Curriculam Vitae

NAME- Urbi Roy

EMAIL- urbi.iisc@gmail.com / urbiroy@iisc.ac.in

PHONE- +91 9062638067,

LAB NUMBER- 080-22932674

DATE OF BIRTH- 17/03/1993

NATIONALITY- Indian

GENDER- Female

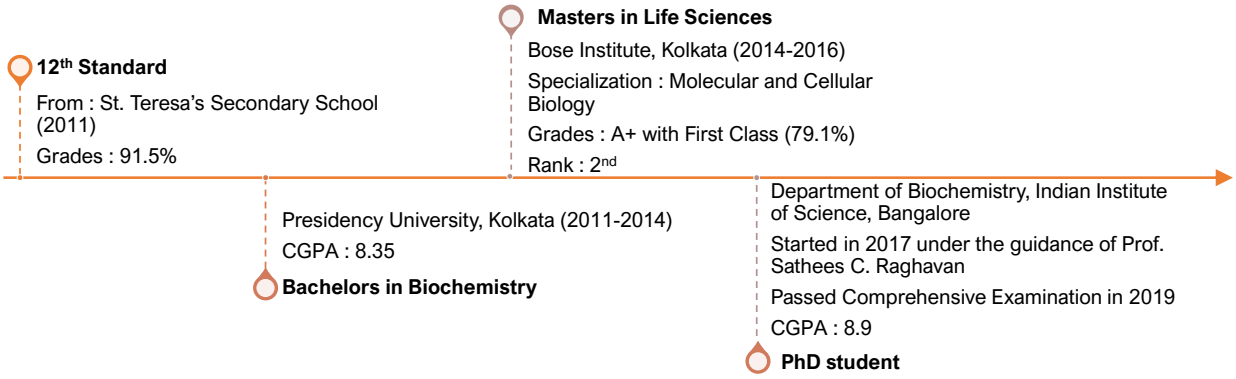
ADDRESS FOR CORRESPONDANCE

Urbi Roy
C/o Dr. Sathees C. Raghavan
Lab No. FA10
Department of Biochemistry, Indian Institute of Science
Bangalore-560012

PERMANENT ADDRESS

North Baksara, Palpara
P.O- Baksara
Howrah-711110

EDUCATION



CURRENT POSITION

Joined as a PhD student in the Department of Biochemistry, Indian Institute of Science, Bangalore in 2017 under the guidance of Prof. Sathees C. Raghavan.

RESEARCH PROJECTS CONDUCTED

1) Understanding the Molecular Mechanism Behind Fragility of *BCL11B* in T-cell Acute Lymphoblastic Leukemia.

2) Functional elucidation of the role of the enzyme, Activation-Induced Cytidine deaminase (AID) in T lymphocytes.
3) miRNA-mediated regulation of RAG1 expression
4) Unravelling the mechanism of *BCL6* chromosomal translocations (in collaboration with other lab colleagues).

RESEARCH EXPERIENCE

- Master's dissertation on **"**Ceramide mediated upregulation of PKCζ and its effects on down regulation of Akt in a murine metastatic melanoma cell line" from Jan, 2016 to July, 2016 under the guidance of Prof. Subrata Majumdar, Bose Institute, Kolkata, India.
- Worked as a Project JRF in the Department of Microbiology and Cell Biology, Indian Institute of Science, Bangalore from September 2016-July 2017 on "Understanding the role of splicing factors in promoting the catalytic activity of the spliceosome machinery in budding yeast" under the guidance of Prof. Usha Vijayraghavan.
- Junior Research Fellow, Department of Biochemistry, Indian Institute of Science, August 2017- August 2019; Research Supervisor: Prof. Sathees C. Raghavan.
- Senior Research Fellow, Department of Biochemistry, Indian Institute of Science, August 2019-Present; Research Supervisor: Prof. Sathees C. Raghavan.

TECHNICAL SKILLS

- Animal handling, maintenance and dissection (mice)
- Semi-quantitative and quantitative real time-PCR
- DNA gel electrophoresis (Native PAGE, Denaturing PAGE, Agarose gel electrophoresis)
- Protein gel electrophoresis
- Immunoblotting
- Preparation of electrocompetent cells
- Overexpression and purification of proteins using bacterial systems (His-tagged/GST-tagged)
- Sorting of T and B lymphocytes into different developmental stages using fluorescence activated cell sorter
- Cell viability assays
- Flow cytometry
- Mammalian cell culture and maintenance
- Primary cell culture (T and B lymphocytes)
- Electrophoretic mobility shift assay
- Immunofluorescence
- Transfection of mammalian cells
- CRISPR-Cas9 mediated knockout in mammalian cells
- Radioactive DNA labelling techniques (γP^{32})
- Molecular cloning
- Bisulphite modification assay
- Southern Blotting
- Dimethylsulphate footprinting

- P1 nuclease assay
- Chromatin immunoprecipitation assay
- Spot assay
- Biolayer interferometry
- Circular dichroism
- Taq polymerase and primer extension assay
- AGO-CLIP

PUBLICATIONS

➢ PUBLISHED

- **Roy, U**, Raghavan, SC. Deleterious point mutations in T-cell acute lymphoblastic leukemia: Mechanistic insights into leukemogenesis. *Int. J. Cancer*. 2021; 149: 1210–1220. https://doi.org/10.1002/ijc.33527.
- Kumari R*, **Roy U***, Desai S, Nilavar NM, Van Nieuwenhuijze A, Paranjape A, Radha G, Bawa P, Srivastava M, Nambiar M, Balaji KN, Liston A, Choudhary B, Raghavan SC. MicroRNA miR-29c regulates RAG1 expression and modulates V(D)J recombination during B cell development. *Cell Rep.* 2021 Jul 13;36(2):109390. doi: 10.1016/j.celrep.2021.109390. PMID: 34260911 (* indicates equal first authors).

