

# Curriculum Vitae

## Dr. Debnath Pal

Professor

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## Research Interests

Computational Biology, Bioinformatics, Genomics, Proteomics, Metabolomics, Drug Discovery, Methods and Algorithms

## Academic Credentials

Ph.D

## Awards and Honors

Young Scientist Medal, Indian National Science Academy, New Delhi (2000)

Alexander von Humboldt Fellowship, Germany (2000)

NASI-Scopus Young Scientist Award, National Academy of Science, Allahabad (2010)

## Research Experience

The main focus of the group is computational biology and omics research. We emphasize on analysis and method development. Our research areas include genomics, proteomics, metabolomics, coarse-grain molecular dynamics, protein-protein docking, genome wide function annotation and mass spectrometry based method development, My lab is involved in both wet and dry lab experiments.

## Publications

62 as on April 4, 2016. Recent five publications:

1. Ebolavirus interferon antagonists—protein interaction perspectives to combat pathogenesis. Anupam Banerjee, Abantika Pal, **Debnath Pal** and Pralay Mitra. Briefings in Functional Genomics , IN PRESS (2017). DOI: 10.1093/bfgp/elx034
2. Assessment of Adaptive Breast Cancer Screening Policies for Improved Mortality Reduction in Low to Middle Income Countries. Baban Wagh, Ramesh Chaluvaryaswamy and **Debnath Pal**. Asian Pacific Journal of Cancer Prevention 18 , 2375-2380 (2017). DOI: 10.22034/APJCP.2017.18.9.2375
3. Molecular dynamics information improves cis-peptide based function annotation of proteins. Sreetama Das, Pratiti Bhadra, S. Ramakumar and **Debnath Pal**. Journal of Proteome Research, 16, 2936-2946 (2017). DOI: 10.1021/acs.jproteome.7b00217

- Numerical Simulation of a Glucose Sensitive Composite Membrane Closed-Loop Insulin Delivery System. Shashi Bajaj Mukherjee, Debabrata Datta, Soumyendu Raha and **Debnath Pal**. *Bioprocess and Biosystems Engineering* **40**, 1453-1462 (2017). DOI: 10.1007/s00449-017-1803-1

- Pipeline for inferring protein function from dynamics using coarse-grained molecular mechanics forcefield. Pratiti Bhadra and **Debnath Pal**. *Comput. Biol. Med.* **83**, 134-142 (2017). DOI: 10.1016/j.combiomed.2017.02.009

### **Projects (some examples)**

- Development of improved clinical genomics data analysis pipeline
- Correlating protein dynamics with its molecular function
- Drug discovery methods
- Analysis of metabolic pathways of humans with relevance to diseases

### **Databases and technologies development**

Check group website: <http://pallab.cds.iisc.ac.in/services.html>