


Title	Dr.	First Name	Asani	Last Name	Bhaduri	Photograph
<b>Designation</b>	Assistant Professor					
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<b>Educational Qualifications</b>						
<b>Degree</b>	<b>Institution</b>			<b>Subjects/Topics</b>		
Ph.D. (2014)	Institute of Genomics and Integrative Biology (CSIR-IGIB) and Department of Microbiology, University of Delhi			Molecular and Biochemical Studies on Secretory Proteins of Mycobacteria (Molecular Microbiology)		
M.Sc. (2005)	University of Delhi			Botany		
B.Sc. Honours (2003)	Presidency College, University of Calcutta			Botany		
Art Appreciation Course (2011-12)	National Museum Institute of the History of Art, Conservation and Museology, Delhi.			Art Appreciation		
P.G. Diploma (2008-9)	Indian Law Institute			Intellectual Property Rights		
<b>Career Profile</b>						
<b>Teaching Experience:</b>						
<ul style="list-style-type: none"> <li>Assistant Professor at Cluster Innovation Centre (2015 July onwards).</li> <li>Assistant Professor (ad-hoc) at Cluster Innovation Centre (2013 August- 2015 July).</li> </ul>						
<b>Research Experience:</b>						
<ul style="list-style-type: none"> <li>University of Delhi, P.I. Innovation Projects (2015-16, 13-15).</li> <li>Institute of Genomics and Integrative Biology, Delhi (Research Fellow: 2006-2014).</li> <li>National Institute of Immunology, Ph.D. coursework (2005-6).</li> <li>Summer research internship at Department of Chemistry, Hyderabad Central University (2004-2005).</li> <li>Project trainee in National Institute of Plant Genome Research, 2003-2004.</li> </ul>						



### Administrative Assignments (at Cluster innovation Centre)

- Convener, Annual Report and Newsletter Committee (2017-)
- Convener, Cultural and Extracurricular Committee (2016-17).
- Member, Annual Report and Newsletter Committee (2016-17).
- Member, Student Advisory Committee
- Member, Academic Sub-Committee, Maintenance Committee, Newsletter/Annual Report/Website Committee (2015-16).
- Member: sub-technical committee, system biology laboratory.
- Involved in creating the syllabus of Systems Biology curriculum (B.Tech IT) at CIC.
- Eco-club organization at CIC.
- Successful inception, co-ordination and completion of the first 'Summer-Internship' of Cluster Innovation Centre held in June-July 2016, where about 40 students from different institutes participated.

### Areas of Interest / Specialization

- Host-Pathogen interaction in emerging and neglected infectious diseases.
- Secretory pathways and mechanisms in Tuberculosis.
- *in silico* Biology.
- Non-coding RNA and Systems biology.
- Cancer and Genetic Diseases.
- Wildlife and Environment Biology: Birds, Odonates.
- Plant systems
- Indian Classical Music (Instrumental).

### Subjects Taught

- Understanding new biology
- Methods for studying biological informational molecules
- Integrative biology
- Exploring biology - systems approach
- Genes to genomes
- Flow of information in living systems
- Biological networks: from micro to macro niche
- *in silico* biology
- Systems biology
- Computational Neuroscience
- Theory in practice: the art of project management
- Environment science & ecosystem management

### Research Guidance

- Mentored several undergraduate students for semester-long projects and innovation projects. Some of the prominent projects include Mapping weekly markets of Delhi (<http://dwm.dudic.io/>), Identification of novel mycobacterial motif, Creating a model of science communication in University.

