SARAYU MURALI

RESEARCH SCHOLAR,
IIT MADRAS

msarayu.1993@gmail.com

Birth Date
October 18, 1993

Nationality
Indian

Languages
English | Hindi | Tamil | Telugu

Soft Skills
Communication | Teamwork | Problem solving | Critical thinking

Software Proficiency
MATLAB | C | ASPEN

PROFILE

Penchant to contribute for the benefit of humanity through research aligning with institutional goals utilizing cutting edge industrial technologies
Research interests –Metabolic Engineering, Phyto-pharmaceuticals
Current research focus – Enhancing secondary metabolite synthesis from plants

EDUCATION

(PhD) – Department of Biotechnology, IIT Madras| 2016-present| CGPA 8.25/10

M.Sc. (Hons) Biological Sciences & B.E. (Hons) Chemical Engineering, BITS Pilani | 2011-2016 | CGPA 8.32/10

Class 12, FIITJEE Junior College, Hyderabad |2010-2011 % Score 96.5/100

Class 10, TRIPS International School, Rajahmundry | 2008-2009 | % Score 96.2/100

EMPLOYMENT HISTORY

Research Scholar, Indian Institute of Technology, Madras| 2016-Present

Winter Research Fellow, Queensland Alliance for Agriculture & Food Innovation(QAAFI), University of Queensland| Jun-Jul 2015

ACHIEVEMENTS

Recipient of the Women Leading Initiative, IIT Madras – 2021-22
Qualified GATE - 2015
Recipient of the DST-INSPIRE Scholarship – 2011 to 2016
Invited to participate in GSLV Awards at ISRO for being the district topper in Class 10 - 2009

EXPERTISE

Polymerase Chain Reaction (PCR) | quantitative Polymerase Chain Reaction (qRT- PCR) | High performance liquid chromatography (HPLC) | Molecular Cloning | Gene over-expression | Plant Tissue culture | Flux Balance Analysis (FBA) | COnstraint Based Reconstruction and Analysis (COBRA)

PATENTS

- A method for the overproduction of camptothecin in engineered cell lines of *Nothapodytes nimmoniana* (Provisional Application No. 202241077443)
- A bioprocess to produce camptothecin from *in vitro* cultures of *Nothapodytes nimmoniana* (Provisional Application No. 202341002091)

PUBLICATIONS

- Murali, S., Ibrahim, M., Rajendran, H., Shagun, S., Masakapalli, S. K., Raman, K., & Srivastava, S. (2023). Genome-scale metabolic model led engineering of *Nothapodytes nimmoniana* plant cells for high camptothecin production. *Frontiers in Plant Science, 14,* 1207218. https://doi.org/10.3389/fpls.2023.1207218
- **Book chapter** - Murali S, Rajendran H, Srivastava S (2021) Plant Cell Biofactories as in vitro production platforms of the anti-cancer drug Camptothecin. In: Malik S (ed) Exploring plant cells for the production of compounds of interest. Springer International Publishing. https://doi.org/10.1007/978-3-030-58271-5_2

CONFERENCES

- **Oral presentation** - Metabolic Pathway Analysis Conference (MPA 2023) organized by MPA2023 held at Seoul, Republic of Korea between Jul 24-27, 2023.
- **Poster presentation** - 8th Conference on Constraint Based Reconstruction and Analysis (COBRA 2022) organized by the American Institute of Chemical Engineers (AIChE) held at Galway, Ireland between Sep 28-30, 2022.
- **Oral presentation** - International Conference on Plant Systems Biology & Biotechnology (ICPSBB) Venue & Date - held on hybrid mode at Golden Sands Resort, Bulgaria (attended virtually) between June 14 - June 17, 2021.
- **Oral presentation -** International Conference on Bioengineering solutions for Healthcare, Food, Energy & Environment (BSHFEE) held on hybrid mode at IIT Jodhpur (attended virtually) between April 9 - April 10, 2021.
- **Poster presentation -** 4th International Conference on Plant Synthetic Biology, Bioengineering and Biotechnology (PlantSynBio- AIChE), held virtually between Oct 30-Nov 1, 2020.