

Shipra

Ph.D. student

Cardiovascular research, Mitochondrial biology research, Immunology

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Academic Highlights -

- UGC-SRF fellowship awardee (Oct 2022- present)
- UGC-JRF fellowship awardee (Oct 2020- Oct 2022)
- Awarded Undergraduate Research fellowship for Innovation projects 2015-2016 by University of Delhi
- Qualified CSIR NET JRF December 2019 with AIR of 76 in Life Sciences (total number of candidates that appeared in exam 83,055).
- Qualified DBT-BET 2020.
- Qualified Joint Graduate Entrance Examination in Biology and Interdisciplinary Life Sciences exam; JGEEBILS-2017, 2019 & 2020.
- Qualified GATE-2019 (Graduate Aptitude test in Engineering- 2019) in Biotechnology and GATE-2020 in Life sciences.
- Qualified IIT- JAM-2017 in Biological Sciences and Biotechnology.
- Qualified other national level exams like JNU-CEEB (2017), ICAR exam (2017), etc.

ACADEMIC RECORD-

Ph.D.

2020- Present

All India Institute of Medical Sciences, New Delhi

Department of Cardiac Biochemistry

Thesis entitled –

“Elucidating the intricate network of alarmins-autophagy-necroptosis in driving inflammation, immune regulation and cardiac homeostasis in doxorubicin induced model of cardiomyopathy”

Post-graduation

2017-2019

Jamia Hamdard, New Delhi

M.Sc. Biotechnology

Marks- 77.27%

- Major subjects- Immunology, Molecular biology, Cell biology, Biochemistry, Genetics, Animal and Plant Biotechnology, Genetic engineering

Graduation

2014-2017

Delhi University, Shivaji College, New Delhi

B.Sc. Life Sciences

Marks obtained- 77.88%

- Major subjects- Zoology, Botany, Chemistry, basic Mathematics and Computer sciences

12th standard

2013-2014

Central Board of Secondary Education (CBSE), Delhi

Holy Child Sr. Sec. School, New Delhi

Marks obtained- 76.4%

- Major subjects- Physics, Chemistry, Mathematics, Biology, English

10th standard

2011-2012

Central Board of Secondary Education (CBSE), Delhi

Holy Child Sr. Sec. School, New Delhi

CGPA- 7.8/10

- Major subjects- Science, Mathematics, Social science, English, Hindi

Scholarships -

- Awarded Undergraduate Research fellowship for innovation projects 2015-2016 by University of Delhi for the project entitled “A dried blood spot collection study for the detection of Brucellosis in bovine population of Indian villages- an ELISA based system specific to Omp25 and Omp28 proteins of *Brucella abortus* ”
- Awarded Junior Research fellowship by University Grants Commission from October 2020 to October 2022
- Awarded Senior Research fellowship by University Grants Commission from October 2022 to October 2025 (ongoing fellowship)

Projects -

- Worked as a Junior Research Fellow at All India Institute of Medical Sciences, New Delhi (Feb 2020- October 2020) under the supervision of Dr. Rima Dada, Professor, Laboratory of Molecular Reproduction and Genetics, Department of Anatomy, AIIMS, Delhi in the project entitled “Analyzing the link between unexplained male infertility and cancer”
- Dissertation project entitled “Role of Ocular Ligands in Immune Dysregulation in Retinitis Pigmentosa using *rd^l* Mouse Model”; a project done at National Institute of Immunology under the supervision of Dr. Pramod K. Upadhyay, Emeritus Scientist, Product Development Cell, New Delhi
- A member of Delhi University’s undergraduate research program, an innovation project entitled "A dried blood spot collection study for the detection of Brucellosis in bovine population of Indian villages- an ELISA based system specific to Omp25 and Omp28 proteins of *Brucella abortus* ”.

Publications -

- **Shipra**; Tembhre, M.K.; Hote, M.P.; Bhari, N.; Lakshmy, R.; Kumaran, S. PGC1 α agonist rescues doxorubicin induced cardiomyopathy by mitigating the oxidative stress and necroptosis. *Antioxidants* 2023 (revision submitted/ decision pending)
- Tembhre, M. K.; **Shipra**; Imran, S.; Jaiswal, K., Chapter 4 - The modulatory approaches of microbiome therapeutics. In *Microbiome Therapeutics*, Chauhan, N. S.; Kumar, S., Eds. Academic Press: 2023; pp 95-126
- Kant N, Kulshreshtha P, Singh R, et al. A study to identify the practices of the buffalo keepers which inadvertently lead to the spread of brucellosis in Delhi. *BMC Vet Res.* 2018;14(1):329. Published 2018 Nov 6. doi:10.1186/s12917-018-1670-2.

