

Dr. Amit Ranjan

Designation: Assistant Professor

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Educational Qualifications:

Ph.D.: ACTREC, Tata Memorial Centre, Homi Bhabha National Institute (HBNI), Mumbai;
Thesis title: Role of β 1,6 branched N-oligosaccharides in regulating key cellular processes
Involved in cancer cell invasion.

Master of Science: (Molecular Biology and Biotechnology), Tezpur University, India.

Bachelor of Science: (Zoology), St. Columba's College, Vinoba Bhave University, India.

Professional Experience:

Assistant professor: Dr. D. Y. Patil Biotechnology and Bioinformatics Institute, Tathawade, Pune (August 2014 till Present)

Senior Research Fellow: ACTREC, Mumbai January 2012 to January 2014

Field of Specialization: Cancer metastasis, Glycobiology, Recombinant DNA Technology
Specific area of research interest

1. Role of tetrasapnin (CD151 and CD63) in cancer metastasis
2. Role of O-GlcNAcylation and N- linked glycosylation in process critical for cancer metastasis.
3. *In-silico* approaches for studying and solving biologically relevant questions.

Honors & other scientific recognitions:

1. Qualified Biotechnology Entrance Test (DBT-BET), in 2005, conducted by Department of Biotechnology, Government of India (AIR-23).
2. Qualified National Eligibility Test for Lectureship (NET-LS) in December 2005, jointly conducted by Council for Scientific and Industrial Research (CSIR) and University Grants Commission (UGC), Government of India.
3. Qualified GATE conducted by IIT, Kharagpur, India, 2006 (AIR-161).
4. Qualified All India M.Sc. DBT entrance Exam. 2004, conducted by Jawaharlal Nehru University, India.
5. Received Travel award from Society of Glycobiology for attending “the joint meeting of the Society for Glycobiology and American Society for Matrix Biology (ASMB)”, 2012.

6. Received travel fellowship from **PATEL KANTABEN KANTILAL** for attending “The Joint Meeting of the Society for Glycobiology (SFG) and American Society for Matrix Biology (ASMB), 2012.
7. Member of Society of Glycobiology (2012 -2014).
8. Recognition as Research guide for Ph.D. program from Dr. D.Y. Patil University in 2020
9. IIC, MHRD “Innovation ambassador” 2020-2021

Workshops/Conferences Attended:

1. Organizing coordinator of national symposium on “**Recent trends in Modern Biology and Biotechnology (RAMBB) 2019**”, held at DR. D.Y Patil Biotechnology and Bioinformatics institute (DYPBBI) on 14-16 March 2019.
2. Attended Training Programme on “**ISO1400:2015 energy Audit and Green education**”, organized by Dr. D.Y. Patil Vidyapeeth, Pune on 28th February 2019.
3. Presented poster entitled “**In-silico analysis and generation of transmembrane polar residue mutants of CD151**” at Indo-Australian Symposium on epithelial – mesenchymal transition held at NCCS, Pune, India, on 24th October 2018.
4. Participated in “**TOT workshop on curriculum mapping**” conducted by Dr. D.Y Patil Vidyapeeth’s University Centre for Professional Education & Faculty Development (UCPE &FD), on 22nd October 2018.
5. Organizing member of “**Industry Academia meet IAC 2018**” organized by DR. D.Y Patil Biotechnology and Bioinformatics institute (DYPBBI) on 23-24 February 2018.
6. Coordinate workshop entitled “**Basic techniques in molecular Biology**” held at DYPBBI, January 18-19, 2018
7. Organizing member of national symposium on “**Recent trends in Modern Biology and Biotechnology 2017**”, held at DYPBBI on 16-17 March 2017.
8. Participated in International symposium on “**Conceptual advances in cellular homeostasis regulated by Proteases and Chaperons the Present, the Future and Impact on Human Diseases**”, held at ACTREC, Mumbai, India on 3-6 December 2013.
9. Presented Poster entitled “**Glycosylation of laminin receptor integrin ($\alpha3\beta1$) regulates their association with tetraspanin CD151 and thus motility/invasion on basement membrane component (matrigel)**” at the Joint meeting of the Society For Glycobiology (SFG) and American Society for Matrix Biology (ASMB) held at hotel Sheraton and Marina, San Diego, California, USA (10-14th November 2012).
10. Presented Poster entitled “**Role of $\alpha2,6$ linked sialic acid substituted $\beta1,6$ branched N-Linked oligosaccharides in modulating cellular adhesion**” at 33rd All India Cell Biology Conference (AICBC, Dec., 2009) held at University of Hyderabad, Hyderabad, India.
11. Participated in the “**1st Global Cancer Genomics Consortium (GCGC)**”, held at ACTREC, Mumbai on 10-12, November 2011.
12. Participated as organizing member in international symposium on “**Intermediate filament proteins: recent trends in keratin biology**” held at TMC-ACTREC, Mumbai, on September 28-29, 2007.

13. Participated in Annual conference of “**International society for cell and gene therapy in cancer (ISCGT)**” held at Mumbai 16-18, November 2007.

