

Gaurav Pandey

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Education

- 2013 – present 📌 **Ph.D. Student, IIT Guwahati, India** in Biosciences and Bioengineering. (Cumulative Grade Point 9/10)
Thesis title: *Effects of Physical and Chemical Perturbants on Aggregation and Nano-Scale Self-Assembly of Peptides*. Under the Supervision of Dr. Vibin Ramakrishnan.
- 2011 – 2013 📌 **M.Tech. Bioinformatics, University of Hyderabad, India** (Cumulative Grade Points Average 9.31/10).
Thesis title: *Meta-Analysis of Epigenetic and Gene Expression Signatures Identifies Novel Regulators of Embryonic Stem Cell Identity*. Under the Supervision of Dr. Sailu Yellabolina (CR Rao AIMSCS). *First Class with Distinction*.
- 2007 – 2011 📌 **B.Tech. Biotechnology, Gautam Buddh Technical University, India.**
First Class with Distinction (81.060%).
- 2005 – 2007 📌 **Senior Secondary (Grade 10 + 2), First Class with Distinction (87.775%).**
Indian School Certificate
- 2004 – 2005 📌 **Higher Secondary (Grade 10), First Class with Distinction (85.400%).** In-
dian Certificate of Secondary Education

Research Interests

- 📌 Peptide Self-Assembly and Amyloid aggregates, Peptide Based Drug Design and Development, Hydrogels, Peptide Based Bio-Nano Assemblies and Functional Peptide Design.

Research Publications

- 1) Jahnu Saikia, Gaurav Pandey, Sajitha Sasidharan, Ferrin Antony, Harshal B. Nemade, Sachin Kumar, Nitin Chaudhary, and Vibin Ramakrishnan.
Electric Field Disrupts Amyloid Aggregation; Potential Non-invasive Therapy for Alzheimer's Disease. *ACS Chemical Neuroscience*, 2019, doi:10.1021/acscemneuro.8b00490
- 2) Gaurav Pandey, Sudhir Morla, Harshal B. Nemade, Sachin Kumar, and Vibin Ramakrishnan.
Modulation of aggregation with Electric Field; the scientific roadmap for a potential non-invasive therapy against tauopathies. *RSC Advances*, 2019, 10.1039/c8ra09993f
- 3) Gaurav Pandey, and Vibin Ramakrishnan.
Electric field assisted inhibition of aggregation in amyloidogenic proteins. *Proceedings of the 35th European Peptide Symposium*, 2018, doi:10.17952/35EPS.2018.268
- 4) Gaurav Pandey, Jahnu Saikia, Sajitha Sasidharan, Deep C. Joshi, Subhash Thota, Harshal B. Nemade, Nitin Chaudhary, and Vibin Ramakrishnan.
Modulation of Peptide Based Nano-Assemblies with Electric and Magnetic Fields., 2017 *Scientific Reports*, doi:10.1038/s41598-017-02609-z

Patents Filed

International Patent

1) Inventors: Vibin Ramakrishnan, Gaurav Pandey, Harshal B. Nemade, Jahnu Saikia, Sajitha S, and Nitin Chaudhary.

Patent No. WO/2019/012556.

Indian Patents

1) Inventors: Vibin Ramakrishnan, Gaurav Pandey, Harshal B. Nemade, Jahnu Saikia, Sajitha S, and Nitin Chaudhary.

Patent No. TEMP/E-1/25296/2017-KOL. Dated 13.07.2017

Office: Controller of Patents, Kolkata.

2) Inventors: Vibin Ramakrishnan, Sajitha S, Nitin Chaudhary and Gaurav Pandey.

Patent No. 243/KOL/2015. Dated 09.03.2015

Office: Controller of Patents, Kolkata.

3) Inventors: Vibin Ramakrishnan, Sajitha S, Nitin Chaudhary and Gaurav Pandey.

Patent No. Patent No. 201631011471 Dated 31.03.2016

Office: Controller of Patents, Kolkata.

