




Bhaskaracharya College of Applied Sciences (University of Delhi)

Sector II, Phase I, Dwarka, New Delhi – 110075

Faculty Profile



Title	Dr.	First Name	Uma	Last Name	Dhawan	Photograph
Designation	Associate Professor					
Address	Department of Biomedical Science Bhaskaracharya College of Applied Sciences University of Delhi Sector-2, Dwarka New Delhi-110 075					
Phone No Office	+91-11-25087597					
Residence	+91-11-79626376					
Mobile	+91-8743033300					
Email	uma.dhawan@bcas.du.ac.in					
Web-Page	http://bcas.du.ac.in					
Educational Qualifications						
Degree	Subject		Institution			
B.Sc. (Hons)	Zoology		DRC, University of Delhi, India			
M.Sc.	Biomedical Science		ACBR, University of Delhi, India			
Ph.D.	Biomedical Science Specialization: Human Molecular Genetics		CSIR-Institute of Genomics and Integrative Biology and University of Delhi, India			
M.S.	Bioinformatics		School of Biological Sciences, University of Edinburgh, UK			
Post Doctorate	Neurology and Experimental Therapeutics		Boston University School of Medicine, Boston, USA			
Career Profile						
<ul style="list-style-type: none"> ● UGC-Raman Fellow (2016-17) for one year at Department of Neurology, Pharmacology and Experimental Therapeutics, Boston University School of Medicine, Boston, USA. ● Assistant Professor (Stage-III- Reader Grade), Department of Biomedical Science, Bhaskaracharya College of Applied Sciences, University of Delhi, since July 23, 2014. ● Universitas21 Fellow (September, 2010- September, 2011), School of Biological Sciences, College of Science and Engineering, University of Edinburgh, UK. ● Assistant Professor (Stage-II- Senior Lecturer), Department of Biomedical Science, Bhaskaracharya College of Applied Sciences, University of Delhi, since July 23, 2009. ● Assistant Professor (Stage-I- Lecturer), Department of Biomedical Science, Bhaskaracharya College of Applied Sciences, University of Delhi, since July 23, 2005. 						
Administrative Assignments						
<p>University</p> <ul style="list-style-type: none"> ● Member, Department Research Committee (Biomedical Science), ACBR, University of Delhi (April 2019-March 2021). ● Member, Committee of Courses (Biomedical Sciences), University of Delhi (July 2017- 2019). ● Member, Selection Committee, PhD interviews at ACBR, University of Delhi (since August 2016). <p>College</p> <ul style="list-style-type: none"> ● Nodal Officer and Convener, Science Setu Outreach Program in association with National Institute of Immunology, New Delhi (September, 2021- till Date) ● Teacher-in-charge of the Department of Biomedical Science (April 2021-till date; August 2018-March 2019; April 2015 – July 2016; September 2012 – March 2013; April 2009-August 2010). ● Convener, Career Counselling Cell of the college (July 2021-till date). ● DBT-Star College Scheme Coordinator (Biomedical Science) (April 2018- September 2020). 						

- Secretary, Staff Council of the college (April 2018- August 2020).
- Convener, Research and Project Assessment committee of the College (April 2019-till date).
- Teacher-in-charge of the Department of Biomedical Science (August 2018-March 2019; April 2015-July 2016; September 2012-March 2013; April 2009-August 2010).
- Convener, Time table committee of the College (April 2015 – April 2016).
- Convener, Central Purchase sub-committee for NR items (Biological Sciences) (April 2015 – till Date).
- Member, NSS cell of the college (April 2018- till date).
- Member, Internal Complaint Committee (2014-August 2016).
- Member, Gender Sensitizing Committee (April 2018-till date, April 2015-August 2016).
- Member, Editorial Board, NAAC committee of the College (Dec. 2015-August 2016).
- Teacher Representative in the Governing Body of the college (2012-2013).
- Convener, Academic committee of the College (November 2011- August 2013).
- Deputy Superintendent for the University of Delhi Practical and Theory Examination (both Semester and Annual mode) for the year 2011-2012 held in the College.
- Member of Departmental moderation committee for internal assessment (2008- till date).

Areas of Interest / Specialization

- Human Genetics
- Neuroepigenetics
- Biology of Human Diseases
- Genomics and Bioinformatics

Subjects Taught

Teaching Experience: ~16 Years
Human Genetics, Cell Biology, Biostatistics, Epidemiological Data Analysis, Computational Biology and *in silico* Drug Design.

