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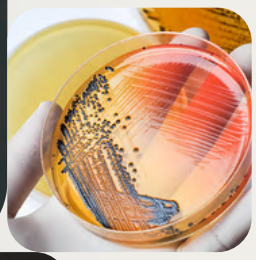
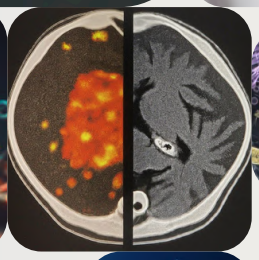
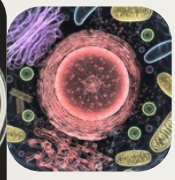
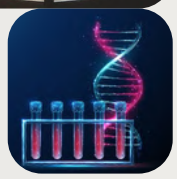
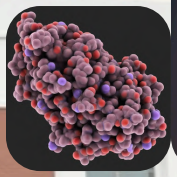
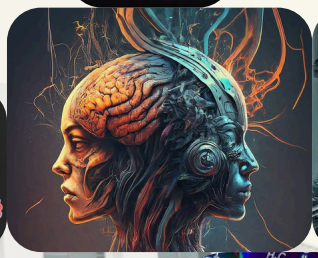


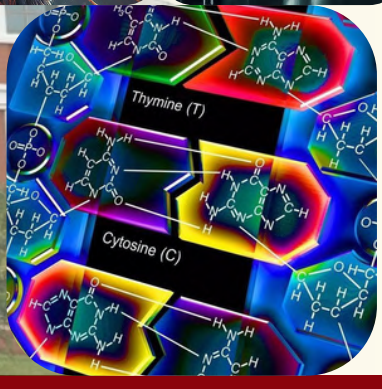





CENTRE FOR LIFE SCIENCES

NEWSLETTER

Vol I, Aug 2024 Issue

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Message from the Vice Chancellor

I am pleased to announce the release of the first newsletter by the Centre for Life Sciences (CLS), established in Fall 2022. Within a span of two years, the CLS has attracted top-quality faculty trained at leading institutions worldwide. The diverse educational backgrounds of our faculty during their PhDs and postdoctoral research are bringing the latest and most varied pedagogical practices to the classrooms through project-based learning.

Mahindra University always strives to equip students with cutting-edge technical skills and foster innovation through industry partnerships, and there is no better place for this than Hyderabad, the Hub of Life Sciences. This immersive learning environment, coupled with a rich in-house research culture, empowers students to develop professional competencies in critical thinking, problem-solving, teamwork, and lifelong learning. Additionally, students at MU have the opportunity to join the Mahindra-Hub Incubation Programme, designed to accelerate and scale up early-stage to mid-stage start-ups.

The CLS faculty has been actively engaging with the industry and, as a result, has established collaborations with Malla Reddy Hospital, Apollo Hospital Education & Research Foundation, Oncoseek Bio, and Dr. Reddy's Labs. All these collaborations aim to strengthen joint research programs in the healthcare segment. Furthermore, the collaboration with Dr. Reddy's provides education to their working professionals in MSc Biotechnology, with a focus on Biologics.

In addition to running two B.Tech. programs in Biotechnology and Computational Biology, the CLS has launched an M.Tech. in Biomedical Data Science, which is highly relevant to industry professionals in IT, Pharma, Biotech, and Medical segments.

Mahindra University, being a research-driven academic institution, has provided financial support amounting to ₹1.55 Crores to CLS faculty as seed funding. This allows them to engage in research and eventually upscale it through external grants from national and international funding bodies, providing not only financial impetus but also academic recognition among peers. Additionally, each faculty member has been allotted at least one university-funded PhD student to maintain their research momentum and continue the work they pursued during their postdoctoral research at international institutes of repute.

My best wishes to the students and faculty of CLS. I am confident that the highly competent faculty, world-class lab infrastructure, and university research support will bring laurels to the Centre for Life Sciences and Mahindra University.