Bioinformatics Skills

Languages	■ C,Python*, R*, Perl, \LaTeX . *Elementary Proficiency
Operating Systems	■ Windows,Linux,Mac.
Public Domain Knowledge	■ NCBI, RCSB, PDB-SUM, Swiss-Prot.
Sequence Analysis Softwares	■ BLAST, FASTA, Clustal W, Sequin
Molecular Dynamics Simulation	■ Gromacs. ■ Docking and QSAR Studies] Gold, SybylX. ■ Molecular modeling and visualization] Swiss-Modeller, Py-mol, Rasmol, Avogadro, Chimera, Discovery Studio, Material Studio.
Web Dev	■ HTML, CSS.
Misc. Softwares	■ Chems sketch, ProCheck, RAST, Cytoscape, Pross, Ribo-some.

Technical Skills

Organic Synthesis	■ Solid Phase Peptide Synthesis.
Biophysical Techniques	■ Spectroscopy (UV-Vis, Fluorescence, IR, CD, Raman), HPLC, AFM, Powder XRD, DLS, ITC.

Miscellaneous Experience

Presentations/Conferences/Workshops Attended

- 2018 ■ **Poster Presented**, at ACS Publications and the Indian Academy of Sciences joint meeting, IIT (BHU) Varanasi.
- **Poster Presented**, 35th European Peptide Symposium, Dublin City University, Ireland.
- 2017 ■ **Poster Presented**, at National Workshop on Fluorescence and Raman Spectroscopy, IIT Guwahati.
- **Oral Presentation**, at International Conference on Advances in Biological Systems and Materials Science in NanoWorld, IIT (BHU) Varanasi.
- 2016 ■ **Poster Presented**, at Research Conclave, IIT Guwahati.
- **Workshop Attended**, National Workshop on Advanced Probing Techniques in TEM, IIT Guwahati.
- 2015 ■ **Workshop Attended**, IuCr Workshop on X-Ray Diffraction Systems and Related Applications, IIT Guwahati.
- 2013 ■ **Poster Presented**, at UoH-Academia Sinica Joint Workshop on Frontiers in Biological Sciences, University of Hyderabad.
- 2012 ■ **Poster Presented**, at Indo-German Symposium on Systems Biology, University of Hyderabad.
- **Poster Presented**, Association of DNA Fingerprinting and Associated Technologies (ADNAT) Convention, CR Rao AIMSCS.
- 2010 ■ **Internship**, in Quality Assurance Division PepsiCo India Limited.

Teaching Experience

- 2015-2016 ■ Bioinformatics and Computational Biology, Teaching Assistant, IIT Guwahati.

Extra Curricular Activities

- 2015 – 2016 ■ Hostel Welfare Secretary, 2015-16, IIT Guwahati.
- Member Student Welfare Board, 2015-16, IIT Guwahati.

Awards and Achievements

- 2011 ■ **Institute Award**, for securing rank 2 in B.Tech. Course at Department of Biotechnology, CET-IILM-AHL.
- **Qualified Gate** with 94 percentile.
- 2013 ■ **Secured rank 2** in M.Tech. Course at Department of Biotechnology and Bioinformatics, University of Hyderabad.
- **Qualified Gate** with 99.9 percentile.
- 2017 ■ **First Prize** in Oral presentation at International Conference on Advances in Biological Systems and Materials Science in NanoWorld, IIT BHU.

Professional Affiliations

- Memberships ■ American Peptide Society.
- European Peptide Society.

Professional Affiliations (continued)

- Indian Biophysical Society.
- Society of Biological Chemists, India.

Personal

- Languages ■ Strong reading, writing and speaking competencies for English and Hindi.
- Activities and Interests ■ Swimming, Running, Badminton and Travel.

References

- Dr. Vibin Ramakrishnan ■ Associate Professor, Indian Institute Technology Guwahati, .
email id: vibin@iitg.ernet.in
- Dr. Nitin Chaudhary ■ Associate Professor, Indian Institute Technology Guwahati, .
email id: nitin@iitg.ernet.in
- Dr. Sailu Yellaboina ■ Associate Professor, CR Rao Advanced Institute of Mathematics,
Statistics and Computer Science (AIMSCS), .
email id: bio.sailu@gmail.com