Research Guidance

PhD Scholars

- Ms. Nitika, BSc, MSc (CSIR-JRF)- Role of protein kinases and phosphatases in life cycle of *Bacillus Anthracis*
- Ms. Amandeep Kaur, BSc, MSc (CSIR-JRF)- Role of 5-hydroxymethylcytosine in neurodegeneration
- Ms. Garima, BTech, MTech (Non-NET Fellow)- Insights into genes implicated in Type2 diabetic dyslipidemia associated atherosclerosis using pathways simulation
- Ms. Shiffali BSc, MSc (Non-NET Fellow)- Identification of novel neuroprotective molecules and their cellular targets for developing effective therapeutics for neurodegenerative disorders

Post graduate/ Undergraduate Scholars

- Mentored one year M.Sc (Bioinformatics) Dissertation of Ms. Jyoti, Jamia Milia Islamia University, New Delhi (01 July, 2014-30 May 2015).
- To inculcate the culture of innovation and research among students in the college, and to encourage them to pursue science as a career, I supervise undergraduate students as part of their summer projects.

Member, Research Advisory Committee

- Ph.D scholar (Ms. Nishtha Agarwal) registered at ACBR, University of Delhi

Publications Profile

1. Gagan Dhawan, Indu Singh, Uma Dhawan*, Pradeep Kumar* Synthesis and Characterization of Nano-Selenium: A Step-by-Step Guide for Undergraduate Students. *Journal of Chemical Education*, (2021) 98(9), 2982-2989.
2. Navrinder Kaur, Heerak Chugh, Meena K. Sakharkar, Uma Dhawan, Saravana Babu Chidambaram, and Ramesh Chandra. Neuroinflammation Mechanisms and Phytotherapeutic Intervention: A Systematic Review. *ACS Chemical Neuroscience* (2020) 11(22), 3707–3731.
3. Peter EA Ash*, Uma Dhawan*, Samantha Boudeau, Shuwen Lei, Yari Carlomagno, Mark Knobel, Louloua FA Al Mohanna, Steven R Boomhower, M Christopher Newland, David H Sherr, Benjamin Wolozin. Heavy Metal Neurotoxicants Induce ALS-Linked TDP-43 Pathology. *Toxicological Sciences* (2019) 167(1), 105-115. *Equal First Authors

