



Dr. Sonali Bhokare

Date of birth: 17/04/1987 **Phone number:** (+91) 9870635112

Email address: sonaliniphadkar@gmail.com

Home: D 203, Laximi deep, Nr Tip Top Hotel, Mumbai Bangalore Highway, Wakad, 411057 Pune (India)

ABOUT ME

I am working as an Expert in OmniActive Health Technologies a nutraceutical company for more than 7.5 years. Skilled in isolation, extraction, purification and analytical techniques of herbal extracts as well as proteins. Hands on experience in sophisticated analytical instrumentations with strong trouble shooting skills for method development & validation and regular analysis of different category samples. Professional with PhD focused in isolation and purification of biomolecules with total 9 research publications in peer reviewed international journals.

WORK EXPERIENCE

Expert

Omniactive Health technologies Pvt.Ltd, [11/06/2017 – Current]

City: Pune | Country: India

- Lead multiple projects simultaneously in method development and method validation and method transfer activities of herbal extract, formulation and API by HPLC and GC analytical instrument
- Worked around stability study, characterization and force degradation study and with a track record of analytical problem solving for various types of products
- Method development for standardization of herbal extracts by HPLC and HPTLC, Worked on analytical aspects of different delivery forms of nutraceutical ingredients like Lutein, Beta Cryptoxanthin, AKBA, ursolic acid, andrographolide, valerianic acid, Capsaicin, Curcumin etc.
- Expertise in various analytical techniques such as GC-MS, GC, UV, HPLC-DA, HPLC-ELSD, FT-IR, LC MS, HPTLC (Finger Printing), particle size analyzer and Karl-Fischer techniques.
- Worked on the raw material extraction process development and optimization of plants such as, Fenugreek, *Asparagus racemosus*, Marigold extract, *Valerian officinalis* and *andrographis paniculata* etc. to prepare enriched extract with defined specifications.
- Experience and knowledge Process development and optimization for extraction, isolation or enrichment of bio-active compounds.
- Hands on experience on enrichment and purification techniques involving process like solvent-solvent extraction, fractionation (liquid-liquid, solid matrix based), enrichment, precipitation, crystallization and chromatographic separation techniques.
- Independent responsibility of project literature search, experiments and documentation
- Analysis, data interpretation and troubleshooting issues with various extraction process and analytical methods and coordinating with cross functional team or scale up team for process transfer.
- Planning, executing requisite lab work and reviewing data for all projects
- Participated in discussions with Regulatory Affairs, Quality Assurance and technology transfer documentation to align on critical quality attributes, test methods, specifications and risk evaluations.
- Communicate and oversee contract laboratory development activities and provide technical support during method transfers.
- Prepare and review scientific and regulatory documents for filing support.
- Preparing & reviewing standard operating procedures (SOPs), Standard test procedure (STP), technology Transfer Documents (TTD) like CODDS, COA, TDS, SDS & Product specification, also coordinating with clients and suppliers
- Mentor junior level scientists and chemists on method development, instrument troubleshooting and investigations.
- Familiar with ICH, FDA, and USP guidance.

Studies in Isolation and Purification of Biomolecules

Phd (Tech) Project [09/01/2012 – 20/02/2018]

- Extraction of 3-O-acetyl-11-keto-boswellic acid (AKBA) from *Boswellia Serrata*
- Optimization of the extraction type and process parameters for maximum recovery of AKBA extraction from *Boswellia Serrata* using novel extraction technique such as microwave, ultrasound, supercritical and three phase technology. Development of the chromatographic purification process for AKBA molecule.

- Isolation of polyphenol oxidase (PPO) enzyme from potato peel
- Extraction and purification of PPO using various techniques such as aqueous two phase extraction and three phase extraction process in order to getting higher product yield and purity

Isolation, purification and development of assay for DHFR from different sources

M Tech (Project) [10/06/2009 – 04/03/2012]

- Fermentative production of DHFR enzyme from *saccharomyces cerevisiae* having its own DHFR and genetically modified strain of it with human DHFR.
- Optimization of media by one factor at a time and Response Surface Methodology for maximum yield of DHFR enzyme.
- Application of downstream processing techniques like isolation of DHFR enzyme by cell disruption, separation, and purification using centrifugation, precipitation, affinity chromatography and gel filtration chromatography.
- Characterization of the purified enzyme by SDS-PAGE and kinetic studies.
- Development of human DHFR enzyme assay for testing the Cytotoxicity of the in-house synthesized anti-tuberculosis molecules.