Member of several institutional committee, at DYPBBI

- ✓ Research Development & Sustainance Committee now known as Committee for monitoring research activities of Institute (CMRAI) (Member)
- ✓ IQAC Cell (NAAC Committee) (Member)
- ✓ International organization for standardization (ISO) committee (Member)
- ✓ Hostel committee/Canteen committee (Member)
- ✓ Grievance redressal committee (Member)
- ✓ Committee for Schedule Caste and Schedule Tribe/ Anti-Discrimination Committee (Member)

Research, Teaching and Administrative Activities

1. Involved in guiding project students (Research) successfully guided 11 research students for their master or under graduation thesis.
M.Sc Biotechnology =6 students
B.Tech Biotechnology =4
M.Tech (Integrated) Biotechnology=1.
2. Involved in conducting **theory and practical classes** for B. Tech in Biotechnology, M. Tech (Int) in Biotechnology and B. Tech in Medical Biotechnology and M.Sc Biotechnology students in following subjects (**Theory**: Molecular Biology, rDNA technology, Genetic Eng., Proteomics, Transcriptomics; **Practical**: Proteomics, Molecular Biology, Genetic Eng., Transcriptomics and Animal Tissue culture and Stem cells).
3. **Involved in Examination duties and syllabus revision** (Invigilation; question paper setting, moderation, evaluation/ assessment of answer scripts) as per allotment and I am also involved in regular revision of the syllabus for subject participated in teaching and allied subjects, curriculum mapping etc.
4. Institutional NAAC Co coordinator
5. **Extracurricular and co-curricular activities**
Participant of institutional NSS program for tree plantation, Swachata program, Traffic awareness programme, preparation of students for competitive exam.

Skill upgradation during COVID -19 pandemic

For self-upgradation I have actively participated in several faculty development program, workshop and webinar to inculcate the quality of innovative and entrepreneurial skill, science leadership skill, adopting new methods and technology for online teaching and content generation.

1. Participated in the ATAL-AICTE sponsored Faculty Development Program on “**Genome Engineering & Technology**” from 2020-9-28 to 2020-10-2 organized by University BDT College of Engineering.
2. Participated in Second Short Term Training Programme (STTP) under AICTE-AQIS on

“Image Processing and its Application” from September 7-12 ,2020 organized by the Department of Computer Engineering, Poornima Institute of Engineering & Technology, Jaipur.

3. Participated in the ATAL-AICTE sponsored Faculty Development Program on **“Biomedical Instrumentation: What and how to teach”**, from 24th August 2020 to 28th August 2020, organized by Rajasthan Technical University.
4. Participated in **“Science leadership workshop”** Organized by Central University of Punjab, Bathinda from June 22 to June 28 2020.
5. Participated in One week Faculty Development Programme (online) on **"e-learning: Managing Online Classes and Creating e-Content"** from 8-12 June 2020, organized by IQAC Cell of Anuradha Engineering College, Chikhli, Pune Maharashtra.
6. Participated in Online International Faculty Development Program on **‘Skilling Teachers for Online Education’** held during June 2 to 6, 2020 organized by Department of Humanities, Uka Tarsadia University.
7. Participated in seven days FDP on **“Entrepreneurship Development”** from 10th - 17th August, 2020 organized by Centre for Molecular and Nanomedical Sciences, Sathyabama Institute of Science and Technology, Chennai.
8. Participated in the **“IIC online Session conducted by institution’s Innovation council (IIC) of MHRD’s innovation cell”**, New Delhi to promote Innovation, IPR, Entrepreneurship, and startups among HEI fom 28th April 2020 to 22nd May 2020

Publications:

1. Sangeeta Ballav, Kiran Bharat Lokhande, Ipshita Dabhi, Sonal Inje, **Amit Ranjan**, K. Venkateswara Swamy, Soumya Basu **“Designing Novel Quercetin Derivatives as Matrix Metalloproteinase-9 Inhibitors in Colon Carcinoma: An In vitro and In silico Approach”** February 2020 DOI: 10.4103/jdr.jdr_67_19
2. Pritam Banerjee, Chiranjit Roy, Mohamed A.-H. Gepreel, **Amit Ranjan**, Soumya Basu, Somnath Bhattacharyya **“Probing nano-scale phase separation at atomic resolution within β -type Ti - Mn alloy; a potential candidate for biomedical implants”** ACS Biomater. Sci. Eng. 2019, 5, 5005–5014
3. **Amit Ranjan**, Rajiv Kalraiya **“Invasive potential of melanoma cells correlates with the expression of MT1-MMP and regulated by modulating its association with motility receptors via N glycosylation on the receptors”**, BioMed Research International, August 2014.
4. **Amit Ranjan**, Sanjay M. Bane, Rajiv Kalraiya **“Glycosylation of the laminin receptor ($\alpha 3\beta 1$) regulates its association with tetraspanin CD151: Impact on cell spreading, motility, degradation and invasion of basement membrane by tumor cells”** Experimental Cell Research, Volume 322, Issue 2, 1 April 2014, Pages 249–264 (DOI 10.1016/j.yexcr.2014.02.004).

5. **Amit Ranjan**, Rajiv Kalraiya “Alpha 2,6 sialylation associated with increased β 1,6 branched N-oligosaccharides influences cellular adhesion and invasion” J Biosci 38(5), December 2013, 1-10 (DOI 10.1007/s12038-013-9382-z)
6. **Amit Ranjan**, Rajiv Kalraiya “Glycosylation of laminin receptor integrin (α 3 β 1) regulate their association with tetraspanin CD151 and thus motility/invasion on basement membrane component (matrigel)”Glycobiology, (2012) 22(11): 1487-1661 doi:10.1093/glycob/cws127 (abstract)
7. **Amit Ranjan**, Akhauri Yash Sinha, Badrinath Dubey, Ankur Saikia, Alak Kumar Buragohain and Suvendra Kumar Ray “Analysis of Bacterial Genomes for In-frame Dinucleotide Abundance, Abundance of the Encoded Amino Acids and Synonymous Codon Choice Reveals a Common Pattern” Current science, vol. 94, no. 2, 25 january 2008.