



Santosh Bhosale

POSTDOCTORAL RESEARCHER

University of Southern Denmark, Odense, Denmark

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I have been working with LC-MS/MS based proteomics research, including discovery and validation of serum biomarkers in clinical samples from type 1 diabetes and atherosclerosis studies. Collaboration with clinicians, mass spectrometry experts and bioinformaticians.

Research Proficiency

Wet lab

CELL CULTURE WORK, ANIMAL HANDLING (ALBINO MICE) AND CLINICAL SAMPLES, CELL & TISSUE SAMPLE LYSIS, SDS-PAGE
ELECTROPHORESIS (1D, 2D) AND WESTERN BLOTTING

Proteomics

IN GEL AND SOLUTION TRYPSIN DIGESTION, IMMUNODEPLETION OF SERUM SAMPLES, LABEL FREE QUANTIFICATION, ITRAQ
LABELING, OFF-LINE SCX FRACTIONATION, SRM MASS SPECTROMETRY, PTMS PROFILING AND AFFINITY CHROMATOGRAPHY

Mass spectrometry

INDEPENDENT HANDLING AND TROUBLESHOOTING OF A RANGE OF INSTRUMENTS LTQ ORBITRAP VELOS PRO, Q EXACTIVE
SERIES, TSQ VANTAGE (ALL FROM THERMO SCIENTIFIC), MALDI-TOF-MS (APPLIED BIOSYSTEM), SYNAPT HDMS (WATERS), API
QSTAR PULSAR (AB SCIEX)

Mass spectrometry informatics tools

XCALIBUR, PROTEOME DISCOVERER (THERMO SCIENTIFIC), MAXQUANT AND PERSEUS, PROGENESIS, SKYLINE, INFERNO
AND SPECTRODIVE (BIOGENOSYS)

Chromatography instrumentation

EASY NLC SERIES (THERMO SCIENTIFIC)

Language and softwares

R, SPSS, DAVID, CYTOSCAPE AND INGENUITY PATHWAY ANALYSIS

Employment

Postdoctoral Researcher

DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY, UNIVERSITY OF SOUTHERN DENMARK

- Working on the development of a post-translational modification specific biomarker discovery platform

Odense - Denmark

January 2020 → Present

Postdoctoral Researcher

UNIVERSITY OF TURKU - TURKU BIOSCIENCE

- Worked with the measurements and data analysis to compare the effects of nutrition supplementation in infancy and the correlation between the proteomes of the child and mother
- Analyzed temporal serum proteomes of celiac disease (CD) developing children
- Conducted the interactomics measurements and data analysis for several transcription factors of T cells

Turku - Finland

November 2018 → December 2019

Project Assistant

NATIONAL CHEMICAL LABORATORY

- Proteomics laboratory work including protein extraction, digestion and cleanup, SDS-PAGE, mass spectrometry (MS) analysis of glycosylated proteins, oligonucleotides, small molecules, and animal experiments e.g. Albino mice

Pune - India

September 2009 → December 2011

Lecturer

JSPM'S JSCOPR AFFILIATED TO UNIVERSITY OF PUNE

- Taught theory and practicals for subjects like pharmaceutical biochemistry and pharmaceutical analysis to the bachelor of pharmacy students
- Supervised undergraduate pharmacy students
- Academic duties grading course assignments and examinations

Pune - India

July 2008 → September 2009

Education

PhD

UNIVERSITY OF TURKU (TURKU BIOSCIENCE)

Turku - Finland

2012 → 2018

- Established and implemented quantitative proteomics methodology for the analysis of human serum samples, including immunoaffinity depletion, protein digestion, iTRAQ labelling, label free quantification, offline-SCX fractionation, LC-MS/MS and data analysis
- Developed targeted SRM-LC-MS methods to monitor multiple protein targets
- Cellular proteomics, including the analysis of Th17 and iTreg cells from mouse and human
- Teaching experience in proteomics data analysis (presented at a national meeting, 2017)

Master of Pharmacy (Pharmaceutical Chemistry)

RAJASTHAN UNIVERSITY OF HEALTH SCIENCES (LACHOO MEMORIAL COLLEGE OF SCIENCE & TECHNOLOGY)

India

2005 → 2008

Bachelor of Pharmacy

UNIVERSITY OF PUNE (SITABAI THITE COLLEGE OF PHARMACY)

Shirur - Pune

2001 → 2005

Awards

Doctoral dissertation award

AWARDED WITH EUR 5000

Orion pharma

2018

Doctoral dissertation award

AWARDED WITH EUR 5000

*The Maud Kuistila Memorial
Foundation*

2018

Travel grant

AWARDED WITH EUR 500 TO ATTEND COMPUTATIONAL PROTEOMICS COURSE AT ETH ZURICH

Turku centre for system biology

2015

Research grant

AWARDED WITH EUR 3500

*Hospital District of Southwest
Finland & Turku City*

2014

Dr. Ashok B. Vaidya prize

SECURED FIRST POSITION IN AN ORAL SESSION(6 MINUTE COMPETITION)

