.
Second Place - Basic Research Award
5. The UAB Dept. of Microbiology David E. Wells Symposium. December 2017.
Graduate Student Speaker Finalist.
6. The UAB Comprehensive Cardiovascular Center 6th Annual Symposium. September 2017.
Second place.
7. The 13th European Meeting on the Molecular Biology of the Pneumococcus (Europneumo 2017). Karolinska Institute, Stockholm, Sweden. June 2017.
8. American Society for Microbiology 116th General Meeting. Boston, Massachusetts. June 2016.
Recipient of The Richard and Mary Finkelstein Student Travel Grant.
9. The Southeastern Pneumococcal Symposium 2016. Starkville, Mississippi. May 2016.
10. UAB Graduate Research day, Birmingham, Alabama. March 2016.
First Place.
11. UTHSCSA Microbiology and Immunology Spring Retreat. San Antonio, Texas. April 2015.

POSTER PRESENTATIONS (Only first author posters included)

1. American Thoracic Society (ATS) Virtual Conference 2020.
2. The Gordon Research Conference for Biology of Acute Respiratory Infections. Galveston, Texas. February 2020
3. The Boston University Evans Department of Medicine Research Day 2019. October 2019.
Second Place - Basic Research Award
4. American Thoracic Society (ATS) Conference 2019. Dallas, Texas. May 2019.
5. The Gordon Research Conference for Biology of Acute Respiratory Infections. Ventura, California. March 2018
6. 26th UAB Microbiology Gail Cassell Annual Research Retreat. Rogerville, Alabama. November 2017.
First Place – Graduate Student.
7. The UAB Comprehensive Cardiovascular Center 6th Annual Symposium. September 2017.
Second Place.
8. The 13th European Meeting on the Molecular Biology of the Pneumococcus (Europneumo 2017). Karolinska Institute, Stockholm, Sweden. June 2017.
9. American Society for Microbiology 117th General Meeting. New Orleans, Louisiana. June 2017.
10. 25th UAB Annual Microbiology Research Retreat. Banning Mills, Georgia. November 2016.
First Place- New Investigator.
11. American Society for Microbiology 116th General Meeting. Boston, Massachusetts. June 2016.
12. 24th UAB Annual Microbiology Research Retreat. Chattanooga, Tennessee. November 2015.
First Place- New Investigator.
13. The 12th European meeting on the Molecular Biology of the Pneumococcus, EuroPneumo 2015. Oxford, United Kingdom. July 2015.
14. The 7th Annual Terry M. Mikiten Graduate Student Research Forum. San Antonio, Texas. June 2015.
15. American Society for Microbiology 115th General Meeting. New Orleans, Louisiana. May-June 2015.
16. UTHSCSA Microbiology and Immunology Spring Retreat. San Antonio, Texas. April 2015.

COURSES COMPLETED (As Postdoctoral Associate)

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| Lung Innate Immunity | Offered by: American Thoracic Society at ATS 2019, May 2019
Location: Dallas, Texas USA |
| Advanced Course in Immunology | Offered by: American Association of Immunologists, July-August 2019.
Location: Boston, Massachusetts, USA |

CLASSES AUDITED (As Postdoctoral Associate)

- Comprehensive Immunology (Fall 2018, BUSM)
- Lung Biology (Fall 2018, BUSM)
- Stanford Neuro-omics 2020 Virtual Workshop (November 2020)

RESEARCH SUPPORT

PENDING:

1 K99 NHLBI HL157555-01

Role: Principal Investigator

ONGOING:

2 R01 NIAID AI115053-05

“Lung resident antibacterial heterotypic immunity”

Dr. Shenoy’s work on defining mechanism underlying lung epithelial- CD4 T cell crosstalk during heterotypic immunity is supported by this grant awarded to Dr. Joseph Mizgerd and was used to generate preliminary data for this proposal.

Role: Postdoctoral Trainee

5 R35 NHLBI HL135756-04

“Pneumonia biology”

Dr. Shenoy’s work on defining remodeling of lung immune components during *Streptococcus pneumoniae* infections is partially supported by this grant awarded to Dr. Joseph Mizgerd.

Role: Postdoctoral Trainee

COMPLETED:

2 R01 NIAID AI114800-06A1

“Cardiac microlesion formation during invasive pneumococcal disease”

Dr. Shenoy’s work on defining mechanism underlying Cardiac pathogenesis of *Streptococcus pneumoniae* was supported by this grant awarded to Dr. Carlos Orihuela.

Role: PhD Trainee

AHA 16GRNT30230007

“Caspase-associated necroptosis of cardiomyocytes”

Dr. Shenoy’s work on defining mechanism underlying host-pathogen interactions of *Streptococcus pneumoniae* in heart, lungs and nasopharynx was partially supported by this grant awarded to Dr. Carlos Orihuela.

Role: PhD Trainee

LANGUAGE PROFICIENCY: Fluency in English, Hindi, Marathi and Konkani.