EDUCATION AND TRAINING

Phd (Tech.) in Bioprocess technology

Institute of Chemical Technology (ICT) University, India [11/01/2012 – 22/02/2018]

M. Tech. in Bio-processing Technology

Institute of Chemical Technology (ICT) University, India [12/06/2009 – 06/03/2012]

Bachelor of Pharmaceutical Sciences

Pune University, India [31/05/2005 – 30/03/2009]

PUBLICATIONS

[2018]

Microwave-assisted extraction of Acetyl 11 -keto- β -Boswellic acids (AKBA) from *Boswellia serrata* by using orthogonal array design

Journal of Biologically Active Products from Nature, 8(2), 90-103.

Sonali S. Niphadkar, Virendra K. Rathod

[2018]

Optimization of ethanol modified supercritical fluid extraction (SFE) of acetyl 11 keto β boswellic acid (AKBA) from *Boswellia serrata* using Box-Behnken experimental design

Biocatalysis and Agricultural Biotechnology, 13, 304-310,

Sonali S. Niphadkar, Virendra K. Rathod

[2017]

Extraction of acetyl 11-keto- β -boswellic acid (AKBA) from *Boswellia Serrata* plant oleo gum resin using novel three phase partitioning (TPP) technique

Journal of Applied Research on Medicinal and Aromatic Plants; 7(1), 41-47.

Sonali S. Niphadkar, Neelem B. Bhokale, Virendra K. Rathod

[2017]

Adsorption kinetics, isotherm, and thermodynamics studies of acetyl-11-keto- β -boswellic acids (AKBA) from *Boswellia Serrata* extract using macroporous resin.

Preparative Biochemistry and Biotechnology, 47 (8), 804-12

Sonali S. Niphadkar, Virendra K. Rathod

[2017]

Extraction of acetyl 11-keto- β -boswellic acids (AKBA) from *Boswellia Serrata* using ultrasound.

Separation Science and Technology, 52 (6), 997-1005.

Sonali S. Niphadkar, Virendra K. Rathod

[2015]

Ultrasound assisted three phase partitioning of polyphenol oxidase from potato peel (*Solanum tuberosum*).
Biotechnology progress, 1(5),1340-7.

Sonali S. Niphadkar, Virendra K. Rathod

[2015]

Purification and Characterization of Polyphenol Oxidase From Waste Potato Peel by Aqueous Two Phase Extraction.
Preparative Biochemistry and Biotechnology, 45(7), 632-49.1.

Sonali S. Niphadkar, Mangesh D. Vetal, Virendra K. Rathod

[2014]

Ultrasound assisted three phase partitioning of a fibrinolytic enzyme.
Ultrasonics Sonochemistry, 21(2), 628-33.

Devchand N. Avhad, Sonali S. Niphadkar, Virendra K. Rathod

[2013]

Novel affinity chromatographic technique for purification of Dihydrofolate reductase from recombinant yeast.
International Journal of Drug Design and Discovery, 4(1),994-9971.

Archana Raju, Marium Degani, Manisha Khedkar, Sonali Niphadkar

CONFERENCES AND SEMINARS

[2014] Institute of chemical technology, Mumbai,India.

Extraction of acetyl 11-keto- β -Boswellic acid (AKBA) from *Boswellia Serrata*: Kinetics and modeling
International Conference Bioprocessing INDIA 2014

[2013] Institute of chemical technology, Mumbai, India.

Isolation, purification and characterization of daunorubicin from fermentation broth of *Streptomyces peucetius* MTCC 4232
CHEMCON 2013

[2013] Hague, Netherlands

Three phase partitioning of fibrinolytic enzyme from *Bacillus sphaericus* MTCC 3672
9th European Congress of Chemical Engineering. 2nd European Congress of Applied Biotechnology.

[2012] Punjabi University, Patiala, Punjab, India.

Extraction of Polyphenol oxidase from Potato (*Solanum tuberosum* L.) Peel using aqueous two-phase system
International Conference on Industrial Biotechnology 2012 (ICIB-2012)

[2012] Taipei city, Taiwan.

Purification of *Mycobacterium tuberculosis* DHFR enzyme from recombinant yeast using novel chromatographic technique
13th Tetrahedron Symposium (Asia Edition): Challenges in Bio-organic and Organic Medicinal chemistry 2012.

VOLUNTEERING

Institute of chemical technology, Mumbai, India

Volunteered for National Science Day, 2009

Institute of chemical technology, Mumbai, India

Chemcon, 2013