- Prof. Yajulu Medury

Message from the Dean

Since the establishment of Centre for Life Sciences (CLS) in Fall-2022, we have been focusing on developing an educational ecosystem to equip students with the skills and knowledge essential for today's global environment. The academic culture in CLS at Mahindra University has been enriched through intensive research engagements of faculty and PhD scholars so that practical skills of undergraduate students are honed through experiential project-based learning in semester-wise lab courses. The backbone of any educational system is the faculty who in CLS are not only trained in world's best institutes but are passionate researchers to inculcate futuristic professional competencies among students in a research-enabled outcome-based learning environment with tangible impact.

Our faculty are trained in world-class education and research institutes, Harvard University, USA; Cornell University, USA; University of Bonn, Germany; University of Illinois, Urbana Champaign, USA; National Heart Lung and Blood Institute, Maryland, USA; University of Groningen, The Netherlands; Center for Global Infectious Disease Research, Seattle, USA; Wageningen University and Research, The Netherlands; University of Washington, Seattle, USA; NIT Bhopal; University of Illinois at Chicago, USA; Cedars-Sinai Medical Center, Los Angeles, USA; University of Wisconsin, Madison, USA; NIT Durgapur, ARO Volcani Centre Israel; IIT Dhanbad.

The international exposure of faculty provides unique opportunity to UG/PG students to master skills and knowledge in modern technologies such as personalized medicine, genome editing, metabolic engineering, GMOs, molecular diagnostics, recombinant vaccines, nanobiotechnology, bioprocess modelling, green products, stem cells & tissue engineering, biomaterials, biomedical devices, computational biology, clinical informatics, biosensors, which are focus of global academic leaders and multinational companies.

Our curriculum has been designed in such a way that the students go through the academic journey with in-depth learning of not only core courses in Biotechnology and Computational Biology but also explorations in entrepreneurship, humanities & social sciences, computation, electronics application, foreign language, physical and chemical sciences so that they are professionally competent to solve any problem or develop technological solutions to problems in healthcare, nutrition, and environment. Keeping in view the global demand of professionals trained in domain-specific biotechnology and computational biology we have created a flexible curricular path through electives and specializations. In addition, all our students will have the opportunity to experience immersion in industrial setting through compulsory internship programme for which no other place is better than Hyderabad- The Hub of Life Sciences in Asia.

-Prof. Rajinder Singh Chauhan

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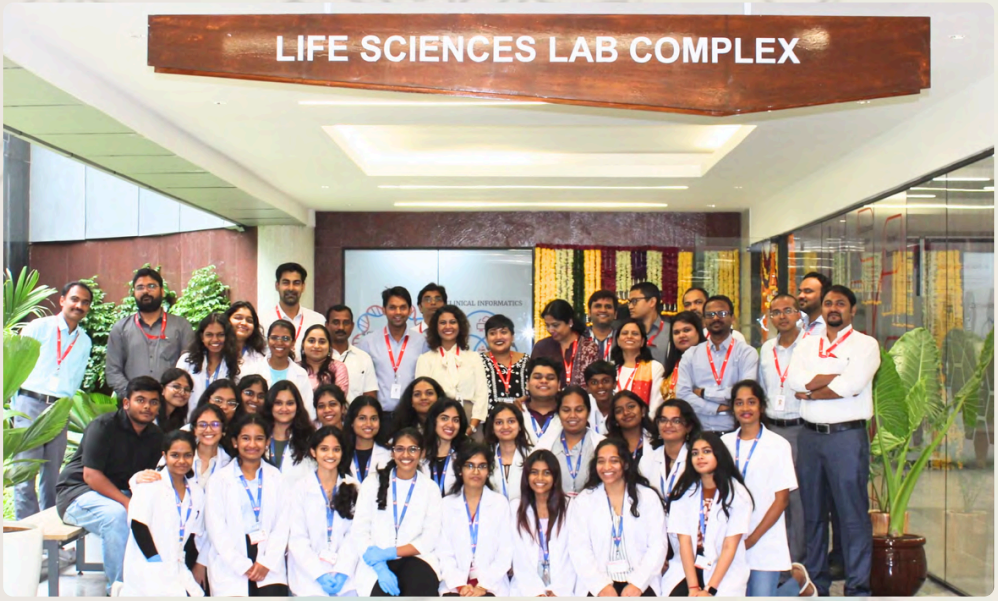
Centre for Life Sciences

The Centre for Life Sciences (CLS) at Mahindra University, established in 2022, has been at the forefront of life sciences education and research, offering cutting-edge UG/PG programs in Biotechnology and Computational Biology. The CLS is strategically positioned to leverage Hyderabad's dynamic life sciences ecosystem, which includes the "Genome Valley," "Medical Devices Park," and "Pharma City. These hubs host over 800 life sciences companies and numerous incubators, making Hyderabad the "Hub of Life Sciences" in Asia.



