

BANESH SOORAM, Ph.D

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Chipurudubba, 504299, Telangana, India.

CAREER OBJECTIVE

I want to continue working with cutting-edge research in the fields of cancer and infectious disease biology in a reputed academic institute and make an everlasting contribution to society.

ACADEMIC QUALIFICATIONS

| Degree | Institute/University | Time frame |
|------------|---|---------------------|
| Ph.D | Indian Institute of Technology Guwahati, India. Thesis title: <i>Potentials of CD36 in sensing apoptotic cells and modulating hemin mediated immune response from macrophages.</i> | Jul 2015 - Dec 2020 |
| M.Tech | National Institute of Pharmaceutical Education and Research SAS Nagar, India. Thesis title: <i>Synthesis and characterization of Aromatase inhibitors as potential enantiopure anti-cancer agents.</i> | Jun 2013 – May 2015 |
| B.Pharmacy | Kakatiya University Subject knowledge acquired in: -Pharmacology and Toxicology -Pharmacognosy -Medicinal Chemistry -Pharmaceutical analysis -Human Anatomy and Physiology -Pharmaceutical Biotechnology | Aug 2009 – May 2013 |

RESEARCH EXPERIENCE

| Duration | Supervisor/s | Work details | Outcome |
|---|--|--|---|
| 2022-2023 (April 4, 2022 to till date) | Independent project mentored by Dr. Prakash Saudagar | National Institute of Technology-Guwahati <i>“Design pharmacophore guided small molecules against infectious diseases and cancer”</i> | Manuscripts under peer review -1 |
| 2015-2020 | Prof. Vishal Trivedi and Prof. Vibin Ramakrishnan | Indian Institute of Technology Guwahati, India. <i>“Investigated and proposed the signaling pathway in CD36 mediated immune dysfunction. Screened and tested small molecules to correct the immune dysfunction targeting CD36.”</i> | Publications-3 Manuscripts in pipeline-2 |
| 2013-2015 | Prof. U.C.Banerjee | National Institute of Pharmaceutical Education and Research SAS Nagar, India. <i>“Synthesized enantiopure derivatives from and characterization of Aromatase inhibitors as potential enantiopure anti-cancer agents.”</i> | Publications-3 |

2012-2013

Kakatiya University, India

Minor project work:

“Developed new method for extraction of cinchona alkaloids from cinchona bark.”

TEACHING EXPERIENCE

| S.No | Institute/University |
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| 1 | Stem cell and Tissue engineering course for Batchelor students (2022) |
| 2 | Prepared course materials on standard molecular biology techniques for the course “ Genetic engineering Theory and applications. ” Course Instructor: Prof. Vishal Trivedi. (2019 and 2020) |
| 3 | Prepared experimental demos and assignments for the course “ Experimental Biotechnology ” course. (2020) |
| 3 | Guided master’s students to design experiments related to their master’s thesis (2016-2019) |
| 3 | Delivered lectures on drug discovery technologies to B. Pharma students (during my masters). |

TECHNICAL EXPERTISE

| Molecular biology techniques | Instrument handling | Computational knowledge |
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| ➤ Agarose gel electrophoresis | ➤ Double beam UV-Vis spectrometer | ➤ Pymol |
| ➤ SDS-PAGE | ➤ Ultracentrifuge | ➤ VMD |
| ➤ PCR, RT-PCR | ➤ HPLC (Shimadzu, Waters) | ➤ Autodock |
| ➤ Protein cloning | ➤ FPLC | ➤ PMV viewer |
| ➤ Over-expression | ➤ Rotavapor | ➤ Gromacs |
| ➤ Affinity purification | ➤ BioRadChemiDoc MP | ➤ Pharmacophore mapping |
| ➤ Site directed mutagenesis | ➤ Fluorimeter | |
| ➤ Immunoprecipitation | ➤ Fluorescence microscopy | |
| ➤ Mass spectroscopy | ➤ ITC (Malvern) | |
| ➤ Mammalian cell culture | ➤ Flow cytometer (BD FACS calibur) | |
| ➤ Plasmodium parasite | ➤ Akta pure M | |
| ➤ Transfection | ➤ Confocal imaging | |
| ➤ Knockdown using siRNA | ➤ Cytell cell imaging system (GE healthcare). | |
| ➤ Cell Cell viability assay | | |
| ➤ Western blotting. | | |

SKILLS

Problem Solving

Critical thinking

Adaptability

Strong work ethic

Time management

Handling pressure

Leadership

Collaboration

ACHIEVEMENTS

| S.No | Achievement |
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| 1 | Admitted to Ph.D program at IIT Guwahati with a full-time fellowship from MHRD, Govt. of India (2015) |
| 2 | Secured 822 nd all India Rank in Graduate Pharmacy Aptitude Test (GPAT) conducted by AICTE India (2013) |
| 3 | Secured 349 th all India Rank in NIPER-JEE exam conducted by NIPER for entry into masters in pharmacy programs (2013) |