➢ UNDER CONSIDERATION/ READY TO BE SUBMITTED

- **Urbi Roy***, Anju Sharma*, Sumedha Dahal, Shivangi Sharma, Nitu Kumari, Sagar Sanjiv Desai, Dipayan Ghosh, Meghana Manjunath, Najma Nujoom, Vidya Gopalakrishnan, Bibha Choudhary and Sathees C. Raghavan. "Understanding the molecular mechanism behind fragility of *BCL11B* gene in T-cell acute lymphoblastic leukemia". (Manuscript under consideration) (* indicates equal first authors).
- Sumedha Dahal, Nitu Kumari, Kohal Das, Sagar Sanjiv Desai, Shivangi Sharma, **Urbi Roy**, Meghana Manjunath, Vidya Gopalakrishnan, S. T. Retheesh, Saniya M. Javedakar, Bibha Choudhary and Sathees C. Raghavan. "Formation of R-Loop in Antisense Direction and G-quadruplex DNA can Explain c-*MYC* Fragility during Chromosomal Translocation Associated to Human Burkitt's Lymphoma". (Manuscript under revision, *JBC*)
- **Urbi Roy***, Rupa Kumari* and Sathees C. Raghavan. "MicroRNA, miR-501, regulates the expression of RAG1 in B Cells". (Manuscript under preparation to be submitted to *FEBS J*). (* indicates equal first authors)
- Vidya Gopalakrishnan, **Urbi Roy**, Kyati B. Dhansukh, Shikha Srivastava, Shivangi Sharma, Saniya M. Javedakar, Bibha Choudhary and Sathees C. Raghavan. "Delineating the Mechanism of Fragility at *BCL6* Cluster II Breakpoint Region Associated with Translocations in Diffuse Large B Cell Lymphoma". (Manuscript under preparation to be submitted to *JBC*).

FELLOWSHIPS

- ✓ All India Rank 5 (Life Sciences) in Graduate Aptitude Test in Engineering (GATE), 2016: Scored 908/1000
- ✓ All India Rank 76 in National Eligibility Test (NET), 2016: Awarded Junior Research Fellowship in Life Sciences and obtained qualification for lectureship, 2016
- ✓ All India Rank 63 in National Eligibility Test (NET), 2015: Awarded Junior Research Fellowship in Life Sciences and obtained qualification for lectureship, 2015

WORKSHOPS/CONFERENCES ATTENDED

1. Participated in the "Phase Separation in Genome Organization (PSiGO)" workshop conducted in IISER Pune, India from July 22-August 2, 2019 by Prof. Geeta Narlikar (University of California, San Francisco).
2. Participated and underwent Hands-on-training on "Laboratory Animal Care and Use" workshop held between September 03-07, 2018 at the Central Animal Facility, Indian Institute of Science, Bangalore.
3. Participated in the INDO-US Conference 2018 on 'Transcription, Chromatin Structure, DNA Repair and Genomic Instability' held on 6th to 10th of March, 2018.
4. Attended Conference on "Genome Analysis and Protein Interaction Network" organized by Bioinformatics Center, Bose Institute, Kolkata on March 21, 2016.
5. Participated in the 'International Conference on Translational Research' held during 16th-18th April, 2016 at Bose Institute, Kolkata.
6. Attended a workshop on Flow Cytometry held during 16th-18th April, 2016 at Bose Institute, Kolkata.

POSTER/ORAL PRESENTATIONS IN CONFERENCES/WORKSHOP

1. Oral presentation in the "Phase Separation in Genome Organization (PSiGO)" workshop conducted in IISER Pune, India from July 22-August 2, 2019 by Prof. Geeta Narlikar (University of California, San Francisco).

MENTORING & TEACHING

Teaching assistance and practicals for the undergraduate course 'UB 303 Biophysics' with Prof. Jayanta Chatterjee in 2020 at Indian Institute of Science, Bangalore.

EXTRA CURRICULAR

- Organized and conducted inter university quizzes for the Presidency University during bachelors.
- Founded Meal-e-Mishe (United over Meals): A non-profit initiative that aimed to support the people who had lost livelihood due to the lockdowns as a result of the COVID pandemic. Meal-e-Mishe has provided more than 5000 meals till date in West Bengal, India.
- Participated in Voluntary Blood Donation Camp organized by Bose Institute on 9th Oct, 2015 in association with State Government Hospital Blood Bank.