

ACADEMIC PROFILE

Dr. ANANYA ALI
SACT
DEPARTMENT OF ZOOLOGY, SERAMPORE GIRLS' COLLEGE



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Academic Awards:

PhD Awards in Biochemistry from University of Kalyani, awarded on 17th October 2019
Title of the PhD thesis: “Prediction and Analyses of Disease-causing Mutations through Protein-Protein Interaction data.”

Teaching Area in college: Zoology

Area of Research Interest: Computational Biology, Immunology, Bioinformatics, Infectious disease, Genetics.

Online Teaching Experiences:

- 1) **Part-time College Grade teacher**, from July 2014-2016, at **TutorVista**, a **Pearson** undertaking, online tutor portal.
- 2) Also teaching in **Chegg** as a subject expert in **Zoology** from September, 2018.

Techniques, known:

- **Statistical Data analyses and Graphical image presenting Tools:** R, R Studio, Statistica, PAST, Origin Pro, Sigma Plot. Also good experience and detailed knowledge of Biostatistics for biological data analyses purposes.
- **Computer languages:** Python, Bio-python (Anaconda), basics of C
- **Machine learning** tools like Usage of WEKA.
- **Bio-informatics tools and techniques:** Using **Discovery Studio**, Pymol, **Chimera** and **GroMacs** tools for **working with bio-molecule Sequences and Structures** (Molecular Mechanics and Dynamics), Marvin Sketch, ExPASy tool and others.
- **Population Biology techniques:** *Drosophila* population maintenance, Mutant flies' culture maintenance, and Selection Line experiments.
- **Molecular Biology and Biochemical Techniques:** PCR with primer designing, Recombinant DNA Technology, Preparing competent bacterial cells for transformation, Transfection in amoeba by electroporation, Southern hybridization, SDS-PAGE,

Zymography, Agarose gel Electrophoresis of DNA, In vitro culture and maintenance of bacteria, amoeba and flukes.

Experience in Research Projects: ~ 6yr

- August 2014 – October 2019: as PhD scholar with UGC NET JRF (2014), the department of Biochemistry and Biophysics, University of Kalyani, under Dr. Angshuman Bagchi.
- June 2011 - August 2011: IASc-INSA-NASI sponsored Summer Research Fellow, working on Molecular Parasitology, at School of Environmental Studies, Jawaharlal Nehru University, New Delhi, under Professor Sudha Bhattacharya.
- Dec. 2010 – May 2011: MSc final semester research based project, on *In Vitro* parasitic worm culture and parasite physiology, at Aligarh Muslim University, Aligarh, under Professor SMA Abidi.

Profession/Academic Training :

- Introduction to R programming. Jul-Sep, 2018. NPTEL online certification course.
- Biostatistics: A user's perspective. July, 2018. IISER, Pune.
- Programming, Data structure and Algorithms, using Python. Feb-Mar, 2018. NPTEL Certification course.
- Bioinformatics: Algorithms and Applications. Jan-Apr, 2018, NPTEL online certification course.
- Human Genomics: Computation methods and Applications. Dec., 2017. GIAN, MHRD, GoI, at Jadavpur University.
- Selected participant in DST-SERC School in Chronobiology. June-Jule, 2012 and Dec-Jan, 2010.

Membership in Learning Societies:

Life Member of Indian Biophysical Society, from 2017.

Awards:

No	AWARD	Details	Year	Organizers
1	First Prize in Best Poster Award	4th IIT Madras-Tokyo Tech Joint Symposium on "Frontiers in Bioinformatics: Large Scale Data Analysis, Resources and Drug Design"	Nov, 2018	IIT Madras
2	Best Student Award	SERB School in Chronobiology	July, 2012	Dept. Of Zoology, NEHU, Shillong
3	Best Group Award	SERB School in Chronobiology	July, 2012	Dept. Of Zoology, NEHU, Shillong
4	Best Write Up Award	SERC School in Chronobiology	Jan,2011	Dept. Of Zoology, DU, Delhi

List of Research Paper Published (Publication details available in Google scholar with citation and h-index):

In International Journal:

1. **2018:** Disease Probability Index (DPI, χ): A new alignment-free scoring method to evaluate the propensities of polypeptide sequences leading to disease onset. Ali A. *et. al.* **BioSystems, UGC approved Journal.**
2. **2017:** Structural study of the effects of mutations in proteins to identify the molecular basis of the loss of local structural fluidity leading to the onset of autoimmune diseases. Ali A. *et. al.* **Biochemical and Biophysical Research Communication, UGC approved Journal.**
3. **2016:** Comparative Analyses of the Relative Effects of Various Mutations in Major Histocompatibility Complex I—a Way to Predict Protein-Protein Interactions. Ali A. *et. al.* **Applied Biochemistry and Biotechnology, UGC approved Journal.**
4. **2015:** Protein-Protein Interactions-classification, characterization and prediction. (Review article). Ali A. *et. al.* **Current Chemical Biology. UGC approved Journal No-49244**