*South Asian Chapter of American
College of Clinical Pharmacology
Mumbai India*

2009

Publications

CIP2A Constrains Th17 Differentiation by Modulating STAT3 Signaling

KHAN MM, ULLAH U, KHAN MH, KONG L, MOULDER R, VÄLIKANGAS T, BHOSALE SD, KOMSI E, RASOOL O, CHEN Z, ELO LL, WESTERMARCK J, LAHESMAA R

iScience

2020

Protein interactome of the Cancerous Inhibitor of protein phosphatase 2A (CIP2A) in Th17 cells

KHAN MM, VÄLIKANGAS T, KHAN MH, MOULDER R, ULLAH U, BHOSALE SD, KOMSI E, BUTT U, QIAO X, WESTERMARCK J, ELO LL & LAHESMAA R

Current Research in Immunology

2020

Quantitative Proteomics Reveals the Dynamic Protein Landscape during Initiation of Human Th17 Cell Polarization

TRIPATHI SK, VÄLIKANGAS T, SHETTY A, KHAN MM, MOULDER R, BHOSALE SD, KOMSI E, SALO V, DE ALBUQUERQUE RS, RASOOL O, GALANDE S, ELO LL, LAHESMAA R

iScience

2019

Serum Proteomic Profiling to Identify Biomarkers of Premature Carotid Atherosclerosis

BHOSALE SD, MOULDER R, VENÄLÄINEN MS, KOSKINEN JS, PITKÄNEN N, JUONALA M, KÄHÖNEN M, LEHTIMÄKI T, VIKARI J, ELO LL, GOODLETT DR, LAHESMAA R, RAITAKARI OT

Sci Rep

2018

Quantitative proteomic characterization and comparison of T helper 17 and induced regulatory T cells

MOHAMMAD I, NOUSIAINEN K, BHOSALE SD, STARSKAIA I, MOULDER R, ROKKA A, CHENG F, MOHANASUNDARAM P, ERIKSSON JE, GOODLETT DR, LÄHDESMÄKI H, CHEN Z

PLoS Biol

2018

Analysis of the plasma proteome using iTRAQ and TMT-based Isobaric labeling

MOULDER R, BHOSALE SD, GOODLETT DR, LAHESMAA R

Mass Spectrom Rev

2018

Mass Spectrometry-Based Serum Proteomics for Biomarker Discovery and Validation

BHOSALE SD, MOULDER R, KOUVONEN P, LAHESMAA R, GOODLETT DR

Methods Mol Biol

2017

The progress and potential of proteomic biomarkers for type 1 diabetes in children

MOULDER R, BHOSALE SD, LAHESMAA R, GOODLETT DR

Expert Rev Proteomics

2017

Serum proteomes distinguish children developing type 1 diabetes in a cohort with HLA-conferred susceptibility

MOULDER R, BHOSALE SD, ERKKILÄ T, LAAJALA E, SALMI J, NGUYEN EV, KALLIONPÄÄ H, MYKKÄNEN J, VÄHÄ-MÄKILÄ M, HYÖTY H, VEIJOLA R, ILONEN J, SIMELL T, TOPPARI J, KNIP M, GOODLETT DR, LÄHDESMÄKI H, SIMELL O, LAHESMAA R

Diabetes

2015

Proteome wide reduction in AGE modification in streptozotocin induced diabetic mice by hydralazine mediated transglycation

KESAVAN SK, BHAT S, GOLEGAONKAR SB, JAGADEESHAPRASAD MG, DESHMUKH AB, PATIL HS, BHOSALE SD, SHAIKH ML, THULASIRAM HV, BOPANA R, KULKARNI MJ

Sci Rep

2013

Zoom-In A targeted database search for identification of glycation modifications analyzed by untargeted tandem mass spectrometry

BHONSLE HS, KORWAR AM, KESAVAN SK, BHOSALE SD, BANSODE SB, KULKARNI MJ

Eur J Mass Spectrom (Chichester)

2012

Comparative and chemical proteomic approaches reveal gatifloxacin deregulates enzymes involved in glucose metabolism

SURESH KK, BHOSALE SD, THULASIRAM HV, KULKARNI MJ

J Toxicol Sci

2011

References

Riitta Lahesmaa, M.D., Ph. D.

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Mahesh J. Kulkarni, Ph.D.

SCIENTIST, BIOCHEMICAL SCIENCES DIVISION, CSIR-NATIONAL CHEMICAL LABORATORY, PUNE, INDIA

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