**Publications Profile****Research Articles:**

- Dhangar T K, Pathak A K, **Bhaduri A\*** (2018) Identification of Essential Genes for Metabolic Reactions in Mycobacterium tuberculosis through Flux Balance Analysis **DU Journal of Undergraduate Research and Innovation** 4(1): 125-129.
- Ray A, **Bhaduri A**, Srivastava N, Mazumder S (2017) Identification of novel signature genes attesting arsenic-induced immune alterations in adult zebrafish (*Danio rerio*) **Journal of Hazardous Materials**. 321, 121-131. doi: 10.1016/j.jhazmat.2016.09.001.
- Bhetariya P, Prajapati M, **Bhaduri A** et al. (2016) Structural analysis of keto synthase domain in *Aspergilli* and its utility for detection **Evolutionary Bioinformatics**. 12: 109–119. doi: 10.4137/EBO.S32694.
- **Bhaduri A**, Misra R, Dhamija N (2015) To eat or not to eat: understanding the tussle between mycobacteria and host autophagy **Indian Journal of Microbiology** 55(4):456–459. doi: 10.1007/s12088-015-0541-9.
- Maji A, ..., **Bhaduri A**,..., Gokhale R, Singh Y (2015) Expression profiling of lymph nodes in tuberculosis patients reveal inflammatory milieu at site of infection **Scientific Reports** 5, 15214. doi: 10.1038/srep15214.
- Pathak N, **Bhaduri A**, Bhat KV, Rai A (2015) Tracking sesamin synthase gene expression through seed maturity in wild and cultivated sesame species - a domestication footprint **Plant Biology** 17(5):1039-46. doi: 10.1111/plb.12327.
- Singh LK, Dhasmana N, Sajid A, Kumar P, **Bhaduri A**, Bharadwaj M, Gandotra S, Kalia VC, Das T.K, Goel A.K, Pomerantsev AP, Misra R, Gerth U, Leppla SH, Singh Y (2014) ClpC operon regulates cell architecture and sporulation in *Bacillus anthracis*. **Environmental Microbiology** 17: 855–865.
- Dhasmana N, Singh LK, **Bhaduri A**, Misra R, Singh Y (2014) Recent Developments in Antidotes Against Anthrax. **Recent Patents on Anti-Infective Drug Discovery** 9(2): 83-96 (PMID: 25174439).
- **Bhaduri A**, Misra R, Maji A, Bhetaria P, Mishra S, Arora G, J Virdi J S, Singh Y (2014) *Mycobacterium tuberculosis* cyclophilin A uses novel signal sequence for secretion and mimics eukaryotic cyclophilins for interaction with host repertoire. **PLoS ONE** 9(2): e88090
- Devi K, Sharma D, **Bhaduri A** and Kothamasi D (2013) Polymorphism in the partial hcnAB gene in hydrogen cyanide producing *Pseudomonas* species. **Geomicrobiology Journal**, 30: 2. 131-139.
- Arora G, Sajid A, Gupta M, **Bhaduri A**, Kumar P, Modak S, Singh Y (2010) Understanding the Role of PknJ in *Mycobacterium tuberculosis*: Biochemical Characterization and Identification of Novel Substrate Pyruvate Kinase A. **PLoS ONE** 5(5): e10772.

**Book Chapter**

- Pathak N, **Bhaduri A**, Rai A K (2017) Sesame: Bioactive compounds and health benefits. In: Mérillon J M, Ramawat K (eds) Reference series in Phytochemistry: Bioactive molecules in food Springer Publications [https://doi.org/10.1007/978-3-319-54528-8\\_59-1](https://doi.org/10.1007/978-3-319-54528-8_59-1).

**Popular Articles (Arts and Aesthetics, Environment and Wildlife)**

- **The less-sought long-tails**, Saevus, 2018 <http://www.saevus.in/the-less-sought-long-tails/>
- **Junglimericks: In the Crazy Wilds of India**, Saevus, 2018 <http://www.saevus.in/junglimericks-crazy-wilds-india/>.
- **Let them spread their wings**, The Hindu, 2017. <http://www.thehindu.com/society/let-them-spread-their-wings/article18523246.ece>.
- **The Cherished Uncommon Man**, The Hindu, 2017. <http://www.thehindu.com/society/The-cherished-uncommon-man/article17075311.ece>.
- **Out of Play**, The Hindu, 2016. <http://www.thehindu.com/todays-paper/tp-features/tp-metroplus/Out-of-play/article16160512.ece>.
- **On a High with Art**, The Hindu, 2015. <http://www.thehindu.com/todays-paper/tp-features/tp-metroplus/on-a-high-with-art/article7339911.ece>.