4. Daniel J Apicco, Peter EA Ash, Brandon Maziuk, Chelsey LeBlang, Maria Medalla, Ali Al Abdullatif, Antonio Ferragud, Emily Botelho, Heather I Ballance, Uma Dhawan, Samantha Boudeau, Anna Lourdes Cruz, Daniel Kashy, Aria Wong, Lisa R Goldberg, Neema Yazdani, Cheng Zhang, Choong Y Ung, Yorghos Tripodis, Nicholas M Kanaan, Tsuneya Ikezu, Pietro Cottone, John Leszyk, Hu Li, Jennifer Luebke, Camron D Bryant, Benjamin Wolozin. Reducing the RNA binding protein TIA1 protects against tau-mediated neurodegeneration in vivo. *Nature Neuroscience* (2018) 21(1), 72-80.
5. Shilpi Aggarwal, Atish Gheware, Anurag Agrawal, Saurabh Ghosh, Indian Genome Variation Consortium, Bhavana Prasher & Mitali Mukerji. Combined genetic effects of EGLN1 and VWF modulate thrombotic outcome in hypoxia revealed by Ayurgenomics approach. *Journal of Translational Medicine* (2015) 13(1), 1-11. As a part of the consortium.
6. Gagan Dhawan, Seema Gupta, Manisha Jain, Uma Dhawan, Deepika, Priya Dunggriyal, Zainab Zaidi, Yashaswi Singh, Jyoti Thakur, Dharmendra, Aayush Chauhan and Keshav Sharma. An Explorative Study on Knowledge and Awareness of Health Problems Related to Usage of Fabric Dyes by Road Side Dyers in Delhi, India. *DU Journal of Undergraduate Research and Innovation* (2015) 1(3), 20-25.
7. Ankita Narang, Pankaj Jha, Dharendra Kumar, Rintu Kutum, Anupam Kumar Mondal, Indian Genome Variation Consortium, Debasis Dash, Mitali Mukerji. Extensive copy number variations in admixed Indian population of African ancestry: potential involvement in adaptation. *Genome Biology and Evolution* (2014) 6(12), 3171-3181. As a part of the consortium.
8. Pramod Gautam, Pankaj Jha, Dharendra Kumar, Shivani Tyagi, Binuja Varma, Debasis Dash, Arijit Mukhopadhyay, Mitali Mukerji, Indian Genome Variation Consortium. Spectrum of large copy number variations in 26 diverse Indian populations: potential involvement in phenotypic diversity. *Human Genetics* (2012) 131(1), 131-43. As a part of the consortium.
9. Ankita Narang, Pankaj Jha, Vimal Rawat, Arijit Mukhopadhyay, Debasis Dash, Indian Genome Variation Consortium, Anabha Basu and Mitali Mukerji. Recent admixture in an Indian population of African ancestry. *American Journal of Human Genetics* (2011) 89(1), 111-120. As a part of the consortium.
10. Shilpi Aggarwal, Sapna Negi, Pankaj Jha, Prashant K Singh, Tsering Stobdan, MA Qadar Pasha, Saurabh Ghosh, Anurag Agrawal, Bhavana Prasher, Mitali Mukerji, Indian Genome Variation Consortium. EGLN1 involvement in high-altitude adaptation revealed through genetic analysis of extreme constitution types defined in Ayurveda. *PNAS* (2010) 107(44), 18961-18966. As a part of the consortium.
11. Ankita Narang, Rishi Das Roy, Amit Chaurasia, Arijit Mukhopadhyay, Mitali Mukerji, Debasis Dash, Indian Genome Variation Consortium. IGVBrowser--a genomic variation resource from diverse Indian populations. *Database* (Oxford). (2010), baq022. As a part of the consortium.
12. Indian Genome Variation Consortium. Genetic landscape of the people of India: a canvas for disease gene exploration. *Journal of Genetics* (2008) 87, 3-20. As a part of the consortium.
13. Nithin Krishna, Surendra Mohan, BS Yashavantha, A Rammurthy, HB Kiran Kumar, Uma Mittal, Shivani Tyagi, Mitali Mukerji, Sanjeev Jain, Pramod Kumar Pal, Meera Purushottam. SCA 1, SCA 2 & SCA 3/MJD mutations in ataxia syndromes in southern India. *Indian J Med Res* (2007) 126 (5), 465-470.
14. Uma Mittal, Sangeeta Sharma, Rupali Chopra, Kalladka Dheeraj, Pramod Kr Pal, Achal K Srivastava, Mitali Mukerji. Insights into the mutational history and prevalence of SCA1 in the Indian population through anchored polymorphisms. *Human Genetics* (2005) 118 (1), 107-114.
15. Indian Genome Variation Consortium. The Indian Genome Variation database (IGVdb): a project overview. *Human Genetics* (2005) 118 (1), 1-11. As a part of the consortium.
16. Uma Mittal, Achal K Srivastava, Satish Jain, Sanjeev Jain, Mitali Mukerji. Founder haplotype for Machado-Joseph disease in the Indian population: novel insights from history and polymorphism studies. *Archives of Neurology* (2005) 62 (4), 637-640.
17. Samira Bahl, Komal Viridi, Uma Mittal, MP Sachdeva, AK Kalla, SE Holmes, E O'Hearn, RL Margolis, S Jain, AK Srivastava, Mitali Mukerji. Evidence of a common founder for SCA12 in the Indian population. *Annals of Human Genetics* (2005) 69 (5), 528-534.
18. Uma Mittal, Sanghamitra Roy, Satish Jain, Achal K Srivastava, Mitali Mukerji. Post-zygotic de novo trinucleotide repeat expansion at spinocerebellar ataxia type 7 locus: evidence from an Indian family. *Journal of Human Genetics* (2005) 50 (3), 155-157.
19. Neeraj Pandey, Uma Mittal, Achal K Srivastava, Mitali Mukerji. SMARCA2 and THAP11: potential candidates for polyglutamine disorders as evidenced from polymorphism and protein-folding simulation studies. *Journal of Human Genetics* (2004) 49 (11), 596-602.
20. Mona Ragothaman, Nagaraja Sarangmath, Shashi Chaudhary, Vishwamohini Khare, Uma Mittal, Sangeeta Sharma, Sreelatha Komatireddy, Subhabrata Chakrabarti, Mitali Mukerji, Ramesh C Juyal, BK Thelma, Uday B Muthane. Complex phenotypes in an Indian family with homozygous SCA2 mutations. *Annals of Neurology* (2004) 55(1), 130-133.

Chapters in Book

Integrated Omics Approaches to Infectious Diseases, Springer-Nature Publication, Singapore (2021)
(ISBN: 978-981-16-0690-8)

1. Amandeep Kaur Kang, Andrew M. Lynn and Uma Dhawan*, Deciphering the Role of Epigenetic Reprogramming in Host-Pathogen Interactions.
2. Heerak Chugh, Gagan Dhawan, Ramesh Chandra and Uma Dhawan*, Microarrays: A Road Map to Uncover Host Pathogen Interactions.
3. Shiffali Khurana, Uma Dhawan and Vibha Taneja, Non-Coding RNA profiling: Potential Application in Infectious Diseases.

