DEPT.OF PHARMACEUTICS

As an integral and flagship wing of FPH, Department of Pharmaceutics at RUAS is committed to advance pharmaceutical sciences through innovative research, education and collaboration for the development of efficient drug delivery systems for the unmet clinical needs. Our commitment to innovation extends to our laboratories, which are equipped with sophisticated instruments to facilitate hands-on learning and experimentation to provide students with a comprehensive understanding of drug formulation and delivery, preparing them for impactful roles in the pharmaceutical industry. In addition to research, we are committed to knowledge dissemination and capacity building. Our department's unwavering dedication to excellence, innovation, and collaboration has paved the way for transformative advancements in pharmaceutical sciences.

DON'T MISS THIS OPPORTUNITY TO EXPLORE THE CUTTING EDGE TOOL OF HEALTHCARE!

PROGRAM OUTCOMES

- Fundamentals behind 3D-modelling and bioprinting technology
- Bioinks Demystified: Exploring different types of bioinks used in bioprinting
- Printing Techniques
- Applications of 3D printing
- Hands-on Expsoure

TARGET AUDIENCE

- . PG, Ph.Ds, Faculties of Pharmacy and Allied Sciences
- Researchers, scientists, and medical professionals interested in regenerative medicine and tissue engineering
- Healthcare researchers
- Students and individuals passionate about bioengineering and its impact on healthcare

SDP BENEFITS

- Gain in-depth knowledge of 3D bioprinting technology and its potential applications
- Learn from leading experts in the field
- Network with like-minded individuals passionate about bioprinting
- Gain practical experience with bioprinting





DEPT. OF PHARMACEUTICS in colloboration with

forefront of medicine and biology that holds immense

promise for transforming various aspects of healthcare

with potential applications in Regenerative Medicine

and Drug Discovery and Testing. This SDP will introduce

you to the exciting world of 3D biomodeling, where

computers become powerful tools for building digital

ONLY 60 REGISTRATIONS

CONTACT - ORGANIZING MEMBER

representations of biological systems

Dr.Tanmoy Ghosh

Dept.of Pharmaceutics

Assistant Professor

FPH, RUAS



PROGRAMME SCHEDULE



| | Day 1: August 9 th 2024 | | |
|---|---|---|--|
| DEPT. OF PHARMACEUTICS | Timings | Session | |
| in colloboration with | 10:00 – 10:30 AM | Inauguration | |
| | 10:30 – 10:45 AM | Tea Break | |
| | 10:45 AM - 12:00 PM | Guest Talk by | |
| | Trends in 3D Printing for Biomedical Applications | Dr. Kaushik Chatterjee Professor, Department of Materials Engineering,Indian Institute of Science, Bangalore | |
| 3D MODELING AND 3D | 12:10 – 1:15 PM | Mr. Vishal Sivakumar | |
| BIOPRINTING: | 3D Printing and it's Entrepreneurial | Demo & Talk | |
| AN AUGMENTED TOOL FOR | Aspects | (Founder & MD, 3D crafts) | |
| AN AUGMENTED TOOL FOR | 1:15 – 2:00 PM | LUNCH | |
| 9 th -10 th AUGUST 2024 | 2:00 – 5:00 PM Basics of 3D Design and Slicing: Hands – on Exposure | Mr.Indhar Saidanyan Scientist, PS Therapy Aravind Eye Care Centre Coimbatore | |
| | Day 2: August 10 th 2024 | | |
| | 10:00 – 11:15 AM | Dr. Manasa Nune, | |
| | Extracellular Matrix Derived Bioinks for Tissue Engineering Applications | Bioinks Associate Professor, Manipal Institute of regenerative Medicine, Bangalore | |
| | 11:30 – 1:00 PM | Ms. Vijeta Jaiswal, | |
| | Fundamentals of 3D | Field Application Scientist | |
| | Bioprinting:Applications of Extrusion and DLP based Bioprinters | CELLINK | |
| | 2:00 – 4:00 PM | Hands on Session with BioX | |
| | 4.00-5.00 PM | Valedictory Function | |
| Have you ever wondered how scientists visualize the intricate structures of cells, tissues, and organs? 3D Bioprinting is a revolutionary technology at the | | | |