**Conference Organization/ Presentations (in the last three years)****Oral/Poster Presentation:**

- Oral presentation in ‘**Young Scientist**’ category of 57<sup>th</sup> **Association of Microbiologists of India** International Conference “Microbes and Biosphere: What’s New What’s Next”, Guwahati, November 24-27, 2016.
- **Best Poster Award** in National Seminar “Emerging Issues of climate change: Sustainability and Economic Implications” for “**Study of bioactive components in buckwheat and *in silico* analysis of *fagopyritol synthase***” at Sri Aurobindo College, October 21-22, 2016.
- Oral and poster presentation at **EMBO Practical Course** “Non-coding RNA in infection” Würzburg, Germany, September 18–24, 2016.
- Poster presented on ‘Tuberculosis Co-Morbidities and Immunopathogenesis’ **Keystone Symposia** on Unique Protein Motifs: The Mycobacterial Slice, February 28-March 3, 2016.
- Poster presented in 5th Indian Peptide Society Symposium, September 24-25, 2015, Predicting unique motifs using data mining techniques in the proteome of *Mycobacterium tuberculosis*.
- Poster presented in Antardhvani, TB-MOTIF and TB-PROMOTER and one on ‘Tails and Feathers’ an app for animal rescue, 2015.

**Invited Lectures/Dialogues:**

- Invited for a talk in the valedictory session of Bloom-The Botany Society of Ramjas College, March 28<sup>th</sup>, 2018.
- Invited as resource person and delivered a talk on “**Birds of India**” in the Workshop "Birds: Watching and Beyond" at Centre for Earth Studies, Indraprastha College for Women, March 27, 2018.
- Delivered a talk on “**Citizen Science: stopgap Research or way forward**” at Centre for Studies in Science Policy, JNU, February 7, 2018.
- Invited to Consultative Roundtable Dialogue “**Humanities matter**” at IIC, July 19, 2017.
- Special Invitee in “**Vidyarthi Vigyan Manthan**” 2016-17, National Camp conducted at IIT Delhi, May 27-28, 2017.
- Invited for lectures and practical demonstrations in add-on course on "**Bioinformatics and in**



*silico medicine*" conducted by Miranda House, University of Delhi, Jan-March 2016.

- Invited to Katha/IGNOU consultative meeting and consequent discussions on ‘**Translating India/ Understanding Diversity**’ August 20, 2015.

### Visit Organised:

- A visit to Aravalli Biodiversity Park from the Eco-Club initiative of CIC, February 11, 2016.
- Visit to Israel pavilion at “India Water Week”, April 7, 2016.

### Research Projects (Major Grants/Research Collaboration)

- **Start-Up Research Grant (Young Scientists)** by SERB, DST in ‘Identification of virulence factors involved in the infection process of emerging and neglected food-borne pathogen *Campylobacter jejuni*’ (2016-18).
- **University of Delhi Research and Development Grant** ‘Tracking expression patterns of mycobacterial secreted virulence factors’ (2015-16).
- **Innovation Project CIC-307** ‘Developing an affordable three-dimensional Bioprinter’ facility (2015-16).
- **Innovation Project CIC-206** ‘Improving the current system of Junk management and recycling’ (2013-15).

