BIOGRAPHICAL SKETCH

Bhavani Shankar Sahu

Designation: Assistant Professor/IBRO Fellow & DBT-Ramalingasawmi Fellow

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Research Area: Vesicular trafficking, Cellular metabolism

Academic Qualifications:

MSc, 2007, Biochemistry and Molecular Biology, Pondicherry Central University.

Ph.D. 2013, IIT Madras in Cell Biology and Molecular Genetics.

Postdoctoral fellow, 2013-2016 with Scottie Robinson, Cambridge University.

Postdoctoral fellow, 2016-2019 with Alessandro Bartolomucci, University of Minnesota.

Assistant Professor, 2019- to date, National Brain Research Center, Manesar.

Awards and Honors:

*ICGEB Trieste early career award 2020.

*IBRO (International Brain Research Organization) Paris, early-career start-up grant award 2019.

*Awarded Daniel T O' Connor Young investigator award from the catecholamine research society, USA for outstanding contributions in catecholamine research, USA, 2018.

*Company of Biologists (Cambridge, UK) visiting research fellowship to University of California, Sandiego,2018.

*Endocrinology & Metabolism Campbell Award by the American physiological society(Finalist), 2018.

*Awarded the prestigious Ramalingaswami fellowship award grant by the department of biotechnology, India, 2017-18.

*N. K. Ganguly Young Investigator Award. For the research excellence in Clinical Cardiology. Awarded by International Academy of Cardiovascular Sciences and International Society of Heart Research in 2011.

*DST Young Scientist Award. For attending the 10th World Congress of Human Proteomics Organization. Awarded by the Department of Science and Technology, Government of India in 2011(Awarded not availed).

*Travel grant from Indian Institute of Technology, Madras for attending 10th World Congress of Human ProteomicsOrganization.

*Qualified Graduate Aptitude Test Exam conducted jointly by Indian Institutes of science and Indian Institute of Technologies (GATE2007).

*Fellowship from CSIR (Council for Scientific and Industrial Research), India 2008-2011.

*Awarded the Best Student for academic excellence during Bachelor of Science degree by the Vice-Chancellor of Andhra University in the year 2005.

*Awarded merit scholarship from the police academy of Andhra Pradesh (State govt of Andhra Pradesh, India) from the year 2000 –2005.

Grants/Funding:

*Visiting fellowship grant from Company of Biologists, Cambridge UK (3000 GBP 2.5 lakhs INR).

*Research grant from DBT, Govt of India through Ramalingaswami Re-entry Program (1.2 crores INR).

*Startup grant from IBRO, Paris to initiate work at NBRC 2019-2022 (20,000 euros ~ 1700000 lakh INR)

ICGEB early career research grant award 2021-2024 (50,000 euros ~ 42 lakh INR)

Invited Talks:

*International academy of cardiovascular sciences, February 2011 MS University Baroda

*Cambridge University/Marie Curie Research Re-treat, June 2017 UK

*American Physiological Society Meeting, April 2018, Experimental Biology Meeting, Sandiego, USA

*Proteins exosomes and micro-RNA in health and diseases, 2018, MS University Baroda

*Molecular Motors, Transport, and Trafficking Meeting 2019, NBRC

***Organized 20th International Symposium on Chromaffin Cell Biology (ISCCB-20)**

Teaching Responsibilities:

*Neurochemistry: ODD Semester at NBRC

Professional responsibilities:

*Adjunct visiting faculty Vikram Sarabhai Institute of Cell and Molecular Biology, Faculty of Science, The Maharaja Sayajirao University of Baroda, Gujarat, India (2016-2019).

*Adhoc Reviewer for Neurochemistry international, Journal of Endocrinology, Neuropeptides, Molecular, and Cellular Endocrinology.

Science Hobbies and outreach:

*Public communication of science by participating and setting up stalls for science at Cambridge science festival, Minnesota State Fair.

*Co-coordinator for NBRC team science out reach team.

*Visit rural schools in the backward districts of the Indian states of Andhra Pradesh/Odisha for outreach activities.