Google Scholar: https://scholar.google.com/citations?hl=en&user=LHgFcaMAAAAJ&view_op=list_works&sortby=pubdate

Member, Editorial Board/Review Editor

Frontiers in Neuroscience

Reviewer

Chemosphere, Elsevier

Expert Reviews in Molecular Medicine, Cambridge University Press

Journal of Medical Virology, Wiley-Blackwell

RNA Biology, Taylor & Francis

Scientific Reports, Nature Research

Conference/ Workshops/ Summer School Organization/ Presentations

Workshops/ Summer School Organized

1. Convener for Brain Awareness Day organized at BCAS, University of Delhi on November 11, 2021 in association with Amity University, Noida funded by IBRO as a part of the International Brain Research Organization (IBRO)-DANA foundation funded Brain Awareness week.
2. Convener for International webinar series (2020-21) on "Research Integrity and Ethics" being organized by BCAS, University of Delhi.
3. Coordinator for the "National Science Series 2020: Igniting Young Minds", a four-day Virtual Learning Program organized by Bhaskaracharya College of Applied Sciences under the aegis of Star College Scheme, Department of Biotechnology, Government of India and IQAC of the college from August 4-7, 2020.
4. Convener for the two-day workshop on "Handling and Care of Laboratory Animals" organized by the Department of Biomedical Science in association with CLAR, SLS, JNU on October 31 and November 01, 2018.
5. Course Coordinator for MHRD GIAN Course on RNA Metabolism and Neurodegenerative Diseases held from April 2-7, 2018 at University of Delhi.
6. Coordinator for a three-day workshop on "Computational Methods in Drug Discovery" organized by Special Centre for Molecular Medicine, JNU, New Delhi and National Network on Mathematical Modeling and Computational Biology (NNMCB), supported by Science and Engineering Research Board, Government of India, August 9-11, 2016.
7. Coordinator for the Pre-Entrance Summer School for M.Sc-Ph.D Combined degree Program of ACBR, University of Delhi organized by Institute of Life Long Learning, University of Delhi for economically weaker section of the society, May 28- June 13, 2016.
8. Coordinator for the add-on certificate course in Bioinformatics and in silico Drug Discovery jointly organized by Bhaskaracharya College of Applied Sciences and Acharya Narendra Dev College, University of Delhi (2012-16).
9. Coordinator for a two-day workshop on "Proteomics and Proteogenomics", January 10-11, 2015 organized by Department of Biomedical Science, BCAS, University of Delhi under Star College Scheme of Department of Biotechnology, Government of India.
10. Coordinator for a three-day workshop on "Statistical Analysis of Biological Data" for undergraduate students at BCAS, University of Delhi under the aegis of DBT Star College Scheme from October 9-11, 2014.
11. Organized a one-week workshop on "Basic Molecular Biology Techniques" for undergraduate students at BCAS, University of Delhi from December 12-16, 2011.

Contribution to the Laboratory Manual

1. Laboratory manual for practical course on "Biochemistry and Environmental Chemistry" for B.Sc (Hons) Chemistry (CHHT-514 and CHHP-514) for the workshop organized by Department of Chemistry, University of Delhi, July 2-7, 2012 for college teachers.

2. A practical on "To learn the application of polymerase chain reaction (PCR) in DNA fingerprinting for parentage determination" is contributed to the laboratory manual for DST funded INSPIRE science camp for the school students organized by BCAS, University of Delhi, July 2010.

Invited Lecture/ Presentation

International: 03 National: 25

International:

1. Invited lecture in ASEAN-INDIA Training Workshop-2019 on 'Emerging Technologies for Young Biotech Professionals from ASEAN Countries', September 20-28, 2019, CSIR-IGIB, New Delhi. Title: A cell-based screening of environmental toxicants identifies potential risk factors for ALS.
2. Invited speaker in the 4th International Conference on 'Innovative Approaches in Applied Sciences & Technology' (iCiAsT-2019), June 25-29, 2019, Kuala Lumpur, Malaysia. Title: Heavy Metal Toxicants Trigger TDP-43 Pathology Associated With ALS.
3. Invited lecture at Department of Biology, Georgia State University, Atlanta, USA on August 7, 2017.

National:

