

Curriculum Vitae

Sushant Shengule, M. Pharm. (Pharmaceutical Biotechnology)

Personal Contact Information

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Date of Birth: February 26th, 1986

Education

08/2008-09/2010: Master of Pharmacy in Pharmaceutical Biotechnology, Poona College of Pharmacy, Bharati Vidyapeeth University, Pune, India (66.21 % First Class)
2007-2008 Appeared for Graduate Aptitude Test Examination (GATE), Percentile Score-91.00, All India Rank-2458
07/2003-07/2007 Bachelor of Pharmacy (B. Pharm.), Y. B. Chavan College of Pharmacy, Dr.B.A.M.U. Aurangabad, Maharashtra, India (68.78 % First Class)

Research Experience: 4 Years

09/2013 - 08/2014 Research Associate, National Toxicology Centre, APT Research Foundation, Pune, India
02/2013 - 07/2013 Research Scholar, Interdisciplinary School of Health Sciences, University of Pune, Pune India
12/2011 - 02/2013 Junior Research Fellow, Symbiosis School of Biomedical Sciences, Symbiosis International University, Pune, India
07/2010 - 01/2012 Junior Research Fellow, Sinhgad College of Engineering, Pune, India (Office of PSA, Govt. of India funded project)
08/2009 - 07/2010 M. Pharm. Dissertation, Sinhgad College of Engineering, Pune, India

Publication:

Mandavi Deshpande, **Sushant Shengule** et al, Anti-Obesity activity of *Ziziphus mauritiana*: a potent pancreatic lipase inhibitor; Asian J Pharm Clin Res, Vol 6, Issue 2, 2013, 168-173 (IF 0.51)

Selected Presentations/ Poster:

02/2012 Oral presentation at 12th International Congress of Ethnopharmacology, Traditional Medicine and Globalisation-The Future of Ancient Systems of Medicine, Kolkata
12/2010 Poster presentation at Recent Advances in Pharmaceutical Sciences 2010, BHU, Varanasi, Uttarpradesh, India

Area of Interest:

Molecular Biology, Preclinical Studies, Cell Biology, Analytical and Phytochemical work.

Skills and Expertise acquired

- **Molecular Biology Techniques:** Molecular mechanistic studies, RBC's, Plasma and PBMC's isolation from human and rat blood, RNA and DNA isolation from PBMC's and tissue samples, Gene expression studies using Real Time PCR, Primer designing using different

software, Genes standardisation (for SNP detection using PCR-RFLP and gene expression studies) using PCR and Real Time PCR, Single Nucleotide gene polymorphism using PCR and PCR-RFLP method, cDNA preparation, Gel electrophoresis method, Pharmacogenomics studies.

- **Preclinical (in vivo) Studies:** For 3 years, worked on different animal models related to metabolic disorder like Intra Uterine Growth Retarded rats model, high fat fed, wound healing, Hepatoprotective and Gestational diabetes mellitus animal models, oral dosing, Intra-peritoneal Glucose tolerance Test, Oral GTT test, Blood biochemistry parameters, blood pressure measurement using non invasive technique, Intra-muscular injections, animal dissection, tissue isolation and cryopreservation.
- **Cell Biology Work (in vitro studies):** The effect of herbal extracts on adipocyte differentiation, Platelet aggregation (anti-platelet activity) using platelet aggregometer, T3, T4 and TSH level determination in three different prikriti human plasma sample using ELISA technique, Cytokine Profiling in healthy and Asthma patient plasma samples (Pre and Post Ayurvedic Treatment), Cryopreservation of cell lines, MTT assay, Cell Counting using haemocytometer, Preparation of various cell culture media, Handling of various cell lines like C3H10T1/2, WRL-68 and E14TG2a etc,
- **Herb Drug Interaction studies:** Effect of herbal extract and its formulations on metformin in normal and diabetic rat models.
- **Analytical and Phytochemical Work:** Isolation and purification of active compound from *Cassia auriculata* plant extract using different Chromatographic technique including HPLC & TLC and Flash chromatography, Preparation of herbal extract and development of in house method of analysis for herbal extract like *Cassia auriculata*, *Terminalia arjuna*, *Cinnamomum zeylanicum* and ophthalmic formulation,
- **Microbial Work:** Isolation and characterisation of protease enzyme from marine actinomycetes isolated from soil, microbial culture handling, Plate streaking, media preparation and sterilisation, SDS-PAGE technique, diff. in house assays using UV spectrophotometer
- **Bio statistical Work:** Acquainted with bio statistical methods and tools used for analysis of molecular biology, Cell Biology, preclinical studies and microbial work.
- **Other Expertise:** Supervised students thesis work from different field like M. Pharm.; M. Sc.; B. Tech, Successfully conducted molecular biology practicals, Prepared Informed Consent form for recruitment of subjects, Actively involved in the research proposal writing for funding agency like DBT, DBT-SIRI and Indo-Australian ICMR.

Summary of Research Work

1. Research Associate at National Toxicology Centre, Pune

"Effect of Herbal extract on gene expression in Wound Healing Animal Model" & "Hepatoprotective effect of Herbal extract on gene expression different animal models" & Herb-Drug interaction studies. **PI** – Dr. Bhushan Patwardhan & Dr. Kishori Apte; **Co-PI**- Dr. P. B. Parab

Work Description: Gene expression using Real Time PCR, primer designing, gene (primer) standardisation using PCR and Real Time PCR, in vivo, in vitro, toxicology & herb-drug interaction studies

2. Research Scholar at ISHS, UOP, Pune

"Development and validation of analytical method for multi-herb ophthalmic formulation"

PI-Prof. Dr. Bhushan Patwardhan;

Work Description: Phytochemical analysis using HPLC, in vitro studies on enzyme assays using ELISA.

3. Junior Research Fellow at SSBS, SIU, Pune

"Molecular mechanism studies of herbal extract and its formulation in type 2 diabetes mellitus."

PI-Prof. Bhushan Patwardhan; Co- PI- Prof. Kalpana Joshi

Work Description: in vitro, in vivo, Gene Expression & molecular mechanistic studies.

4. Junior Research Fellow at SCOE, Pune

DST-PSA funded project "Genomic variation analysis and gene expression profiling of human dosha prakriti based on principles of ayurveda." (PI- Prof. Kalpana Joshi)

Work Description: DNA and RNA isolation, Primer designing, gene standardization (for SNP detection and gene expression studies using PCR & Real Time PCR), in vitro studies, phytochemical analysis, ELISA assays, analysis of gene polymorphisms and expressions

5. M. Pharm. Dissertation work at SCOE, Pune

Effect of Pioglitazone, Metformin and *Cassia auriculata* extract on Gene Expression in Insulin resistant rat. (**Research Guide-** Prof. Kalpana Joshi)

Work Description: RNA isolation, gene standardization, gene expressions analysis, in vivo, platelet aggregation studies, isolation of phytochemicals from plant extract.

References:

1. Prof. Dr. Bhushan Patwardhan
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2. Prof. Dr. Kalpana Joshi
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