REGISTRATION DETAILS

FIRST SERVE

| PG/Ph.D Schola | rs: | Rs. 1600 |
|------------------------|-----|----------|
| Faculty | | Rs1800 |
| (Inclusive of 18 % GST |) | |

Coverage: **Registration kit, Lunch,** High tea, Certificate

PAYMENT LINK

https://ruasportal.msruas.ac.in/as d EventPublicUserMaster.htm? FIRST COME



Manmoy.ps.ph@msruas.ac.in

+91-8867763868

- eventID=79

SPEAKERS PROFILE



DR. KAUSHIK CHATTERJEE

Professor Dept.of Materials engineering IISc , Bangalore

Dr. Kaushik Chatterjee joined the Indian Institute of Science, Bangalore, in 2011, where he is currently a Professor in the Department of Materials Engineering and the Department of Bioengineering. His research group focuses on materials for biomedical applications. Specifically, they are using 3D printing and additive manufacturing technologies to prepare medical devices and tissue scaffolds He has obtained his Ph.D. (Bioengineering) Pennsylvania State University, USA 2007 : M.S. (Materials Science and Engineering) University of Virginia, USA 2003 :B.E. (Metallurgical Engineering) Bengal Engineering College (now IIEST), India 2001

Chair, Department of Bioengineering, Indian Institute of Science (IISc), Bangalore, India 2023 - Present

Adjunct Faculty, Datta Meghe Institute of Higher Education and Research, Wardha, India 2022 - Present

Adjunct Faculty, Manipal Institute of Regenerative Medicine, Manipal Academy of Higher Education, Bangalore, India 2019 - Present



MR.VISHAL SIVAKUMAR

Founder and MD 3D Crafts

Mr.Vishal Sivakumar is the founder Director of 3D craft (3D printing firm) established in 2020. He has incorporated his 3D Printing Company in Madurai, Bengaluru, Boston (USA). He obtained his bachelor's degree in Engineering with a specializatation in Mechanical Engineering from Vickram College of Engineering, Madurai. He was the recipient of the DBT INSPIRE award in 2011. He has trained over 500 students in additive manufacturing techniques and has provided extensive support in 3D printing to various commercial companies and government organizations. He holds good experience in Solid Modelling, FDM, SLA and SLS models of 3D manufacturing. He has experimented with and developed various raw material composites for FDM based fabrication



DR. INDHAR SAIDANYAN R

Scientist PS Therapy Aravind Eye Care Centre, Coimbatore, TN,India

Mr. Indhar Saidanyan is a researcher currently working as a Research Scientist, PS Therapy (Aravind Eye Care), Coimbatore, India.

His research interest includes invasion ecology, metabolomics, additive manufacturing, and computer aided design. He has published several research papers and worked in collaboration with governmental agencies. He has organised and conducted training program on 3D printing and holds 2 years of experience in CAD and 3D printing.

3D MODELING AND 3D BIOPRINTING: AN AUGMENTED TOOL FOR HEALTHCARE RESEARCH



MS. VIJETA JAISWAL

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Field Application Specialist (India) CELLINK Bioprinting

Ms. Vijeta Jaiswal earned a post-graduate degree in Microbiology from Pondicherry University in 2018. With five years of academic research experience and expertise in Molecular biology and cell culture, she has a strong publication record and has passed several national exams. Now as an Application Specialist for Cellink Bioprinting in India, she supports researchers and industrialists in 3D bioprinting, handling high-end extrusion and DLP-based printers. In her presentation, she will discuss 3D bioprinting applications and demonstrate extrusion-based bioprinters