### Awards and Distinctions

- **First prize in Simulation Exercise Group Presentation** of Faculty Development Program on Climate Smart Governance at **Indian Institute of Public Administration (IIPA)**, June 25- July 6, 2018.
- **‘EMBO Travel Grant’** to attend EMBO Practical Course on “Non-coding RNA in Infection” at Würzburg, Germany, September 18 – 24, 2016.
- **Certificate of Appreciation**, Selected Innovation Projects, University of Delhi Foundation day, May 1<sup>st</sup>, 2016.
- **‘Global Health Travel Award’** funded by the Bill & Melinda Gates Foundation to attend conference on ‘Tuberculosis Co-Morbidities and Immunopathogenesis’ organised by Keystone Symposia, February 2016.
- **‘Teaching Excellence Award for Innovation’** by University of Delhi on Foundation Day May 1<sup>st</sup>, 2015.
- **Senior Research Fellowship** by CSIR 2008, 2010(extended).
- **Junior Research Fellowship & Eligibility for Lectureship** by CSIR-UGC, 2006.
- **National Scholarship** in Master’s Degree (Ranked 3<sup>rd</sup> in the University of Calcutta and 1<sup>st</sup> in the merit list of Entrance test of Delhi University).
- **National scholarships** in class X and XII examinations.

### Association With Professional Bodies

- Life member, The Association of Microbiologists of India.
- Editorial Board member of Journal of Innovation for Inclusive Development (JIID) <http://jiid.in/about-this-journal/editorial-board/>.
- Reviewer for ‘Du-Vidha’ - a bilingual journal of creative writing of the University of Delhi <http://journals.du.ac.in/creative/index.html>.
- Co-founder of CIC eco-club Vasundhara.
- Associated with ‘Translating India/ Understanding Diversity’ and “Humanities Matter” initiative.

**Other Activities****Workshops, Courses and Leadership Camps:**

- Successfully completed Faculty Development Program on Climate Smart Governance at IIPA June 25 - July 6, 2018.
- Successfully completed Orientation Course with 'A' grade at CPDHE, University of Delhi, November 21- December 19, 2017.
- Participated in Uttarakhand Spring Bird Festival and Uttar Pradesh International Bird Festival, 2017-2018.
- Bio-entrepreneurship and Bio-enterprise creation workshop at IISER, Mohali, September 2-3, 2016.
- Workshop at YETI (Young Ecologists Talk and Interact) January 17, 2016.
- Technology Enriched Instruction Workshop "Faculty Development for the 21st Century" organised by PHD Chamber of Commerce and Industry and Microsoft September 30, 2015. Awarded 'Microsoft Faculty Fellow' certificate.
- Workshop on 'Renovating bacterial taxonomy with Bioinformatics' by National Bureau of Agriculturally Important Microorganisms (NBAIM) & Department of Zoology, University of Delhi, May 14-15, 2015.
- Workshop on Environment/Natural Resource Conservation by Govt. of Delhi, November 2014.
- ProArt Photography Workshop with Akash Das in Delhi Photography Festival Sept-Oct 2013.
- Third Novartis BioCamp – a biotechnology leadership camp in India, August 1-3, 2011.
- Attended training course in IPR from National Institute for Intellectual Property Management, Nagpur, India, 2009-10.
- First CSIR workshop on Biosafety and Biosecurity organized at Indian Institute of Integrative Medicine, Jammu, January 29 – 31, 2007.

**Music:**

- Learned violin under the guidance of Prof. Sisirkana Chowdhury, Previously Head, Bowing Department, Ustad Ali Akbar Khan College of Music, California, U.S.A. (1992-2003).
- Workshop by Late Ustad Ali Akbar Khan and Pt. Buddhadeb Dasgupta at Rajya Sangeet Academy Kolkata (2000-2002).

**Art:**

- Presently engaged in abstract and wildlife photography. Photograph featured in **Saevus, Nicephoto 2012, The Hindu, Avesnest, website of University of Delhi, University of Illinois.**  
The "Bird of India" collection is featured through **Google Plus Create India** and has over 85000 followers (<https://plus.google.com/u/0/collection/QwWZv>).

**Other interests:**

Collecting Handicrafts (especially toys made by local artisans in different part of India) and Antiquities.

Signature of Faculty Member