1. Resource person during the five-day National Workshop with Hands-on training on "Bioinformatics and Biostatistics: A Beginner's Guide" organized by the Department of Biochemistry, Shivaji College, University of Delhi under DBT Star College Scheme from January 16-20, 2021.
Title of the session: 'R' tool for statistical analysis of biological data.
2. Invited for keynote lecture at National Workshop on Basics of Molecular Biology and Nanobiotechnology Techniques, February 26-29, 2020, Department of Biotechnology, IIS University, Jaipur.
Title: A Hitchhiker's Guide to Molecular Biology Techniques.
3. Invited lecture at National conference on 'Emerging Trends in Ayurvedic and Biomedical Sciences', February 19-20, 2020, Bundelkhand University, Jhansi.
Title: Heavy Metals as Potential Risk Factors for Amyotrophic Lateral Sclerosis.
4. Invited speaker in a two-day symposium on 'Exploring Mind, Brain and Behavior', March 28-29, 2019, Amity Institute of Neuropsychology and Neurosciences (AINN), Amity University Noida Campus.
Title: Heavy Metal Neurotoxicants Induce ALS-Linked TDP-43 Pathology
5. Invited lecture for research scholars for PhD coursework on January 16, 2020 at ACBR, University of Delhi.
Title: Biostatistical data analysis
6. Resource Person in the workshop on "Learning R programming Skills and Applications to Proteomics" held on March 15-16, 2019 organized by ANDC, University of Delhi in association with CSIR-IGIB, New Delhi.
Title: Introduction to Proteogenomics and Hands-on session on mass spectrometry data analysis.
7. Resource Person for MHRD-GIAN Course on RNA Metabolism and Neurodegenerative Diseases to be held from April 2-7, 2018 at Department of Chemistry, University of Delhi.
8. Oral presentation at 11th Annual Symposium on "Frontiers in Biomedical Sciences (FBR-2018) Challenges in Human Health: Prevention, Diagnosis and Cure", February 19-21, 2018 organized by Dr. B. R. Ambedkar Centre for Biomedical Research, University of Delhi.
9. Invited to deliver a talk in an interaction session with Prof. David Anderson, California Institute of Technology, USA and Dr. Emilie Marcus, The CEO of Cell Press and Chief Editor of Cell organized by School of Computational and Integrative Sciences, JNU, New Delhi on January 15, 2018.
10. Invited Lecture in Computational Methods in Drug Discovery organized by Special Centre for Molecular Medicine, JNU, New Delhi and National Network on Mathematical Modeling and Computational Biology (NNMCB), supported by Science and Engineering Research Board, Government of India from August 9-11, 2016.
Title of my talk: Introduction to R followed by Hands-on Session.
11. Resource Person, Pre-Entrance Summer School for M.Sc-Ph.D combined degree program (Biomedical Science) from May 28 -June 13, 2016, organized by ILL, University of Delhi.
12. Resource Person for third batch (2015-16) of Certificate Course in Bioinformatics and *in silico* Drug Discovery (BIDD) jointly organized by ANDC and BCAS, University of Delhi.
13. Resource Person in Instructional Workshop on Proteomics and Proteogenomics: Hands-on Protein Identification and Gene Discovery from Mass Spectrometry Data, October 2-4, 2015 jointly organized by Acharya Narendra Dev College and National Network on Mathematical Modeling and Computational Biology (NNMCB), supported by Science and Engineering Research Board, Government of India.
14. Resource Person in Interdisciplinary Refresher Course in Computer science Bioinformatics and Information Technology organized by ASC-HRDC-JNU, Delhi from August 24-September 18, 2015.

Title: Microarray Data Analysis.

15. Resource Person in an Instructional Workshop on Gene Expression Analysis: Hands-on using Microarray and Next Generation Sequencing Data, March 7-9, 2015, sponsored by National Network on Mathematical Modeling and Computational Biology (NNMCB), Science and Engineering Research Board, Government of India.
16. Resource person in the workshop on "Proteomics and Proteogenomics" (January 10-11, 2015) organized by Department of Biomedical Science, BCAS, University of Delhi under Star College Scheme of Department of Biotechnology, Government of India.
17. Resource person in the workshop on "Statistical Analysis of Biological Data" (October 9-11, 2014) organized by Department of Biomedical Science, BCAS, University of Delhi under Star College Scheme of Department of Biotechnology, Government of India.
18. Resource person in an add-on certificate course in Bioinformatics and in silico Drug Discovery (First and Second batch) jointly organized by Acharya Narendra Dev College and Bhaskaracharya College of Applied Sciences, University of Delhi (2012-13 and 2013-15).
19. Resource person in the workshop on "Field trial of training package in Biology at Higher Secondary stage" for reviewing and editing the training material developed for teachers teaching biology organized Department of Education in Science and Mathematics DESM, NCERT from February 2-10, 2015.
20. Resource person in workshop on "Development of training package in Biology for Higher Secondary stage" (January 13-17, 2014 and March 10-13, 2014) and a part of committee constituted by NCERT for the reviewing and development of reference material for teachers (Class XI and XII).
21. Resource person for DST funded INSPIRE program for the school students organized by BCAS, University of Delhi, February 5-9, 2013.
22. Invited lecture and Resource person in workshop on theory and practical course "Biochemistry and Environmental Chemistry" for B.Sc (Hons) Chemistry (CHHT-514 and CHHP-514) organized by Department of Chemistry, University of Delhi, July 2-7, 2012.
23. Resource person for DST funded INSPIRE program for the school students organized by BCAS, University of Delhi, July 5-9, 2010.
24. Resource person in the workshop entitled "Development of online quizzes in Life Sciences" organized by Institute of Lifelong Learning University of Delhi and developed online quizzes (Biological Sciences) for the undergraduate students, April 13, 2009.
25. Resource person for short-term course Medical Nutrition Therapy organized by Department of Food Technology, BCAS, University of Delhi (2007-2008).