The Bio X is a user-friendly, standalone system with unique features ensuring unparalleled flexibility. It includes a built-in air compressor, touchscreen, and USB flash drive, requiring no extra hardware. Its compact design fits both on benchtops and inside biosafety cabinets. Equipped with CELINK's Clean Chamber Technology, it boasts a dual HEPA filtration system and a UV-C germicidal lamp for sterile bio-printing. The printer has three printheads compatible with CELINK's intelligent printheads, supporting various printing technologies such as pneumatic, thermoplastic, themperature control, syringe-based, and more. It also features a temperature-controlled print bed (4°C to 60°C) and is compatible with standard petri dishes, multi-well plates, and custom inserts. The system operates at various pressures, allowing users to print hydrogels and control cell stress, and is compatible with diverse printing materials and cells.

DR. MANASA NUNE

Associate Professor Manipal Institute of Regenerative Medicine (MIRM), Manipal Academy of Higher Education (MAHE)

Dr. Manasa Nune completed her Ph.D. in Biomedical Nanotechnology from the SASTRA University, Thanjavur. She worked as a Post-doctoral Research Associate at the Jawahardal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore. She is an Associate Professor at the Manipal Institute of Regenerative Medicine (MIRM), Manipal Academy of Higher Education (MAHE), Bengaluru campus. She is also the Ph.D. Co-Ordinator and Member Secretary for the Institutional Committee for Stem Cell Research (IC-SCR) of MIRM, MAHE

Her research interests are in biomaterials and bioink design for neural, uterine, and liver tissue engineering applications.

Awards & Honors:

One of the 20 Indian women scientists invited to participate in the inaugural ASEAN-INDIA Women Scientists Conclave (AIWSC) co-organized by Singapore's Agency of Science, Technology and Research (A*Star) with India's Department of Science & Technology and Anushandhan National Research Foundation (ANRF) with the support of the ASEAN Secretariat held from 24-26 April 2024, Singapore.

- American Chemical Society (ACS) membership as an appreciation in recognition for being an ACS peer-reviewer in March 2024.
- SBAOI-MAHE Young Scientist Award and first prize for her talk at the International Conference on Biomaterials, Regenerative Medicine and Devices (BIO-Remedi 22) held at IIT Guwahati from 14th-18th December 2022.
- Awarded Life member of the Society for Biomaterials & Artificial Organs India (SBAOI) and the Society for Tissue Engineering & Regenerative Medicine India (STERMI).
- Certificate of Appreciation awarded for being the resource person for the faculty development program titled "Institutional Committee for Stem Cell Research: Guidelines and Screening Procedures for Protocols" organized by Manipal College of Dental Sciences, Mangalore on January 28th 2022 & July 2nd 2021.
- Received about 7 research grants and published about 20 articles, 2 book chapters and made 40 conference presentations.

ABOUT MSRUAS

M S Ramaiah University of Applied Sciences (RUAS) was created under the University Act of 2013 with approval from the Government of Karnataka.

Ramaiah University commonly referred as RUAS, is characterized by a vibrant academic curriculum, experiences faculty, the state-of-the-art facilities cum infrastructure and an ecosystem to actively participate in co- and extra-curricular activities. We take pride in fostering an environment that encourages innovation, critical thinking, and holistic development of our students. Whether you are pursuing a degree in Science & Technology, Engineering, Management, Health Sciences, social sciences, or any other discipline, our curriculum is designed by accomplished experts to prepare you to face and overcome the challenges of the future. At RUAS, we believe in the power of education to shape your destiny. Our commitment to excellence extends beyond the classroom, with a focus on research, entrepreneurship, and community service.

Since its inception, RUAS has served as a platform that bridges the existing gaps between academia, industry and society. With every program it offers, the University charts its own unique path, creating students who comfortably adopt multidisciplinary thinking and are driven by a strong desire to build to a better tomorrow. RUAS seek to move our society towards greater harmony and inclusiveness

ORGANIZING COMMITTEE

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CO-CONVENOR

Dr. Tanmoy Ghosh Ast. Professor , Dept. of Pharmaceutics, FPH

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APPLIED BRILLIANCE MAKES ALL THE DIFFERENCE