

Ghurupreya R

Contact

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Laboratory skills

Phytochemical extraction & analysis, Thin Layer Chromatography, Plant DNA isolation, Molecular docking, Culturing of microbes & toxicity assay, Material characterization

Key courses learned

Bio-molecular and Cellular Process Engineering, Reaction engineering for Biotechnologists, Biopharmaceutical production: An industry perspective, Industrial waste water management, Total quality management, Current Good Manufacturing Practices

Merits

- **Gold medal for securing 1st rank** in the Department of Biotechnology in B. Tech Class of '21
- **AIR 634** in GATE (BT) '21
- TANCET '21 - MBA: **98.456 percentile** and M. Tech: **91.842 percentile**
- **Ishikawa Award** in the 12th International Convention on Student Quality Control Circle-2009

References

- **M. Tech Project Supervisor:** Dr. Selvaraju Narayanasamy, Associate Professor, Department of BSBE, Indian Institute of Technology Guwahati.
Phone: +91 9446021424
Email: selva@iitg.ac.in
- **M. Tech Thesis Examiner/ Course Instructor:** Dr. Senthilkumar Sivaprakasam, Professor, Department of BSBE, Indian Institute of Technology Guwahati.
Phone: +91 - 361 - 2582226
Email: senthilkumar@iitg.ac.in

Education

2021 - Present	M. Tech (Biotechnology) Indian Institute of Technology Guwahati Score: 9.72/10
2017 - 2021	B. Tech (Biotechnology) Kalasalingam Academy of Research and Education Score: 9.13/10
2016 - 2017	Senior Secondary TVS Matriculation Higher Secondary School Score: 90%
2014 - 2015	Secondary TVS Matriculation Higher Secondary School Score: 97%

Experience

January 2022 - Present	Graduate Teaching Assistant (TA) <i>Department of Biotechnology, IIT Guwahati</i> Courses: Microbial Biotechnology (January-May 2022), Biothermodynamics (July-November 2022), Introductory Biology (January-May 2023)
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Project

May 2022 - Present	Adsorptive removal of Contaminants of Emerging Concern (CEC) from wastewater by tailored bio-sorbents and its ecotoxicological assessment <i>Dr. Selvaraju Narayanasamy, Associate Professor, IIT Guwahati</i> Currently working on the adsorptive removal of Cerium and Bisphenol A from waste water, wherein biosorbents are tailored, characterized and optimised for contaminant removal. Toxicity testing of the contaminants is also performed.
August 2020 - May 2021	Bio-active compounds from <i>Mimosa pudica</i> - An in-silico investigation against Neurological disease <i>Dr. K. Jyothi, Assistant Professor, Kalasalingam Academy of Research & Education</i> This study involved ultrasonic assisted extraction of <i>Mimosa pudica</i> , its phytochemical analysis and screening using GC-MS analysis. Molecular docking studies was performed to evaluate the action of identified phyto-compounds as NMDA receptor & BACE 1 protein inhibitor.
July 2019 - May 2020	Herbal Foot Care Cream <i>Dr. K. Jyothi, Assistant Professor, Kalasalingam Academy of Research & Education</i> Community service project in UG, wherein a foot care cream was formulated from herbal plant extracts. Phytochemical and Anti-oxidant assay of the herbal plants was performed.
June - November 2016	QC project – Lack of seriousness towards academics As the team leader, I worked on the project to identify the causes and effects of the identified problem and implemented solutions to resolve it.
June - November 2008	QC project – Lack of cleanliness This project was focused on mitigating lack of cleanliness in the target area by cause and effect analysis and tailoring suitable solutions. This project was also selected for the 12 th International Convention on Student Quality Control Circle-2009 held in Lucknow and won the Ishikawa award.

Publications

- Jyothi Kanagaraj, **Ghurupreya Ramesh**, Derina J. Pearlin, K. Ponmozhi; 2022; *Phytocompounds from Withania somnifera against breast cancer: An in-silico study*; Biomedicine; vol. 42(4); pp. 720-725.
- Jyothi Kanagaraj, **Ghurupreya Ramesh**; 2022; *Molecular docking of bio-active compounds from Mimosa pudica against NMDA receptor*; International Journal for Modern Trends in Science and Technology; vol. 8(01); pp. 265-268.
- **Ghurupreya Ramesh**, Geetika Devi Kaliappa, Venkatesan Chandran, Jyothi Kanagaraj; 2021; *Formulation of herbal foot cream using ethanol extracts of medicinal plants*; Journal of Huazhong University of Science and Technology; vol. 50(3); pp. 1-10.
- Jyothi Kanagaraj, Geetika Devi Kaliappa, **Ghurupreya Ramesh**; 2021; *Influence of Withania somnifera Extract on N, N-Dimethylformamide Induced Oxidative Stress in Saccharomyces cerevisiae*; PENSEE; vol. 51(3); pp. 258-264.
- Jyothi Kanagaraj, **Ghurupreya Ramesh**, Geetika Devi Kaliappa, Venkatesan Chandran; 2020; *Comparative Study of Medicinal Plants in Skin Care*; International Journal for Research in Applied Science & Engineering Technology (IJRASET); vol. 8(XII); pp. 172-175.
- Jyothi Kanagaraj, Vasanthi Nachiappan, **Ghurupreya Ramesh**; 2019; *Degradation of Phospholipids by N, N-Dimethylformamide Induced Liver Toxicity in Male Wistar Rats*; International Journal of Innovative Technology and Exploring Engineering (IJITEE); vol. 9(2S2); pp. 665-669.

Conferences

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| December 2022 | International Conference on ‘Advances in smart materials, chemical & bio-chemical engineering (CHEMSMART-22)
Presentation title: Sequestration of Basic Fuchsin from water using Oxidant modified Biomass: Mechanism and Toxicity assessment |
| August 2022 | National Conference on Innovative Trends in Biotechnology
Presentation title: Adsorptive removal of Ibuprofen and Sulfamethoxazole by Corn Starch Nanoparticles: Isotherm, Kinetics and Thermodynamics study |
| June 2022 | Biodrasillence VT’22
Presentation title: Removal of pharmaceutical drugs from water by tailored nano-polysaccharide: Adsorption mechanism and Toxicity assessment |
| May 2021 | 2nd National Conference on “Innovations in Bio and Chemical Engineering for Sustainable Life
Presentation title: Bioactive compounds from <i>Mimosa pudica</i> – An <i>in-silico</i> investigation against Alzheimer’s disease |
| June 2020 | Virtual International Conference on Innovation in Inter Disciplinary Research
Presentation title: Enhanced Phospholipase A2 by DMF Induced Hepatotoxicity in Rats |
| December 2019 | Kalasalingam Global Conference
Presentation title: Degradation of Phospholipids by N, N-Dimethyl formamide Induced Liver Toxicity in Male Wistar Rats |

Training

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| January 2023 | Synergistic Training program Utilizing the Scientific and Technological Infrastructure (STUTI) on the theme " Challenges and opportunities in Water, Sanitation & Hygiene (WASH) " by National Institute of Technology Agartala |
| June - August 2020 | CSIR Summer Research Training Program 2020 (Online)
Study topic: Hydroponic cultivation of <i>Coriandrum sativum</i> |
| June - July 2019 | Trainee – Plant Tissue Culture And Molecular Biology Lab
Jawaharlal Nehru Tropical Botanic Garden And Research Institute, Thiruvananthapuram |
| December 2018 | Trainee – Laboratory services
Meenakshi Mission Hospital And Research Center, Madurai |