Dr. S. Prabhakar
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I N D I A

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Dr. S. Prabhakar was born on 03-06-1968 and completed his B.Sc (BZC) and M.Sc. (Org Chem.) in Osmania University, Hyderabad. He joined CSIR-IICT for Ph.D. degree (CSIR-JRF/SRF, 1993-1997) in the area of Mass Spectrometry. He continued as CSIR-RA (1 year) and joined CSIR-IICT as a Scientist in 1998, till date, continuing his research in the area of Mass Spectrometry/Analytical Chemistry. He published more than 165 research publications (international journals). He supervised 13 Ph.D. students, and currently 6 Ph.D. students working.

EXPERTISE

Expertise in Mass Spectrometry analysis (> 25 years) for structural characterization of small molecules, pharmaceuticals, natural products, biomolecules (proteins, lipids etc.) and toxicants. His research applications are to both basic & applied research, which include shotgun metabolomics for disease markers, Metabolite profiling/quantification, Impurity profiling of pharmaceuticals & agrochemicals, Proteomics, Isomeric differentiation, Gas-phase rearrangements, Chemical warfare agents and their degradation products. He is Quality Manager of ISO/IEC 17025, NABL Assessor, GLP Inspector, and Faculty of AcSIR.

EDUCATION:

M.Sc. (Organic Chemistry), Osmania University 1992; Ph.D. (Chemistry), Osmania University 1997
(Thesis title "*Development of mass spectral techniques for stereochemical problems*"
Under the supervisor of Dr. M. Vairamani, CSIR-IICT)

PROFESSIONAL EXPERIENCE

2017 – Present: Senior Principal Scientist at CSIR-IICT
2012-2017: Principal Scientist at CSIR-IICT
2007-2012: Senior Scientist at CSIR-IICT
- **2007-2009:** *Postdoc*: Research Scientist, Dept. of Chemistry, George Washington University, USA

2001-2007: Scientist C at CSIR-IICT
- **2001-2003:** *Postdoc:* Research Associate, Dept. of Biochemistry, University of Oxford, UK

1998-2001: Scientist B at CSIR-IICT
1997-1998: Research Associate, CSIR-IICT
1993-1997: CSIR-JRF and SRF, CSIR-IICT

SELECTED PROJECTS COMPLETED/ONGOING:

Industry Sponsored:
- Impurity profiles of pharmaceuticals and agrochemicals

Academic:
- Metabolic and molecular profiling of aromatic rice germplasm of India for gaining insights about aroma
- Metabolic profiling of human body fluids by MS &NMR
- Non-covalent interactions between proteins and ligands under mass spectrometry conditions
- Assessment of plasma metabolites in patients on maintenance of Hemodialysis
- Assessment of uremic toxins in patients with different stages of chronic kidney disease
- Development of Process for Production of Choline Hydroxide / Choline Etchant for Semiconductor Laboratory (SCL)
- Establishment of GLP compliant analytical facility at CSIR-IICT to augment biosimilars characterizations in India
- Plasma metabolomic profiling to identify metabolic biomarkers for early detection of prediabetes associated with pancreatogenic diabetes (type3cDM) in chronic pancreatitis

AWARDS & HONOURS

- Eminent Mass Spectrometrist (2013) by ISMAS
- Fellow of Telangana Academy of Science (2016)
- CSIR-IICT Gaurav Samman Award (2012)
- Special award for skill development team (2018)
- Special appreciation award (2008)
- CSIR outstanding performance award (2004)
- Highest ECF award (technical) for Department (2019)
- Highest ECF award (technical) 2nd prize (2022)
- Director special appreciation award for services as course coordinator of skill programs (2022)

SELECTED PUBLICATIONS: (Total 165 till Feb2023)

1. *Metabolomics* **2023** (Accepted)
2. *J. Pharm. Biomed. Analysis* **2020**, 188, 113442
3. *Scientific Reports,* **2020,** 10, 2970.
4. *J. Mass Spectrom.* **2019**, 54, 761.
5. *Plant Cell Report* **2019,** 38, 1127.
6. *Rapid Commun. Mass Spectrom.* **2018,** *32*, 1529
7. *Eur. J. Mass Spectrom.* **2018,** 24, 442
8. *J. Mass Spectrom.* **2016,** 51, 638.
9. *PLoS ONE* **2016,** 11(3):e0150253.
10. *J. Org. Chem.*, **2015**, 80, 1746.
11. *Rapid Commun. Mass Spectrom.,* **2015,** 29, 1155.
12. *Anal. Methods*, **2014**, 6, 8212.
13. *Phys. Chem. Chem. Phys.*, **2014,** 16, 17266.
14. *PLoS ONE* **2014,** 9(12): e115173.
15. *Anal Bioanal. Chem.* **2014,** 406, 5235
16. *Metabolomics*, **2013**, 9, 623.
17. *Chem. Commun.* **2012,** 48, 3700.
18. *Int. J. Mass Spectrom.* **2011,** 299, 169.
19. *Protein & Peptide Letters*, **2011,** 18 (6), 588.
20. *PLoS ONE*, **2010**, 5(9):e12590.
21. *Food chem.* **2009,** 115(4), 1556.
22. *Nature genetics*, **2006**, 38, 1015.
23. *Anal. Chem.* **2004,** 76, 3505