The CLS envisages to focus on interdisciplinary research by reaching to other schools of engineering, law, management, education, media, design and hospitality so as to fulfill the needs and aspirations of not only students but also of society at large because the complex problems of climate change, healthcare and food security warrant taking up holistic approaches. At CLS, we prioritize an educational ecosystem that combines rigorous academic training with real-world industrial experience. Our distinguished faculty, trained at leading global institutes, are committed to fostering research-enabled, project-based learning. The curriculum has been designed to provide in-depth knowledge in core subjects as well as courses in Computer Science, Electronics, Social Sciences, Entrepreneurship, Physics, Maths, Statistics, and Chemistry. The curriculum also dives into futuristic technologies of diverse fields such as Synthetic Biology, Microbiology, Cell Factory, Gene Therapy, Biomarkers, Pathogen Genomics & Surveillance, Protein Engineering & Structures, Generative AI for Biologics and Predictive Models for Diseases. Through internships and research-driven projects, our students gain essential skills and practical experience, preparing them to be "Job Creators not only Job Seekers."

Lab Complex Inauguration

The Centre for Life Sciences at Mahindra University was inaugurated on August 5 2023, by Mr. Grandhi Mallikarjuna Rao, Chairman of GMR Group, and Mr. Ronnie Screwvala, Chairman of upGrad. This momentous occasion was graced by the esteemed presence of Shri Anand Mahindra, Chancellor of the Mahindra University and Dr. Yajulu Medury, Vice-Chancellor, alongside other distinguished guests including Vineet Nayyar, Chairman of Mahindra Educational Institutions (MEI), and CP Gurnani, Managing Director and CEO of Tech Mahindra.

The event was graced by luminaries from academia, industry and entrepreneurship. The Centre for Life Sciences is poised to become hub of groundbreaking research and discovery, empowering the faculty and students to delve into intricacies of Life Sciences and contribute to advancement of scientific knowledge.

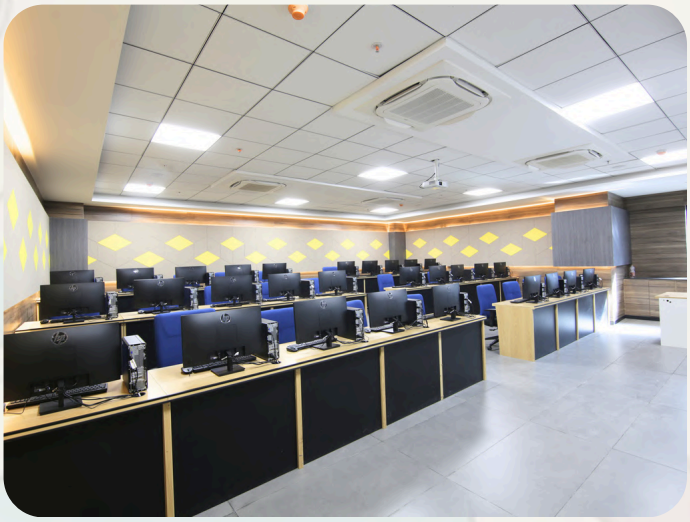
Lab Developments

Bioprocess Technology

Production of bio-based green products to replace petro-based chemicals

Computational Biology

Computational Drug Discovery; Genomics; Disease Modelling; etc.



Enzymes & Biomolecules

Industrial Enzymes & Phytochemicals; Biosensors

Lab Developments

Cell & Organoids Cultures

Nanomedicine; Gene Therapy
Drug Screening

Genetics & Molecular Biology

Molecular Basis of Diseases such as Cancer, Gut Microbiomes, etc.

