




## PERSONAL INFORMATION



Sonali S. Shinde

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Sex Female | Date of birth 14 January 1987 | Nationality Indian

## WORK EXPERIENCE -----

January 2016- present

Asst. Professor in Garware College, Department of Biodiversity

August 2015- January 2016

Patent Analyzer

Patent analysis (Prior art study, State-of -art study)

Patentability

Landscape study

Jan 2015- 2016

Visiting Lecturer

Conducting lectures in Microbial Metabolism, Gene Sequencing.

August 2012– Nov 2014

Research Fellow

Computational and Systems Biology Laboratory,  
National Center for Cell Science Pune (India)

Drug target Identification in *L.major* and *S.mansoni* through  
Biochemical Network Modeling.

Worked on Evolutionary dynamics in Inositol Phosphoryl  
Ceramide Synthase in *L.major*.

Assisted in the project “Synthetic Biology for *Leishmania*.”

Assisted in conducting workshops for Molecular Docking,  
Sequence analysis and Homology Modeling.

July 2010– April 2011

Visiting Lecturer

Conducted lectures in Biostatistics, Bioinformatics, Biophysics,  
Microbial Metabolism and Instrumentation.

August 2009– April 2010

Research Fellow

Institute of Bioinformatics and Biotechnology,  
University of Pune (India)

Vaccine design against *A.bayli* through Bioinformatics  
approach.

Assisting and conducting practical of Molecular Biology,  
Bioinformatics.

## EDUCATION AND TRAINING -----

July 2007–30 April 2009

Master of Microbiology  
Abasaheb Garware College, Affiliated to University of Pune,  
Pune (India)

Subjects: Biochemistry, Molecular Biology, Microbiology,  
Immunology, Virology, Biostatistics, Bioinformatics.

**Project Undertaken:** “Isolation and Identification of mycotoxin (Aflatoxin B1) degrading enzymes.”

Under the guidance of **Dr. Jayant Khire** (Scientist in NCL) and **Dr.B.D.Bhole** (HOD of Garware college)

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July 2003- May 2006

Bachelor of Industrial Microbiology  
Annasaheb Magar Mahavidyalaya, Affiliated to University of  
Pune, Pune (India)

Subjects: Microbiology, Industrial Microbiology, Chemistry  
and English.

## PERSONAL SKILLS ADDITIONAL INFORMATION-----

### Job-related skills

#### **Molecular Biology:**

Cloning, Primer design, Polymerase Chain Reaction, Genomic & Plasmid DNA isolation and RNA isolation from Bacteria, Transformation of Bacterial cells using CaCl<sub>2</sub> and Electroporation, Chromatography, FACS, cell culture handling

#### **Bioinformatics:**

Sequence Analysis, BLAST, FASTA Molecular dynamics simulation (Protein-Water, Protein-Peptide, Protein-drug, Lipid bilayer simulation), Molecular docking (Protein-ligand, Protein-Protein), worked on high performance computing, graphic user interface on workstation, I-MAC.

#### **Microbiology Techniques:**

Media preparation, Aseptic handling techniques, spreading, streaking, Isolation and Identification of microorganism.

#### **Software, Tools and Programming:**

Clustalw, Modeler, T-coffee, RasMol, PyMoL, C-programming, Tinker cell, Cytoscape, Cell-designer, Matlab, Autodock, Schrödinger, Thomson Innovation (IPR)

## PUBLICATION AND WORKSHOP ATTENDED -----

Metabolic Modeling Workshop- MetaMod **2016**: Organized by Anu Raghunathan, NCL, Pune, India, David Fell, Oxford Brookes University, Oxford, UK, Mark Poolman, Oxford Brookes University, Hassan Hartman, Oxford Brookes University.

Shailza Singh, Vineetha Mandlik and **Sonali Shinde (2015)** Molecular dynamics simulations and Statistical Coupling Analysis of GPI 12 in *L.major*: Functional Co-evolution and

Conservedness Reveals potential drug-target sites. Mol. BioSyst., DOI: 10.1039/C4MB00649F.

**Sonali Shinde**, Milsee Mol, Virashree Jamdar and Shailza Singh (2014) Molecular Modeling and Molecular dynamics simulations of GPI 14 in L.major: Insight into the catalytic site for active site directed drug design. Journal of Theoretical Biology, 351:37-46.

**Sonali Shinde**, Vineetha Mandlik and Shailza Singh (2014) Integrating Bioinformatics and Systems Biology for Exploring Novel Lipid Pathways in Infectious Diseases Advances in Mathematical Chemistry and Applications, Vol. 2, 161-190.

**Sonali Shinde**, Milsee Mol, and Shailza Singh (2014) Regulatory Networks, Genes and Glycerophospholipid Biosynthesis Pathway in Schistosomiasis: A Systems Biology View for Pharmacological Intervention, Gene, 25,550(2):214-22.

Vineetha Mandlik, **Sonali Shinde** and Shailza Singh (2014) Molecular evolution of the enzymes involved in the sphingolipid metabolism of Leishmania: Selection pressure in relation to functional divergence and conservation, BMC Evolutionary Biology, 14:142.

Vineetha Mandlik, Milsee Mol, **Sonali Shinde**, and Shailza Singh. (2013). Gene Regulatory Network: A New Paradigm in Bioinformatics. Biotechnology, 6 Studium Press LLC, USA.

Vineetha Mandlik, D. Limbachiya, **Sonali Shinde**, Milsee Mol and Shailza Singh (2012) Synthetic circuit of Inositol Phosphorylceramide Synthase in Leishmania: A Chemical Biology Approach, Journal of Chemical Biology, 6(2), 51-62.

Vineetha Mandlik, **Sonali Shinde**, Ashish Chaudhary and Shailza Singh (2012) Biological Network Modelling identifies IPCS in Leishmania as a Therapeutic Target. Integrative Biology Integr. Biol., 2012, 4(9) 1130-1142.

Shailza Singh and **Shinde Sonali** (2012) Stochastic Simulation for Biochemical Reaction Networks in Infectious Disease. Medicinal Chemistry and Drug Design ISBN 978-953-51-0513-8. DOI: 10.5772/38245.

## POSTER PRESENTATION-----

**Sonali Shinde**, Rashmi Arya and Raj Hirwani (2015) Visualizing Converging Business of Nanobiocomposite packaging for competitive Intelligence, Conference on Patinformatics for Technological Competitive Intelligence and Licensing

**Sonali Shinde**, Rashmi Arya and Raj Hirwani (2015) Progress in the use of Nanobiocomposite material for suitable packaging: An insight from Patinformatics, Conference on Insights in Biology, held in NCL.

**Sonali Shinde** and Shailza Singh (2013) Gene Regulatory Network Modeling in Schistosomiasis: An Insight into the catalytic site for active site directed drug design, 25th November 2013, International Conference on Biotechnology and Bioinformatics, Hotel Le Meridean.

**Sonali Shinde** and Shailza Singh (2012) Evolutionary dynamics of IPCS in Leishmania: A bioinformatic perspective. 81st Annual Meeting of The Society of Biological Chemists (India) and Symposium on Chemistry and Biology: Two Weapons against Diseases held at Science City, Kolkata from November 8-11 pp 68.

## **OTHER ACHIEVEMENTS**

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- Cleared PET (PhD entrance test) , Pune 2010
- Cleared SET (State Eligibility Test) 2013
- Cleared GATE (Graduate Aptitude Test in Engineering) 2013, 2015
- Reviewer of Elsevier (Genomics) Journal 2015