Refresher/ Faculty Development Programs/ Orientation Courses/Training Programs

1. Ten Days Online Faculty Development Program (FDP) on "Teaching Learning and Assessment" Ministry of Education-sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), to be organized by Teaching Learning Centre (TLC), Central University of Rajasthan (November 23-December 03, 2020)
2. Ten Days Online MOOC Short Term Certificate Course "Know Thyself: Balancing Mind, Body and Soul" organized by Maitreyi College, University of Delhi (September 30-October 9, 2020)
3. One Week Online Faculty Development Program (FDP) on "Development of Teacher's e-Kit and MOOCs in Four Quadrant Format of e-Content" GAD-TLC, SGBT Khalsa College, University of Delhi under Ministry of Education sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) (September 12-20, 2020)
4. Smarter Experimentation for Chemists: Five-day online training program on "Design of Experiments" organized by Royal Society of Chemistry, London (June 22-26, 2020)
5. One Week online FDP "Open Source Tools For Research" under MHRD-sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), organized by Teaching Learning Centre (TLC), Ramanujan College in association with Research Development and Services Cell, Ramanujan College, University of Delhi (June 8-14, 2020)
6. One-week webinar cum Faculty Development Program (FDP) on "Current Progress and Future Prospects of Biotechnology" organized by Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad (June 08-13, 2020)
7. American Chemical Society (ACS) Reviewer Labs-Paper Review Training Course June, 2020
8. Faculty Training Program of University of Delhi to pursue master's degree in Bioinformatics from the College of Science and Engineering, University of Edinburgh, Scotland, UK (September 01, 2010- August 31, 2011)
9. Refresher Course in Computer Science, Bioinformatics and Information Technology, UGC-HRDC, JNU, New Delhi, August 24-September 18, 2015

10. UGC Sponsored Refresher Course in Life Sciences/ Biological Science/ Bioinformatics organized by CPDHE, University of Delhi, February 25-March 16, 2013.

Workshops/ Symposiums

1. Three days online Faculty Development Programme on "Online Transaction of Courses with Moodle-LMS" held from May 08-10, 2020 organized by BCAS, University of Delhi.
2. Two days' workshop on "Design of Experiment (DoE) using statistical tools" organized by the Phytomics: The Botanical society of Bhaskaracharya College of Applied Sciences, University of Delhi held on November 6-7, 2020.
3. 4th International Conference on "Innovative Approaches in Applied Sciences & Technology" iCiAsT-2019 (June 25-29, 2019), Kuala Lumpur, Malaysia.
4. Pre-Conference workshops on "Experimental Design – by NC3R's UK and Hygiene in Animal Facilities" by Tecniplast, Italy on November 24, 2017 organized at CSIR-IGIB, Mathura Road, Delhi.
5. Two days' workshop on "Sexual Harassment of Women at Workplace" (Prevention, Prohibition and Redressal Act, 2013) organized by Internal Complaints Committee, JNU on May 1-2, 2018.
6. "Animal Behaviour and Welfare" workshop of International Society for Applied Ethology organized by CSIR-IGIB, Delhi on December 8, 2018.
7. Attended training and passed the examination for working with live vertebrate animals with the Institutional Animal Care and Use Committee (IACUC) at Boston University, USA on September 20, 2016.
8. Attended Institutional Animal Care and Use Committee (IACUC) orientation course at Boston University, USA on September 19, 2016.
9. UGC-Sponsored 1st Refresher Course in Computer Sciences, Bioinformatics and Information Technology organized by Academic Staff College, JNU, New Delhi from August 24-September 18, 2015.
10. Participated in the Mentorship workshop for women scientists organized by Department of Biotechnology, Govt. of India and coordinated by Biotech Consortium India Limited at INSA, New Delhi, July 11, 2013.
11. UGC Sponsored Refresher Course in Life Sciences/ Biological Science/ Bioinformatics organized by CPDHE, University of Delhi, February 25-March 16, 2013.
12. Genomeet 2013- "Vitamin B12 and one carbon metabolism in Health and Diseases: A genomic perspective" held at the CSIR-Institute of Genomics and Integrative Biology, Delhi, India, March 8–10, 2013.
13. 32nd Annual Convention of Indian Association for Cancer Research (IACR) on Emerging Trends in Cancer Research: Road to Prevention & Cure and an International Symposium on Infection & Cancer organized by Dr. B.R. Ambedkar Centre for Biomedical Research (ACBR), University of Delhi, February 13-16, 2013.
14. Workshop/ conference on Emerging Trends in Development of Drugs and Devices jointly organized by Department of Chemistry, University of Delhi and three National Science Academies of India, January 21-23, 2013.
15. One-day workshop on laboratory animal welfare and alternative models, organized by CPCSEA and CSIR-IGIB, 6th July, 2012
16. One-year faculty training program of University of Delhi to do master's in Bioinformatics from University of Edinburgh, Scotland, UK, September, 2010-2011.
17. Workshop on "Bioinformatics and Molecular Modeling in Drug Design" organized by ACBR, University of Delhi, December 22-24, 2009.
18. Training course on MS-Access organized by DUCC, University of Delhi, May 18-29, 2009.
19. A three-day workshop on e-learning organized by University of Delhi, South Campus, September, 2006.

