Dr. Sinam Ibotombi Singh



Assistant Professor
Department of Animal Science, School of Life Sciences
Central University of Karnataka
Email: ibotombisinam@cuk.ac.in | sinammichael2@gmail.com
Phone: +91 7005972011

Professional Summary

Biomedical scientist with expertise in mitochondrial biology, skeletal muscle atrophy, cardiometabolic diseases, molecular signaling and translational medicine. International research experience with high-impact publications and externally funded research.

Research Interests

- Mitochondrial Biology
- Skeletal Muscle Atrophy
- Cardiomyopathy
- Cell Signaling
- Muscle Stem Cells
- Molecular Imaging
- Protein Post-translational Modification

Education

Degree	Institution	Year
PhD	Kyungpook National University	2017–2022
MSc	Bharathidasan University	2014–2016

Academic Appointments

- Assistant Professor, Central University of Karnataka (2026–Present)
- Research Professor, Kyungpook National University Hospital (2023–2026)
- Postdoctoral Researcher, Kyungpook National University Hospital (2022)
- Research Assistant, ILBS (2016–2017)

Research Funding (Completed)

Principal Investigator: Treatment of Cardiomyopathy by Improving Mitochondrial Function
Funding Agency: National Research Foundation of Korea
Duration: 2023–2026
Budget: Approximately ₹1.8 Crore

Selected Publications

1 **Ibotombi Singh Sinam**, Dipanjan Chanda, Themis Thoudam , Jae-Han Jeon* & In-Kyu Lee. Pyruvate dehydrogenase kinase 4 promotes ubiquitin–proteasome system-dependent muscle atrophy. Journal of Cachexia, Sarcopenia and Muscle (2022) DOI: 10.1002/jcsm.13100 **(Impact Factor:9.9)**.

2 Themis Thoudam , Dipanjan Chanda , **Ibotombi Singh Sinam** , Jae-Han Jeon , In-Kyu Lee. Noncanonical PDK4 action alters mitochondrial dynamics to affect cellular respiration. PNAS (2022) DOI: 10.1073/pnas.2120157119 **(Impact Factor:10.6)**.

3 Themis Thoudam, Dipanjan Chanda, Jung Yi Lee, Min-Kyo Jung, **Ibotombi Singh Sinam**, Jae-Han Jeon , In-Kyu Lee. Enhanced ER–mitochondria calcium channeling complex formation underlies alcohol-associated liver disease. Nature Communications (2023) DOI: 10.1038/s41467-023-37214-4 **(Impact Factor:16.6)**.

4 Min-Ji Kim, **Ibotombi Singh Sinam**, Zerwa Siddique, Jae-Han Jeon, In-Kyu Lee. The link between mitochondrial dysfunction and sarcopenia. Diabetes & Metabolism Journal (2023) doi: 10.4093/dmj.2022.0305. **(Impact Factor:5.9)**.

5 Dipanjan Chanda, Themis Thoudam, **Ibotombi Singh Sinam**, Jae-Han Jeon , In-Kyu Lee. Upregulation of the ERRγ–VDAC1 axis underlies the molecular pathogenesis of pancreatitis. PNAS (2023) doi: 10.1073/pnas.2219644120 **(Impact Factor:10.6).**

6 Kim YR, Jun S, Jung S, Lee B, Lee SH, Lee J, Hwang JS, Thoudam T, Lee H, **Sinam IS**, Jeon JH, Lee KY, Min SJ, Kim UK. Inhibition of the mitochondrial permeability transition pore as a promising target for protecting auditory function in cisplatin-induced hearing loss. Biomedicine & Pharmacotherapy (2025 doi: 10.1016/j.biopha.2024.117767. **(Impact Factor:7.5).**

Awards:

- ❖ Awarded National Talent Search scholarship (NTSE) in 2004
- ❖ Outstanding Young Scientist Grants in 2023, South Korea.

Conferences:

1 The 19th Annual Meeting of the Society for Heart and Vascular Metabolism, SHVM j fc, held in Seoul, South Korea, from 16 to 19 October 2022.

2 International Congress of Diabetes and Metabolism (ICDM 2024), which was held in Grand Walker hill, Seoul, Korea on October 9 (Wed) ~ 11(Fri), 2024

3 The American Heart Association's Vascular Discovery: From Genes to Medicine Research Chicago, IL | May 14-18, 2024

4 Korean Society for Mitochondrial Research and Medicine (KSMRM) KSMRM, South Korea 2025.

5 FASEB Science Research Conference: Mechanisms of Mitochondrial DNA Mutation and Repair, June 1 - 5, 2025 | Nashville, Tennessee, USA

6 Keystone conference Mitochondria Signalling in Physiology and Disease, Feb 09–12, 2026 | Keystone Resort, Keystone, Colorado (CO), USA

Invited Talks:

18th International Conference Rome, 11-13 December 2025, Sarcopenia, Cachexia & Wasting Disorders – SCWD "**Mitochondrial protein modulation as a therapeutic approach to counteract muscle wasting"**

Reviewer Experience: Molecular Biomedicine | Springer Nature Link