

# SAMHITHA URS R

Nationality: Indian

Mail ID: [samhithaurs82@gmail.com](mailto:samhithaurs82@gmail.com)  
[Samhitha.Urs.Ramaraje.Urs@ukbonn.de](mailto:Samhitha.Urs.Ramaraje.Urs@ukbonn.de)

Phone No: +49 15777128653, +91 9066300960

Skype ID: samhithaurs82

LinkedIn: [linkedin.com/in/samhitha-urs-8a9a2b118](https://www.linkedin.com/in/samhitha-urs-8a9a2b118)



## RESEARCH EXPERIENCE

---

### Ph.D student

**Project: "Exploring the conformational landscape of Factor VIII B-domain in order to generate an all atom full length structure of the coagulation factor VIII protein"**

Institut für Exp. Hämatologie und Transfusionsmedizin (IHT)  
Universitätsklinikum Bonn, Venusberg Campus-01  
Faculty of Pharmacy, University of Bonn, Bonn, Germany

PI: **PD. Dr. Arijit Biswas (IHT)**

**Prof. Dr. Diana Imnhof (Faculty of Pharmacy, University of Bonn)**

**Prof. Dr. Johannes Oldenberg (IHT, Director)**

**January 2020-Present**

### Project Assistant

**Project: "DNA Polymerase theta (POLQ) as a cancer drug target"**

Synthetic Biology,  
Institute of Bioinformatics and Applied Biotechnology (IBAB) Bangalore, India

PI: **Dr.H.S.Subramanya (Director),**

**Dr. Sanjay Ghosh, Ph.D.**

**August 2018 - October 2020**

### Project Trainee

**Project: "Construction of a plasmid for the depletion of BLM helicase"**

Department of Biochemistry, Indian Institute of Science (IISc) Bangalore, India

PI: **Prof. Ganesh Nagaraju, Ph.D.**

**January 2018 - June 2018**

## EDUCATION

---

### Integrated Masters in Molecular Biology (5 years)

Yuvaraja's College, University Of Mysore, Mysore, India

**Courses:** Molecular Biology, Microbiology, Cell Biology, Immunology, Molecular Genetics, Genetic Engineering.

Percentage: **87.5%**

**2018**

### Karnataka State Board Pre-University, Class 12th

MMK & SDM Pre-University College, Mysore, India

Percentage: **73.8%**

**2013**

### Karnataka State Board Secondary School, High School

Nirmala High School, Mysore, India

Percentage: **94.5%**

**2011**

## RESEARCH SKILLS

---

### Molecular Biology

Genomic DNA, Plasmid DNA, Bacmid DNA isolation and purification (mini- and maxi-preps), DNA gel analysis, quantification and extraction, Standard, Gradient and Splicing by Overlap Extension-SOE PCR technique, Restriction enzyme based cloning, Gibson cloning, Agarose gel electrophoresis, Gel extraction of DNA, RNA isolation, cDNA synthesis and RT-PCR. Primer Designing: SnapGene.

### Genetic Engineering

RNAi mediated- shRNA knockdown studies in mammalian cells.  
CRISPR-Cas9 knockdown studies in mammalian cells.  
Indel study: Verification of CRISPR-Cas9 indels using PCR and T7 Endonuclease assay

<b>Cell culture</b>	Handling and maintenance of U2OS (Osteosarcoma), HeLa and HeLa mutant cell line (HeLa S3), MDAMB231 (Breast Cancer), Human Embryonic Kidney cells (HEK293T), Insect cells (SF9, SF21) Transfection methods: Neon Transfection, Electroporation, Calcium Chloride, and Lipofectamine.
<b>Protein Biology</b>	Affinity chromatography (Ni-NTA,) (SP/Q), AKTA Pure- Gel-filtration, Ion-Exchange chromatography Isothermal Titration Calorimetry- ITC Bradford Assay of protein estimation, SDS-PAGE, Native PAGE, Western Blotting, CBB Silver staining, Dialysis. Transcreener ADP assay- Screening of inhibitors.
<b>Molecular Docking</b>	YASARA, Gromacs based MD Simulations, Docking , Schrodinger, AutoDock-Vina, PyMol, Biosolve IT- Virtual screening of Inhibitors
<b>Microscopy</b>	Light, confocal and Fluorescence microscopy.
<b>Crystallography</b>	Crystallization setup- Vapour diffusion, Hanging drop method, Crystallization screening.
<b>Microbiology</b>	Competent cell preparation- Calcium Chloride and INOUE methods. Transformation, plating and liquid culture of bacteria, Glycerol Stock preparation
<b>Basic Bioinformatics</b>	Sequence Analysis: BLAST, FASTA, CLUSTAL-W, EMBOSS, GENE TOOL, Biological databases-NCBI, GeneDB,PDB, Profam. ExPaSy-ProtParam

## WORKSHOPS AND CONFERENCES

---

<b>Poster Presentation- Foundation Day- "DNA Polymerase theta as a cancer drug target"</b> Presenter Institute of Bioinformatics and Applied Biotechnology, Bangalore, India	<b>2019</b>
<b>Hands on workshop - "Advanced Computer-Aided Drug Design and Computational Biology"</b> Participant Schrodinger Inc, Bangalore	<b>2019</b>
<b>B4 workshop- Bharat Boston Building Program on Synthetic Biology, DBT funded</b> Student Volunteer Institute of Bioinformatics and Applied Biotechnology, Bangalore, India	<b>2019</b>
<b>Indo-US conference " Transcription, Chromatin Structure, DNA repair, and Genomic Stability"</b> Participant Indian Institute of Science, Bangalore, India	<b>2018</b>

## MEMBERSHIPS

---

Student member of Indian Science Congress Association- Since 2016  
Student member of the Association of Microbiologists of India- Since 2015

## REFERENCES

---

### **Dr. Arijit Biswas. Ph.D.,PD**

AG, FXIII group  
Room No. 2.308,  
Institut für Exp. Hämatologie und Transfusionsmedizin (IHT)  
Universitätsklinikum Bonn, Venusberg Campus 1, Gebäude 43  
Bonn-Venusberg 53127  
Mail ID: [aribis@gmail.com](mailto:aribis@gmail.com)  
[arijit.biswas@ukbonn.de](mailto:arijit.biswas@ukbonn.de)

### **Dr. Devaki N S, M.Sc., Ph.D., Course coordinator**

Integrated M.Sc. Molecular Biology  
Yuvaraja's College, University of Mysore,  
Mysore, India-570005  
Mail ID: [devakineerkaje@gmail.com](mailto:devakineerkaje@gmail.com)