PUBLICATIONS

| S.No. | Title and authors | Status |
|-------|--|--------------|
| 1 | Sooram Banesh , Vishal Trivedi: <i>Therapeutic potentials of Scavenger receptor CD36 mediated innate immune responses against infectious and non-infectious diseases. Current Drug Discovery Technologies</i> 08/2019; 16., DOI:10.2174/1570163816666190802153319 | Published |
| 2 | Sooram Banesh , Vibin Ramakrishnan, Vishal Trivedi: <i>Mapping of phosphatidylserine recognition region on CD36 ectodomain. Archives of Biochemistry and Biophysics</i> 10/2018; 660., DOI:10.1016/j.abb.2018.10.005 | Published |
| 3 | Sooram Banesh , and Trivedi, V., 2021. <i>CD36 Ectodomain Detects Apoptosis in Mammalian Cells. Molecular biotechnology</i> , 63(11), pp.992-1003. | Published |
| 4 | Sooram Banesh , Vishal Trivedi: <i>Gallic acid acts as a CD36 ligand to reduce pro-inflammatory cytokine secretion from macrophages.</i> | With journal |
| 5 | Sooram Banesh , Layek, S. and Trivedi, V., 2022. <i>Hemin acts as CD36 ligand to activate down-stream signalling to disturb immune responses and cytokine secretion from macrophages. Immunology Letters</i> , 243, pp.1-18. | Published |
| 6 | Mostakim SK, Sooram Banesh , Vishal Trivedi, Shyam Biswas: <i>Selective and Sensitive Sensing of Hydrogen Peroxide by a Boronic Acid Functionalized Metal–Organic Framework and Its Application in Live-Cell Imaging. Inorganic Chemistry</i> 11/2018; 57(23)., DOI:10.1021/acs.inorgchem.8b02240 | Published |
| 7 | Soutick Nandi, Sooram Banesh , Vishal Trivedi, Shyam Biswas: <i>A dinitro-functionalized metal- organic framework featuring visual and fluorogenic sensing of H₂S in living cells, human blood plasma and environmental samples. The Analyst</i> 02/2018; 143(6)., DOI:10.1039/C7AN01964E | Published |
| 8 | Aniruddha Das, Sooram Banesh , Vishal Trivedi, Shyam Biswas: <i>Extraordinary Sensitivity for H₂S and Fe(III) Sensing in Aqueous Medium by Al-MIL-53-N₃ Metal-Organic Framework: In Vitro and In Vivo Applications of H₂S Sensing. Dalton Transactions</i> 01/2018; 47(8)., DOI:10.1039/C7DT04009A | Published |
| 9 | Soutick Nandi, Helge Reinsch, Sooram Banesh , Norbert Stock, Vishal Trivedi, Shyam Biswas: <i>Rapid and highly sensitive detection of extracellular and intracellular H₂S by an azide- functionalized Al(III)-based metal-organic framework. Dalton Transactions</i> 09/2017; 46(38)., DOI:10.1039/C7DT02293J | Published |

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| 10 | Saptarshi Ghosh, Ganesh Sawant, Sooram Banesh , JayeetaBhaumik, Uttam Chand Banerjee: <i>In- silico approach towards lipase mediated chemoenzymatic synthesis of (S)-Ranolazine, as an anti-anginal drug.</i> RSC Advances 05/2016; 6(54):49150-49157., DOI:10.1039/C6RA06879K | Published |
| 11 | Neeraj S. Thakur, JayeetaBhaumik, Banesh Sooram , LingaBanoth, Uttam C. Banerjee: <i>Synthesis of Enantiopure Drugs and Drug Intermediates Using InSilico Generated Archetype Biocatalyst: A Case Study Using Alprenolol as a Model Drug.</i> ChemistrySelect 04/2016; 1(4):871-876., DOI:10.1002/slct.201600043 | Published |
| 12 | SaptarshiGHosh, JayeetaBhaumik, LingaBanoth, Sooram Banesh , Uttam Chand Banerjee: <i>Chemoenzymatic Route for the Synthesis of (S)-Moprolol, a Potential -Blocker.</i> Chirality 01/2015; 28(4)., DOI:10.1002/chir.22574 | Published |

CONFERENCES

| S.No. | Details |
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| 1 | Presented poster entitles “ <i>Probing the interactions of phosphatidylserine with scavenger receptor CD36 using in-silico tools and its implications in understanding the non-opsonic phagocytosis mechanism</i> ” in ICMBDT 2019 , organized by Central University-Rajasthan held during March 2019. |
| 2 | Presented poster entitles “ <i>Elucidation of phosphatidylserine pharmacophore within scavenger receptor CD36 using in-silico tools and its implications in understanding the non-opsonic phagocytosis mechanism</i> ” in Research Conclave 2017 , organized by Indian Institute of Technology-Guwahati held during 16 th -19 th March 2017. |
| 3 | Participated in the International conference on Drug Design , held during 7-9 April, 2017 organized by Schrodinger. |
| 4 | Presented poster in 26th National parasitology Congress on “ <i>Addressing New Challenges and Emerging Issues in Parasitology and Disease Biology</i> ” held at BHU, Varanasi between 21st to 23rd January, 2016. |
| 5 | Presented poster in Research conclave 2016 an annual conglomeration of scientific community organized by Indian Institute of Technology-Guwahati held during March 2016. |
| 6 | Presented poster entitles “ <i>Biochemical and molecular modelling study to understand CD36-PS interaction: potentials in downstream applications</i> ” in the scientific session in the “ 85th Annual Meeting of Society of Biological chemists (India) ” held during November, 2016 at CSIR-CFTRI, Mysore, India. |
| 7 | Attended 11th International conference of ISHR on: Changing Trends on Cardiovascular Drug Discovery and Development (2014). |

CERTIFICATIONS

| S.No. | Details |
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| 1 | <p>Awarded certificate in the “Take your medicine-The impact of drug development” course.</p> <p>Mode: Online</p> <p>Offered by: The University of Texas system</p> <p>Verify at: https://verify.edx.org/cert/305e904bef874824b9c3a1c4920e29a2</p> |
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- 2 English language proficiency certificate- (*C1 advanced* on CEFR scale).
Mode: Online
Offered by: British council
Verify at: <https://api2.englishscore.com/verify/8aa8b653>
- 3 English language proficiency certificate- (*C1 advanced* on CEFR scale).
Mode: Online
Offered by: EFSET
Verify at: <https://www.efset.org/cert/4WqXZc>
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CONTACT DETAILS OF REFERENCES

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Dr.Surajbhan Sevda

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