Technical Skills-

- Molecular Biology – PCR, qPCR, Gel electrophoresis, Western Blot
- Cell culture – Primary cells and Mammalian Cell line
- Immunology– Enzyme Linked Immuno-Sorbent Assay (ELISA), Flow cytometry, Immunocytochemistry assay (ICC), Immunohistochemistry assay (IHC)
- Microscopy – Fluorescence, Bright field, Phase contrast, Confocal and Electron microscopy
- Animal work (rodents) – Handling, Dissections, Cardiac Imaging (Echocardiography and MRI)
- Clinical work –Phlebotomy and Peripheral Blood Processing

Hands on Training / Workshops -

- 37th National training programs in biological electron microscopy 2021 – 2022 conducted by All India Institute of Medical Sciences, New Delhi (2 weeks) - Hands on workshop.

- National Workshop “Karyashala – High-end workshop on advanced techniques in live confocal microscopy”, organized by Indian Institute of Science, Division of Biological Sciences, Bangalore from 24th to 30th April 2022.

Poster Presentations -

- Presented poster entitled “Downregulation of HMGB1 and HSP60 transcript levels in peripheral blood of dilated cardiomyopathy patients and it’s correlation with disease severity”, on 18th October 2022 for Annual Research Day of All India Institute of Medical Sciences, New Delhi.
- Poster presentation entitled “PGC1 α agonist rescues doxorubicin-mediated cardiac dysfunction by targeting autophagy, oxidative stress and tissue remodeling”. Abstract submitted to APCON 2023 Conference to be held in December 2023.

Other Workshops / Webinars-

- 1) Attended workshop entitled “Writing research paper” organized by All India Institute of Medical Sciences, New Delhi in Feb 2020 (1 day). A Research paper writing workshop organized by A.I.I.M.S, New Delhi in Feb 2020.
- 2) Attended workshop on Research Methodology entitled “Research Methodology, Writing and communication” (duration =1 week) in March 2020 organized by All India Institute of Medical Sciences, New Delhi from 02/03/2020 to 07/03/2020.
- 3) National webinar on “Data Analysis and Statistical Computing” on 27 May 2020, organized by Dr. Bhimrao Ambedkar University, Agra
- 4) 5-days online workshop on “single-cell RNA-seq data analysis” from 22/06/2020 to 26/06/2020 hosted by pathfinder research and training foundation.
- 5) Workshop on R-programming and its application in biomedical research from 07/08/2020 to 09/08/2020 (3 days workshop) from Pathfinder Research and Training Foundation.
- 6) Workshop on essential Biostatistics for Biologist conducted from 15 Sep 2020 to 18 Sep 2020 (4 days workshop organized by Amazing Biotech Pvt. Ltd.
- 7) Workshop on Single cell RNA seq Data analysis from 22/06/2020 to 26/06/2020 (5 day workshop) conducted by Pathfinder Research and Training Foundation.
- 8) Workshop on essentials of Microscopy: from basics to image analysis, conducted from 22 Aug 2020 to 24 Aug 2020 (3 day online workshop) conducted by Amazing Biotech pvt. Ltd.
- 9) Webinar on "Quantitative Mass Spectrometry of Biomolecules- Utility from Bench to Bedside" on 22 Sep 2020
- 10) Webinar on "Chromatography, Ek prem kadha" on 27 Jun 2020
- 11) Mass Spectrometry in Proteomics workshop from 15 July 2020 to 18 July 2020 (4days workshop) conducted by Amazing Biotech pvt. Ltd.
- 12) Practical approach to Flow cytometry webinar conducted by AIIMS, CCRF facility, on 17 Sep 2020.
- 13) Webinar on PCR – Basics, Working and Optimization on 28th February 2021
- 14) Workshop on “Confocal microscopy based drug screening (high content imaging)” organized by ATPC on 22nd October 2021.
- 15) UNESCO sponsored virtual workshop on mass spectrometry based proteomics organized by ATPC on 12-13th October 2021.
- 16) Abcam troubleshooting workshop for Western Blotting and Immunofluorescence organized at AIIMS, Delhi

Areas of expertise-

- Cardiovascular biology
- Mitochondrial biology
- Autophagy and Cell Death
- Immunology

Personal skills-

- Exploratory and inquisitive
- Good observation skills
- Optimistic and jolly
- Patient listener
- Powerful presenter

References-

Available on Request