Publications:

1.**Sahu BS**, Rodriguez P, Nguyen ME, Han R, Cero C, Razzoli M, Piaggi P, Laskowski LJ, Pavlicev M, Muglia L, Mahata SK, O`Grady S, McCorvy JD, Baier L, Sham YY, Bartolomucci. A. Peptide/receptor co-evolution explains the lipolytic function of the neuropeptide TLQP-21. ***Cell Reports***. **2019**; 28:2567–2580.

2.**Sahu BS** *Ŧ, **Sumana Mahata**, Keya Bandyopadhyay, EnnioAvolio, Chinmayi Sahu, Gautam K. Bandyopadhyay, Alessandro Bartolomucci, Nicholas J.G. Webster, Angelo Corti, Lee Eiden, Sushil K. Mahata*. Catestatin regulates vesicular quanta by interacting with cholinergic and peptidergic stimulations in PC12 cells. ***Cell Tissue Res.*** **2019** Apr;376(1):51-70. (**Co-corresponding Co-first author**)

3.Guo, Z., **Sahu, B.S**., He, R., Finan, B., Cero, C., Verardi, R., Razzoli, M., Veglia, G., Di Marchi, R.D., Miles, J.M. and Bartolomucci, A.*, Clearance kinetics of the VGF-derived neuropeptide TLQP-21. ***Neuropeptides***. **2018** Oct; 71:97-103.

4.**Sahu BS**, Paul Manna, James Edgar, Robin Antrobus, Sushil Mahata, Alessandro Bartolomucci, Georg Borner, Margaret Robinson*. Role of clathrin in dense core vesicle biogenesis. ***Molecular Biology of the Cell. 2017***. Oct 1; 28(20):2676-2685.

5.Cero C, Razzoli M , Han R, **Sahu BS**, Patricelli J, Guo Z, Zaidman N, Miles J, O`Grady SM, Bartolomucci A*. The neuropeptide TLQP-21 opposes obesity via C3aR1-mediated enhancement of adrenergic-induced lipolysis. ***Molecular Metabolism.*** **2017**. S2212-8778(16)30201-0.

6.Subramanian L, Allu PK, Kiranmayi M, **Sahu BS**, Abrar Khan; Sharma S, Khullar M, Mullasari AS, Mahapatra NR*. Human chromogranin A gene promoter haplotype: Differential interactions with the transcription factor c- Rel and implications for cardio metabolic disorders. ***Journal of Biological Chemistry***. **2017**.292(34):13970-13985.

7.Kiranmayi M, Chirasani VR, Allu PK, Subramanian L, Martelli EE, **Sahu BS**, Vishnuprabu D, Kumaragurubaran R, Sharma S, Bodhini D, Dixit M, Munirajan AK, Khullar M, Radha V, Mohan V, Mullasari AS, Naga Prasad SV, Senapati S, Mahapatra NR*. Catestatin Gly364Ser variant alters systemic blood pressure and the risk for hypertension in human populations via endothelial nitric oxide pathway. ***Hypertension.*** **2016**. 68:334-347.

8.Sonawane PJ, Gupta V, Sasi BK, Kalyani A, Natarajan B, Khan AA, **Sahu BS**, Mahapatra NR*. Transcriptional Regulation of the Novel Monoamine Oxidase Renalase: Crucial Roles of Transcription Factors Sp1, STAT3 and ZBP89. ***Biochemistry*** **2014**.53: 6878-6892.

9.Sasi BK, Sonawane PJ, Gupta V, **Sahu BS**, Mahapatra NR. Coordinated transcriptional regulation of Hspa1a gene by multiple transcription factors: crucial roles for HSF-1, NF-Y, NF-κB and CREB. ***J MolBiol*** **2014**. 426:116-35.

10. **Sahu BS**, Mohan J, Sahu G, Allu PKR, Subramanian L, Sonawane PJ, Singh PK, Sasi BK, Senapati S, Maji SK, Bera AK, Gomathi BS, Mullasari AS, Mahapatra NR*. Functional genetic variants of the catecholamine-release-inhibitory peptide catestatin in an Indian population: allele-specific effects on metabolic traits. ***J BiolChem*** **2012**.287: 43840-43852

11. **Sahu BS**, Mohan J, Sahu G, Singh PK, Sonawane PJ, Sasi BK, Allu PKR, Maji SK, Bera AK, Senapati S, Mahapatra NR. Molecular interactions of the physiological anti-hypertensive peptide catestatin with the neuronal nicotinic acetylcholine receptor. ***J Cell Sci*** **2012**125:2323–2337.

