

Namrata Shah

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OBJECTIVE: To work in the field of research using Molecular and Cell Biology knowledge.

EDUCATION

School Of Life Sciences at Arizona State University, Tempe , AZ

Master of Science (Molecular and Cellular Biology) May 2008

Abasaheb Garware College, University of Pune ,Pune, India

Master of Science (Microbiology) June 2002

H.V.Desai College, University of Pune , Pune, India

Bachelor of Science (Microbiology) June 2000

TECHNICAL SKILLS

CELL And MOLECULAR BIOLOGY

- Isolation of DNA and RNA from eukaryotic cells and animal tissue samples
- Western Blotting
- Enzyme Based assays with fluorescence and chemiluminescence as end points
- Isolation of plasmid by mini and medi prep
- Agarose Gel Electrophoresis
- In-vitro metabolism assays to check intrinsic clearance rate of the drug
- Real Time PCR
- Restriction digestions

IMMUNOLOGY

- Detection of ROS by DCF, Lucigenin based assays
- Detection of Apoptosis (TUNEL)
- Direct ELISA

MICROBIOLOGY AND BIOTECHNOLOGY

- Recombinant protein expression, Isolation, Purification
- Protein expression by Shake flask
- SDS-PAGE

TISSUE CULTURE

- Handling of cancerous cell lines (HeLa, SH-SY5Y, THP1)
- Handling of smooth muscle cell lines (A7r5)
- Primary culture of neurons and cardiomyocytes
- Transfection of mammalian cell lines to express the plasmid of interest
 - These cell lines and primary cultures are being used for different purposes like: High throughput screening, Cytotoxicity assays (MTT based assays), Apoptosis study.

PROFESSIONAL EXPERIENCE

Arizona State University

January – May 2006

Lab Assistant (Voluntary)

Worked on Arapidopsis cell lines in order to check the hypothesis that AOX constitutes an important link in the Oxygen deprivation signaling via its modulation of ROS levels and consequent triggering of Ca. ADH 1 and AOX 1 were the two genes studied.

Torrent Pharmaceuticals Ltd, India

2003-2004

Scientist-II

- Worked on various drug discovery projects at Cell & Molecular Biology Division, Torrent Research Centre and gained expertise over several molecular biology, cell biology and tissue culture techniques routinely employed in drug discovery projects

National Chemical Laboratory, India

2002-2003

Project Associate

- Conducted Research work at Plant Molecular Biology Division on a project entitled "Mapping of Diverse temperature sensitive male sterility genes" for pyramiding and using in two line heterosis in Rice (*Oryza sativa*) under guide Dr. Vidya Gupta.
- Involved in the screening of hybrids with the aid of RAPD primers for the markers linked to the gene of interest. RAPD's were used for the detection of the male sterility gene, characteristic of one of the two parents. The long term objective of the project was development of hybrids with higher yield and resistance to pathogens.

National Chemical Laboratory, India

2002

Project Associate

- Worked on a project as a part of MSc dissertation entitled, "Isolation and characterization of PHB depolymerase gene from *Streptomyces aureofaciens* NRRL 2209" under guide Dr. S. K. Raval.
- Main objectives were
 - To isolate the PHB depolymerase gene from *Streptomyces aureofaciens* NRRL 2209.
 - To find out its copy number.
 - To learn some of the important molecular biology techniques.

ACHIEVEMENTS

- Secured **1st rank** in the merit list of B.Sc(Microbiology) examination at the Pune University .
- Recipient of The Krishnaji Hari Joshi Palaspen Memorial Microbiology Prize .
- Recipient of The Dr.B Wolf V. Vishniac Prize in Microbiology.
- Recipient of third prize in the Chemaid exam conducted by the University Chemical Society, Dept of Chemistry, University of Pune - Year 1999.

CO-CURRICULAR ACTIVITIES

- Learnt Japanese language for a period of three months.
- Gave seminars on various research papers from reputed journals like SCIENCE as a part of the M.Sc.
- Wrote review of literatures on various topics such as Nosocomial Infections, Microbial circadian rhythms and PHB depolymerases.
- Done 'Arangetram' in 'Bharatnatyam' (Indian classical dance) under the able guidance of guru Sucheta Joshi.

REFERENCE

- Dr. S. K. Rawal
Deputy Director,
Plant Tissue Culture Dept., National Chemical Laboratory, Pune. India sk.rawal@ncl.res.in
- Dr. Vidya Gupta
Division of Biochemical Sciences,
Plant Molecular Biology Group, National Chemical Laboratory, Pune. India vs.gupta@ncl.res.in
- Dr. Vijay Chauthaiwale
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- Mrs. Rajashree Patwardhan
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- Dr. David Rhoads
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