In Edited Volume: Book chapters

1. **2015:** Structural analyses of the mode of binding between AANAT protein with 14-3-3 protein involved in human melatonin synthesis. Ali A. *et.al.* Information System Design and Intelligent Applications. Volume II.
2. **2017:** Altered PPI Due to Mutations in hPER2 and CKI Delta Locus, Causing ASPS. Ali A. *et.al.* Proceedings of the First International Conference on Intelligent Computing and Communication

Paper presented at seminar

No	Participated Events	Organizers	Year	Remarks
1	“Indo-German Workshop on Computing in Chemistry, Biology and Medicine”	Centre for Computational Natural Sciences and Bioinformatics, IIT Hyderabad	29-30th November, 2018	Presented a poster titled: “Comparative analyses of Local Spatial Stochasticity, arisen due to Polymorphic mutations in MHC I and II proteins’ structure”
2	4th IIT Madras – Tokyo Tech Joint Symposium on “Frontiers in Bioinformatics: Large Scale	IIT Madras	10th-11th November, 2017	Presneted a poster, titled: “Computational analyses of disease causing mutations’ and their

**Data Analysis,
Resources and
Drug Design”**

**propensities
from numerical
information,
related to
Proteins’
length”**

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| 3 | “National
Symposium on
Oxidative Stress
in Health and
Disease” | University
Kalyani | of 30th -31st
March,2017 | Presented a
speed talk on:
“Computational
analyses of the
structural
aspects of
hAMPD3
protein and its
ligand binding
interactions
leading to
AMPDDE” |
| 4 | Annual
Symposium of
the Indian
Biophysical
Society (IBS
2017) | IISER, Mohali | 23rd-25th
March, 2017 | Presented a
poster, titled:
“Loss of local
spatial
stochasticity due
to disease-
causing
mutations in
some immune
related proteins
structure: A
Lyapunov
Exponent
Study” |
| 5 | First
International
Conference on
Intelligent
Computing and
Communication | University
Kalyani | of 18th-19th
February, 2016 | Published and
presented a
paper, titled:
“Altered PPI
due to mutations
in hPER2 and
CKId locus,
causing ASPS |
| 6 | Annual meeting
of the Indian
Biophysical
Society | IISc, Banagalore | 8-10, February,
2016 | Presented a
Poster, titled:
Altered
“Protein-Protein
Interactions in
inheritable |

Circadian Rhythm Sleep Disorders – A potential for better remedies”

7	Selected participant in The Second International conference on Information System Design and Intelligent Applications (INDIA 2015)	Department of Computer Science Engineering, University of Kalyani	of 8th January, 2015 – 9th January, 2015	and	Published and presented a paper, titled: ‘Structural analyses of the mode of binding between AANAT
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Participation in Seminar

No	Participated Events	Organizers	Year	Remarks
1	Seminar in connection with “the first World DNA Day”	University of Kalyani	25th April, 2018	
2	“Brainstorming Session on Modern Trends in Biodiversity: Cataloguing and Bio-prospecting	University of Kalyani	24th April, 2017	-
3	National Workshop on “Introduction to Next Generation Sequencing”	University of Kalyani	9th-10th November, 2016	-
4	DST-PURSE Sponsored special Seminar on Frontiers of Research in Microbiology	University of Kalyani	17th March, 2016	-
5	National Seminar Series sponsored by DST-PURSE and University	University of Kalyani	February and March, 2016	-
6	National Workshop on “In Silico Analysis of Mutation”	BIF, University of Kalyani	16th Dec, 2015	-

- 7 Selected participant in National Centre for 5th November – 7th
Second International Biological Sciences, November, 2014
Symposium in Bengaluru
Protein folding and
dynamics, 2014.
- 8 **Poster** Dept. of Zoology, 17th March, 2011 Poster Topic:
Presentation at AMU “**Pest &**
the inaugural ceremony of **Parasite: its**
Zoological diversity and
Society of AMU management”.
- 9 Participated in Dept. of Zoology, 23rd-24th Oct., National level
MAASCON-1. AMU. 2010 Symposium.
- 10 Participated in the Dept. of 27th-28th Feb., State level
Seminar on “Safe Chemistry, 2008. Seminar, assisted
Drinking Water”. Krishnagar Govt. by UGC.
College.
- 11 Participate in the District Science 21st Dec., 2002. **2nd Topper.**
“Competition of Fair, Krishnagar,
Scientific Nadia, WB.
Terminology”.
- 12 Group Leader in DST-NCSTC. 27th-31st Dec., Project title: “Use
a National Level 2001 of *Azolla* in
Project. integrated
nutrient
management in
Rice”.

Place: Krishnagar
Date: 09/04/2020

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