12. Sonawane PJ, **Sahu BS**, Sasi BK, Geedi P, Lenka G, Mahapatra NR. Functional promoter polymorphisms govern the differential expression of HMG-CoA reductase gene in mouse models of essential hypertension. ***PLoS ONE.*** **2011** 6: e16661 (1-16).

13. Abdul Khaliq R, Sonawane PJ, Sasi BK, **Sahu BS**, Pradeep T, Das SK, Mahapatra NR. Enhancement in the efficiency of polymerase chain reaction by TiO_2 nanoparticles: the crucial role of enhanced thermal conductivity. ***Nanotechnology.*** **2010** 21: 255704 (1-11).

14. **Sahu BS**, Sonawane PJ, Mahapatra NR. Chromogranin A: a novel susceptibility gene for essential hypertension. ***Cell Mol Life Sci*** **2010**. 67:861-874.

Book chapters:

*Sonawane PJ, **Sahu BS**, Mahapatra NR. 2011. Pharmacogenomics of cardiovascular drugs. In: Drug Design-Basics and Applications (Doble M, Ed.). pp. 280-310. Tata-McGraw-Hill Publishers, New Delhi, India.

Selected Conference Proceedings as the first author:

1.**Experimental Biology meeting 21 to 25 April 2018 Sandiego, USA.**

Title: The TLQP-21 neuropeptide and the complement 3a receptor (C3aR1) regulate a novel pro-lipolytic pathway (Oral Presentation).

Authors: Sahu BS, Cheryl Cero, Ruijun Han, Maria Razzoli, Scott O`Grady, Alessandro Bartolomucci, Department of Integrative Biology and Physiology, University of Minnesota, 2231 6th St. SE, Minneapolis, MN 55455, USA, USA.

2. **Protein and lipid function in secretion and endocytosis meeting 14 to 19 January 2014.** Gold egg am See, Austria.
Title: Role of Clathrin and associated proteins in vesicular biogenesis and trafficking in PC12 neuroendocrine cells.
Authors: Sahu BS, Georg Borner, James Edgar, Robin Antrobus, Margaret Robinson.

3**. Catecholamine Research in the 21st Century Symposium, 2012, Asilomar California. Title:** Identification and Functional Characterization of Genetic Variants of the Catecholamine Release-Inhibitory Peptide Catestatin in an Indian Population.
Authors: Sahu BS, Lakshmi Subramanian,Prasanna K.R. Allu, Giriraj Sahu, JaganMohan,Pradeep K. Singh, BalashankarGomathi, Samir K. Maji, Amal K. Bera, SanjibSenapati, AjitS. Mullasari and NitishR. Mahapatra

4**. 10th world congress of human proteomic organization held from 4th to 7th September 2011 in Geneva, Switzerland**.

Title: Structural and functional characterization of polymorphisms in the physiological anti-hypertensive peptide Catestatin

Authors: Sahu BS, Jagan Mohan, Giriraj Sahu, Parshuram J Sonawane, Binu K Sasi, Pradeep K Singh, Samir K Maji, Amal K Bera, SanjibSenapati, Nitish R. Mahapatra.

5**. Oral presentation at the 4th World Congress of the International Academy of Cardiovascular Sciences held on Feb. 1-3, M. S. University of Baroda, Vadodara, India (Best OralPresentation).**

Title: Identification and functional characterization of genetic polymorphisms in the physiological anti-hypertensive peptide catestatin in an Indian population. (Proceedings of the International Academy of Cardiovascular Sciences).
Author: Sahu BS.

6**. Poster presentation at the International Symposium on Genomics, Model organisms and disease held on Oct. 1-2, 2008, National Centre for Biological Sciences, Bangalore, India.**
Title: Identification and molecular characterization of polymorphisms in the HMG-CoA reductase gene in mouse.
Authors: Sahu BS, Geedi P, Lenka G, Sonawane PJ, and Mahapatra NR.