Research Projects (Major Grants/Research Collaboration)

Ongoing Research Projects

1. Principal Investigator, SERB-DST Project (2018-21)
Title of the project: " Significance of 5-Hydroxymethylcytosine in Neurodegeneration Associated with Rapid Eye Movement Sleep Deprivation ".
Duration: Three years (August, 2018- August, 2021); Grant received: Rs. 40.11 Lakhs.
2. Co-Investigator, ICMR Project (2018-21)
Title of the project: "Screening and identification of cellular targets of small molecules in ameliorating amyloid disorders using yeast model ".
Duration: Three years (September, 2018- September, 2021).

Completed Research Projects

1. Innovation Project for Colleges Scheme of University of Delhi
Title of the project: "Exploring the Involvement of Mechanotransduction Network in Inter-individual Differences through Ayurgenomics Approach".
Duration: One year (July 2015-July 2016)
2. Innovation Project for Colleges Scheme of University of Delhi
Title of the project: "Identification of Genetic Factors for Coronary Artery Disease and Its Association with other Atherogenic Risk Factors in Young Indians".
Duration: One year (July 2015-July 2016)
3. Innovation Project for Colleges Scheme of University of Delhi
Title of the project: "Genetic curation of ataxia phenomes for establishment of predictive and rapid diagnostic paradigm".
Duration: One year (July 2013-July 2015)
4. Innovation Project for Colleges Scheme of University of Delhi
Title of the project: "Understanding the Burden of Vitamin B12 and Folate Deficiency in Young Indians".
Duration: One year (July 2013-July 2015)

Awards and Distinctions

- **INSA Teachers Award** (2021), Indian National Science Academy, Government of India.
- **Early Career Research Award** (2017) by SERB-DST, Government of India.
- **UGC-Raman Award** for Post-Doctoral Research (2015-16) at Department of Pharmacology and Neurology, Boston University School of Medicine, Massachusetts, USA.
- **Appreciation Award** for the project "Exploring the Involvement of Mechanotransduction Network in Inter-individual Differences through Ayurgenomics Approach" involving undergraduate students was given during 94th Foundation Day-2015 of University of Delhi.
- **Best Display Award** for the DU Innovation project titled "Genetic curation of ataxia phenomes for establishment of predictive and rapid diagnostic paradigm" at University of Delhi, Academic and Cultural Festival "Antardhwani-2015".
- **Universitas 21 Fellowship**, University of Delhi under Faculty Training Program to do one-year masters in Bioinformatics from The University of Edinburgh, UK (2010-2011).
- **Best Poster** Presentation, 2nd National Conference of Biotechnology Society of India, BioTech 2004 Challenges and Opportunities organized by CSIR-Institute of Genomics and Integrative Biology, Delhi, (October 2004).
- **CSIR-UGC Senior Research Fellowship** (2002-05) and Junior Research Fellowship (2000-02).
- Qualified **Graduate Aptitude Test in Engineering** with score of 93.20 (GATE-2000).
- **CSIR-Catch them young Fellowship** during M.Sc., University of Delhi (1999-2000) under grant-in aid scheme entitled "Human Resource Development for Biomedical Research: CSIR-University Interaction Model".
- **National Scholarship** by University of Delhi (1998-1999).
- **Certificate of merit** for securing highest marks in B.Sc. (Hons.) Zoology (all three years combined) University of Delhi (1998).
- **Teachers' Memorial Prize** for securing third position in Zoology (Hons.) III year, University of Delhi (1997-98).
- **Proficiency Prize** for securing highest marks in Zoology (Hons.) I year, University of Delhi (1995-96).
- **Most promising student of science stream award**, Queen Mary's School, Delhi (1994-95).

Association With Professional Bodies

- Member, Royal Society of Biology, London
- Member, The Japan Neuroscience Society
- Member, British Society for Antimicrobial Chemotherapy
- Member, Global Network for Anti-Microbial Resistance & Infection Prevention
- Member, International Society for Infectious Diseases
- Life Member, Indian Academy of Neurosciences
- Associate Life Member, Indian Academy of Medical Genetics
- Life Member, Society of Biological Chemists of India
- Member, Indian Science Congress Association
- Member, National Network for Mathematical and Computational Biology, SERB, DST, India
- Member, National Institute for Technical Training and Skill Development

Other Activities

Curriculum Development

- Involved as convener, co-convener or member of various subject-wise committees constituted by ACBR, University of Delhi for restructuring of 3-year semester mode (2009-10), FYUP (2012-13), CBCS (2014-15, 2017-18) and LOCF (2018-19) syllabi of B.Sc. (Hons) Biomedical Science course of University of Delhi.
- Designed Neuroinformatics course for M.Tech students (2019) at Netaji Subhas University of Technology (NSUT), New Delhi
- Course Reviewer (June 2018) for B.Sc. (H) Neurosciences and M.Sc. Neurosciences of Amity Institute of Neuropsychology and Neurosciences, Amity University, Noida.
- Member of the course advisory committee and Coordinator for the add-on certificate course in Bioinformatics and in silico Drug Discovery jointly organized by Acharya Narendra Dev College and Bhaskaracharya College of Applied Sciences, University of Delhi.

