

Curriculum Vitae

Name: Dr. Shashi Baruah
Current Position: Professor
Affiliation: Tezpur University
Highest Qualification: PhD
Complete Address: Immunology and Immunogenetics Laboratory, Room No –206,
Department of Molecular Biology and Biotechnology
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Educational Qualifications:

PhD in Parasite Immunology from Post Graduate Institute of Medical Education and Research, Chandigarh, India

M.Sc(Hons). Microbiology from Panjab University, Panjab, India

Professional Experience

- 2013 - present: Professor, Department of Molecular Biology and Biotechnology, Tezpur University, Assam, India
- 2007 – 2013: Associate Professor, Department of Molecular Biology and Biotechnology, Tezpur University, Assam, India
- 2004-2007- Reader, Department of Molecular Biology and Biotechnology, Tezpur University, Assam, India
- 2002 – 2004: Lecturer, Department of Molecular Biology and Biotechnology, Tezpur University, Assam, India
- 2001-2002 : Scientific Officer, Medecins Sans Frontiers(MSF), Assam, India
- 1997- 2002: Part-time Faculty, Department of Biotechnology, Gauhati University, Assam, India

Teaching Experience:

Undergraduate Teaching

Immunology,

Microbiology,
Developmental Biology,
Post Graduate Teaching
Immunology,
Immunotechnology,
Evolutionary Immunogenetics
Doctoral Studies
Evolutionary Immunogenetics

Research Interest

The focus of my research is to understand the molecular basis of heterogeneity and evolution of innate immune responses to understand disease pathogenesis in relation to genetic background of host. We are examining the diversity of receptors in context of migration history of the different ethnic groups as well as activation and regulation of Natural Killer Cells and of Monocytes in infectious (*P.falciparum*) and non- infectious (autoimmunity and cancer) diseases.

Professional Membership and Positions (selected)

- Life member of Indian Immunology Society (IIS)
- Vice President (East) for Indian Immunology Society from 2018-2020
- Vice President (East) for Indian Immunology Society from 2014-2016
- Member of Task Force on Human Resource Development, Department of Biotechnology, Govt. of India; 2014-2017
- Member of Course Advisory Committee, Department of Biotechnology, Govt. of India
- Head, Department of Molecular Biology and Biotechnology, Tezpur University, Assam India from 2011-2014
- Chairperson, Internal Complaint Committee, Tezpur University, 2014-present
- Member of Scientific Review Committee (TMC&H, NECHRI, LGBRIMH, TU etc)
- Member, Course Advisory Committee, Tezpur University

Ongoing Projects

- ✓ Diagnosis and Immunopathogenesis of Dengue Virus Infections; a longitudinal investigation into genotype diversity, diagnosis and immune response to dengue infections in Assam, Northeast India, *funded by Defense Research Development Organization (DRDO) Govt. of India* for Rs. 61,59,727 from 2017-2020

Polymorphism of Toll Like and Nod like receptors and their role in inflammasome activation in Head and Neck Squamous Cell Carcinoma *funded by Indian Council of Medical Research (ICMR), Govt. of India*, for Rs 49,81,130 from 2017-2020

- ✓ Establishment of Institutional Level Biotech Hubs (Advanced Level) *funded by Department of Biotechnology, Govt. of India* from 2011-2020

Completed Projects (since 2010)

Project title: “Systemic Lupus Erythematosus (SLE) - An investigation into diagnostics and disease pathogenesis” for Rs. 206.84 lakhs from 2015-2017

Project title: “Longitudinal analysis of changes in cytokine profile of malarial patients at different stages of treatment and disease resolution: Understanding molecular basis of cure and malarial pathology” for Rs 67.06 lakhs from 2011-2015

Project title: “KIR haplotypic variation and activation of Natural Killer cells in cancer”, for Rs. 27.3 lakhs from 2011-2014

Project title: “Understanding the molecular interaction between NK receptor diversity and activation with diverse malignancy in HNSCC prevalent in the population of Assam” for Rs.49.59 lakhs from 2010-2014

Project title: “Preparation and studies on polymer anchored Transition Metal compounds- Towards development of Bio-relevant complexes and active oxidation catalyst” as Co-Investigator

Scientific Publications in last ten years (2009-2019)

1. Sarmah, N., Baruah, M.N., **Baruah, S.** (2019), Immune modulation in HLA-G expressing Head and Neck Squamous Cell Carcinoma in relation to Human Papilloma Virus positivity: a study from North-East India. *Frontiers in Oncology, Section- Head & Neck Cancer*, doi: 10.3389/fonc.2019.00058 (impact factor- 4.4).
2. Phukan S, Sarma H, Dutta A, Mattaparthi VSK and **Baruah, S** (2019), Allelic diversity of KIR-2DL1 and of HLA-C in context of its evolutionary significance in the population of Assam, North-East India, *Human Immunology* (under review)

