

### C.V. of Dr. Giridhar Parvatam

Dr. Giridhar Parvatam earned his MSc in 1991 and his PhD in 1996, both from Kakatiya University in Telangana, India. His doctoral research focused on the prevalence of mycotoxins in various spices and dried fruits, underscoring the critical need for establishing rigorous controls to mitigate microbial spoilage throughout the supply chain, from production to consumer delivery. Following this, served as a lecturer in Microbiology for three years at Santhinikethan Degree College and SSRJ Arts & Science College in Khammam, Telangana. Dr. Parvatam joined the Central Food Technological Research Institute (CFTRI) as a scientist in 1999 and progressed to become the Director of CSIR-CFTRI in September 2025, marking a significant step in his career within the domain of food science and microbiology.

Dr. P. Giridhar has made substantial contributions to the fields of Biotechnology, Bioactive Secondary Metabolites, and Food Sciences & Technology throughout his distinguished research career. The R&D initiatives have led to significant advances in the production of value-added food metabolites, including natural colourants such as anthocyanins, betalains, and annatto dye, and have also focused on the extraction of steviol glycosides, a non-caloric sweetener, and capsaicin, a pungent compound.

Additionally, research studies delve into the area of plant neurotransmitters through the identification of indole amines, as well as the exploration of diterpenes, which are recognized as anti-nutritional factors in coffee. Giridhar's work has also yielded nutraceuticals, including cordycepin and isoflavones. He has been instrumental in developing vanillin-flavour metabolites from swallow root, engineering transgenic *Coffea* plants with reduced caffeine content, and enhancing annatto colour content in *Bixa orellana*.

Dr. Giridhar's investigations have underscored the nutritional and nutraceutical value of underutilized plant parts, notably the fruits of *Tinospora cordifolia*, *Rivina humilis*, and *Santalum album*, along with green leafy vegetables. His team was the first to explore the functional food applications of *Basella rubra* fruit extracts. Collectively, these findings have considerable implications for the industrial production of relevant food-value metabolites.

Dr. Giridhar Parvatam has made substantial contributions to the advancement of two pivotal commercial crops, Coffee and Soybean, through his involvement in government-funded research fellowships and project initiatives. The overseas tenure as a DAAD fellow at the University of Bayreuth, Germany (1995-96), under Prof. Ewald Komor's mentorship, served as a springboard for international collaborations upon his return to CFTRI. Notably, during the Indo-Bulgaria project (2007-08), Dr. Giridhar refined expertise in developing in vitro protocols and isolating bioactive compounds from Bulgarian Soybean varieties. Association with the esteemed Coffee Genomics Research Group at IRD, France (2005-2006), facilitated by the DST-BOYSCAST Fellowship, under the mentorship of Dr. Alexander de Kochko, provided him with critical insights into coffee genomics, which he subsequently built upon through securing funding for his own projects supported by DBT and SERB. Research trajectory further

expanded through a partnership with Leibniz University, Germany, under the CSIR-BMBF (Indo-German) initiative, focusing on applications of CRISPR-Cas9 technology.

Dr. Parvatam has elucidated the roles of neurotransmitters, specifically serotonin and melatonin, in promoting plant morphogenesis and bioactive production. His innovative work on enhancing the nutritional profile of Moringa foliage through plant growth-promoting rhizobacteria (PGPRs)—specifically by enriching pigments, iron, and folates—has significant health implications. His early career was characterized by a profound commitment to research, leading to a trajectory of consistent achievements that aligned with institutional objectives. These accomplishments have fostered enduring partnerships with the industry, particularly in the areas of dehydrated green leafy vegetable powders for food fortification and the extraction of natural vanillin flavour metabolites from swallow root for culinary applications.

Dr. Giridhar edited two books i.e. **Coffee Science: Biotechnological Advances, Economics, and Health (CRC Press, 2021)**, and **Benefits & Tropane Alkaloids: Sources, Chemistry, Pharmacology and Biotechnology (Springer, 2025)**.

#### **Fellowships awarded:**

- Fellow of the Royal Society of Biology (FRSB)
- Fellow of the National Academy of Biological Sciences (FNABS)
- Fellow of the Association of Food Scientists & Technologists (FAFSTI)
- Fellow of Andhra Pradesh Akademi of Sciences (FAPAS)
- Fellow of the Academy of Plant Sciences, India (FAPS)
- Fellow of the Indian Botanical Society (FBS)
- Fellow of the Society for Applied Biotechnology (FSAB)
  
- Elected member of the National Academy of Sciences, Allahabad.
- Elected member of the Plant Tissue Culture Association of India.

#### **Awards**

- Eminent Senior Scientist Award -2023 – Conferred by CSER (Centre for Societal and Environmental Research), Ranchi
- Prof V. Puri Commemorative medal of Indian Botanical Society – 2021
- Outstanding Scientist Award of The Society of Tropical Agriculture, India - 2019
- Senior Scientist Award of Asian Biological Research Foundation, Prayagraj - 2019
- Senior Scientist Award of the Association of Biotechnology and Pharmacy 2018
- International Plant Scientist Award of the Academy of Plant Sciences, India
- Best Scientist Award- Food Technology by National Academy of Biological Sciences-2015

- Laljee Godhoo Smarak Nidhi Award for Food Scientist of Association Food Scientists and Technologists, India – 2012
- CSIR-CFTRI, Best Research Scientist Award – 2012
- Prof. HC Dubey Outstanding Young Scientist Award of ISMPP-2010
- Prof. Y.S. Murthy Commemorative Gold Medal Award for Sr. Botanist of IBS-2009
- Young Scientist Award of Academy of Plant Sciences, India 2003

Dr. Giridhar is associated with BIS, Govt. of India, as a member of the Flavour and Fragrance Section committee (PCD-18), a scientific panel member of FSSAI (SP1), and also as a Nodal Scientist for the National Biodiversity Authority at CSIR-CFTRI, Mysore, during 2021-2025. He has also served as Director of the Referral Food Laboratory at CFTRI, Mysore, from January 2024 to September 2025.

Over the course of an esteemed academic and professional career, Dr Giridhar supervised 17 PhD candidates and 51 dissertation students. His research has led to the acquisition of 9 patents and the publication of more than 231 scholarly articles, resulting in an h-index of 53 and an i-10 index of 150. Dr Giridhar's work has been cited over 8,635 times and has been honoured with 16 awards from various scientific societies in India.