Extra-curricular/ Extension activities

- Coordinator for **Sketchbook2020**- Webinar series for Alumni talks- Nine webinars were held during May-July, 2020. The aim of this series is to provide a platform to the students and faculty members to interact with the alumni of the Department of Biomedical Science. This provided the opportunity not only to our students but also to students from other institutes to learn from their experiences and gain insights into various career opportunities.
- Organized various activities like Short talk on October 01, 2019 and Debate competition on August 29, 2018 for Gender Champion selection as a member of Gender Sensitization committee.
- Organized Swachhata Day in the department on August 08, 2018. The members of the department also took the Swachhata pledge on September 05, 2018 followed by screening of a short movie on the Swachhata theme on September 07, 2018.
- Organized Training program for the lab staff from six different departments of the college on "Handling of Biomedical Waste" on July 19, 2018 as one of the members of Swachhata and Waste Management Committee in the Department of Biomedical Science.
- Jury Member for Scientific Writing Competition organized by School of Computational and Integrative Sciences, JNU, New Delhi concurrently with InCoB2018, September 26-28, 2018, under the aegis of ISCB SC-RSG-India.
- Jury Member for Department of Science and Technology-INSPIRE JURY PROCESS: 3rd National Level Exhibition and Project Competition (NLEPC) for school students during December 06-07, 2015 at IIT, Delhi.
- Proposed and started a new add-on course (approx 120 hours) in Bioinformatics and *in silico* Drug Discovery jointly organized by Acharya Narendra Dev College and Bhaskaracharya College of Applied Sciences from August 2012.
- Appointed as Mentor, since 2015 by National Network of Mathematical and Computational Biology (NNMCB) funded by Science and Engineering Research Board (SERB), Government of India, to provide training in mathematical and computational biology to both undergraduate/ post graduate students and to promote research activities.
- Development of training package in Biology for Higher Secondary stage and part of committee constituted by DESM, NCERT for the reviewing and development of reference material for school teachers (Class XI and XII).
- Resource person in the workshop "Laboratory Staff Skill Development Program" organized by BCAS, University of Delhi sponsored by DBT Star College Scheme, December 15-18, 2014.
- Organized a Health Check-up Camp in BCAS (April 9, 2014) and ANDC (September 23-24, 2014) wherein basic biochemical tests like lipid profile (cholesterol, LDL, HDL, triglyceride), urea, creatinine, Vitamin B12 and Folate levels

were done for the college students and staff free of cost under DU Innovation Project (2013-15).

- Organized a blood camp on September 11, 2014 sponsored by DBT Star College Scheme to determine the blood group of the students and staff of the college who did not know their blood groups and a database of blood group of all the students who volunteered in this initiative was prepared for use in case of any emergency.
- I was invited as an external expert for the comprehensive examination of a PhD student (Ms Sangeeta Sharma) on July 20, 2012 at The Energy Resource Institute (TERI), India Habitat Center Complex, Lodhi Road, New Delhi
- Inviting speakers from various universities/ research institutes from India as well as abroad to interact with our young students, deliver talks, enable undergraduate research and designing short duration modules for adding values to the existing courses.
- Resource person for DST funded INSPIRE program for the school students organized by BCAS, University of Delhi (July 2010).
- I contributed to the module development and validation of 'GeneProf', a web-based, graphical software suite that allows users to analyze data produced using next-generation, high-throughput sequencing platforms (www.geneprof.org) with Professor Simon Tomlinson, Institute for Stem Cell Research, Centre for Regenerative Medicine, University of Edinburgh, Scotland, UK.

Educational visits organized/ coordinated

- National Science Day program of Regional Centre for Biotechnology, Faridabad on February 28, 2020 wherein students participated in various activities like debate, skit, sketching, science quiz etc.
- National conference on 'Emerging Trends in Ayurvedic and Biomedical Sciences', February 19-20, 2020, Bundelkhand University, Jhansi. A group of 24 students of B.Sc. (H) Biomedical Science attended the conference.
- 10th edition of the TNQ Distinguished Lectures in the Life Sciences 2020 by Dr. Venkatraman Ramakrishnan, Nobel Laureate and President of the Royal Society, London on January 24, 2020. A group of 67 students of the departments of Biomedical Science and Microbiology attended this lecture at Jawaharlal Nehru Auditorium, AIIMS, New Delhi.
- Coordinator, Students' visit to CSIR-IGIB on CSIR Open Day on September 26, 2019 and September 27, 2018. The visit provided excellent opportunity to the students for interacting with the experts in the latest fields of science and technology.
- Coordinator, Students' visit to Regional Center for Biotechnology on October 16, 2019.

Dr. Uma Dhawan