3. Mahanta,A, Ganguly, P,Barah P, Sarkar, R,Sarmah ,N,Phukan ,S, Bora ,M, **Baruah, S** (2018) Integrative Approaches to Understand the Mastery in Manipulation of Host Cytokine Networks by Protozoan Parasites with Emphasis on Plasmodium and Leishmania Species Front. Immunology. 9:2969 (impact factor- 5.511)
4. Dutta,A, Banerjee,A, Saikia,N, Phookan,J, Narayan,M, **Baruah, S** (2015). Negative regulation of natural killer cell in tumor tissue and peripheral blood of oral squamous cell carcinoma, Cytokine, 76(2), 123-130 (impact factor – 3.4)
5. Dutta A, Saikia,N, Phookan,J, Baruah,M.N and **Shashi Baruah** (2014) Association of Killer cell immunoglobulin-like receptor gene 2DL1 and its HLA-C2 ligand with family history of cancer in oral squamous cell Carcinoma, Immunogenetics 66(7-8), 439-448 (impact factor – 2.0)
6. Dutta, A., Lourembam, S.D., Pradhan, S., **Baruah, S.**, (2013) KIR diversity in three ethnic populations of Assam state, Northeast India,Tissue Antigens, Volume 82, Issue 1, pages 48–5 (impact factor – 2.13)
7. Mahanta,A, Baruah,S. (2015)Lower expression of GATA3 and T-bet correlates with downregulated IL-10 in severe falciparum malaria. Clinical and Translational Immunology,4(11), e49
8. Dutta,A, Banerjee,A, Saikia,N, Phookan,J, Narayan,M, **Baruah,S** (2015). Negative regulation of natural killer cell in tumor tissue and peripheral blood of oral squamous cell carcinoma, Cytokine, 76(2), 123-130 (impact factor- 3.4)
9. MahantaA, Kar,S. K.,Kakati,S; **Baruah,S** (2015) Heightened inflammation in severe malaria is associated with decreased IL-10 expression levels and neutrophils. Innate Immunity 21(5),546-552 (innate immunity – 2.46)
10. Mahanta A, Kakati, S, **Baruah,S**, (2014) The association of IL8-251 T/A polymorphism with complicated malaria in Karbi Anglong district of Assam, Cytokine,65:210-216 (Impact factor -2.51).
11. Dutta A, Saikia,N, Phookan,J, Baruah,M.N and **Shashi Baruah** (2014) Association of Killer cell immunoglobulin-like receptor gene 2DL1 and its HLA-C2 ligand with family history of cancer in oral squamous cell Carcinoma, Immunogenetics 66(7-8), 439-448 (Impact factor -2.9)
12. Dutta, A., Lourembam, S.D., Pradhan, S., **Baruah, S.**, (2013) KIR diversity in three ethnic populations of Assam state, Northeast India,Tissue Antigens, Volume 82, Issue 1, pages 48–52, (Impact factor – 2.58).
13. Lourembam, S.D., Sawian,C.E., **Baruah, S.**,(2013) Dysregulation of cytokines expression in complicated falciparum malaria with increased TGF-beta and IFN-gamma and decreased IL-2 and IL-12Cytokine,64(2):503-8(Impact factor -3.171).

14. Sawian, C.E., Lourembam, S.D., Banerjee, A., **Baruah, S.**, (2013). Polymorphisms and expression of TLR4 and 9 with malaria in two ethnic groups of Assam, Northeast India, *Innate Immunity*,19 (2),174-183, (Impact factor – 4.0)
15. Khanppnavar,B;Baruah,S; Ray, S.K.(2013) TALE:an emerging tool for genome editing and genetic engineering. *Current Science* 104(5), 576;
16. Lourembam, S.D., **Baruah, S.**, (2012) Antibody response to allelic variants of 19 kDa fragment of MSP-1: Recognition of a variant and protection associated with ethnicity in Assam, India, *Vaccine*, **30** (4), 767–773. (Impact factor – 3.7)
17. Lourembam, S.D., Sawian, C.E., **Baruah, S.**, (2011) Differential association of KIR gene loci to risk of malaria in ethnic groups of Assam, Northeast India, *Infection Genetics and Evaluation*,**11** (8),1921–1928. (Impact factor – 3.128)
18. Kumar, V., Sawian, C.E., Mohanta, D., **Baruah, S.**, Islam, S., (2011) Physical and Biophysical characteristics of nanoscale Tungsten Oxide particles and their interaction with Human Genomic DNA, *Journal of Nanoscience and Nanotechnology*,**11** (xx). (Impact factor – 1.56)
19. Konwarh, R., Karak, N., Sawian, C., **Baruah, S.**, Mandal, M.,(2011) Effect of sonication and aging on the templating attribute of starch for green silver nanoparticles and their interactions at bio-interface, *Carbohydrate Polymers*,**83**,1245-1252. (Impact factor – 3.628)
20. **Baruah, S.**, Lourembam, S.D., Sawian, C.E., Baruah, I., Goswami, D.,(2009) Temporal and Spatial variation in MSP1 clonal composition of Plasmodium falciparum in districts of Assam, Northeast India, *Infection, Genetics and Evolution*,**9**,853-859. (Impact factor – 3.128)

Research Supervision

Doctoral Studies- Completed and Ongoing: 13

M.Sc Dissertation: 40



Dr Shashi Baruah,

Professor,