Microbes & Immune Systems

Infectious Diseases-
Diagnostics; Therapeutics

Ambrosia: Bio Club

Ambrosia, the Bio-Technical club at MU, has been founded by a group of biotech and computational biology engineering students who are passionate about translating discoveries in biological sciences to technology. Addressing the vast array of unsolved and intriguing questions in Biology, Ambrosia highlights the importance of interdisciplinary knowledge. Our vision is to create an environment that promotes awareness and understanding of Biological Sciences through hands-on projects, workshops, expert talks, interdisciplinary research, and excursions. Ambrosia aims to cultivate creativity and ideas, making the exploration of the Bio-technical world engaging and accessible to all, including non-biology students.

At Ambrosia, we believe that the constructive collaboration between Biology and other fields of study are crucial for innovation and problem-solving in areas such as healthcare, environmental science, and food security. Our DIY projects and interactive events are designed to nurture curiosity and encourage collaborative learning. Join us in our mission to delve deeper into the living world and discover the exciting intersections of biology and technology.

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Ambrosia Events

The Scavenger Hunt

Ambrosia, the Biotechnology Club at Mahindra University organized "The Orientation of Ambrosia" and "The Scavenger Hunt" on February 27th, 2023, to present our club's itinerary and to inform people about the club's purpose. The event featured insightful presentations by the club heads, outlining Ambrosia's vision. The Scavenger Hunt tested observational and analytical skills, instilling the practice of slowing down in our fast-paced lives, thinking, and observing. With over a hundred students deciphering clues, the hunt encouraged a welcome pause in the fast pace of campus life, promoting thoughtful exploration of the surroundings. Through this engaging event, Ambrosia successfully laid the groundwork for scientific exploration and discovery, welcoming new members and fostering a vibrant community of students passionate about biotechnology.

Flora & Film

The "Flora and Film" event held on 5th April 2023, by Ambrosia as a part of Pre-Aether season at Mahindra University introduced hundreds of creative students to the art of herbarium creation and to appreciate plant life. The program featured hands-on learning, with club heads guiding participants to create frames adorned with pressed flowers, leaves and potpourri and engaged participants in clicking their polaroid photos, and decorating them in these unique frames. The event concluded with many participants expressing their delight at the newfound skills and appreciation for the beauty and diversity of the plant world.

EcoExplore

Ambrosia hosted another Orientation event to welcome its newest members. This exciting program offered freshers a glimpse into the captivating world of biology and the vibrant community within the club. This informative session explored diverse biology topics, igniting a passion for scientific discovery in the new members. To add a touch of friendly competition, Ambrosia organized an "EcoExplore" relay race. Teams collaborated on a series of engaging mini games, crosswords, word searches and puzzles centered on many topics in biology. This immersive wide clue-hunt experience marked a memorable beginning for the new members' biological adventure at Mahindra University.

EcoGlam

Ambrosia's EcoGlam event, held on November 15th, 2023, championed environmental responsibility in the fashion realm. Over 60 enthusiastic students participated in the hands-on process of creating organic dyes from natural elements like beetroot, turmeric, onion peels, marigold, and red cabbage. The vibrant atmosphere buzzed with experimentation as participants infused their personalized touches onto provided hoodies using these eco-friendly dyes. By encouraging the use of eco-friendly alternatives, the event promoted a shift towards more sustainable and earth-conscious approaches in the fashion industry, fostering a greater appreciation for nature's resources and advocating for a greener, more mindful way of creating and enjoying clothing.

Cipher Chase

Ambrosia hosted a stimulating event named “Cipher Chase” on February 15th, 2024, for Pre-Aether at Mahindra University. Designed to introduce participants from various educational backgrounds to forensics, genetics, botany, and investigative biology. The competition provided a unique platform for students to hone their scientific acumen and collaborative problem-solving skills. Throughout the event, teams navigated themed stations that challenged them with diverse puzzles and scenarios. These stations encompassed the intricacies of forensic analysis, the findings from genetics and the thrill of digital forensics to build theories. This engaging event not only fostered teamwork and creative thinking but also instilled a deeper appreciation for the multifaceted disciplines within biology.

Social'24

Social ‘24 was a vibrant networking event featuring fun activities for faculty, PhD students and undergraduates. It marked a memorable conclusion for Ambrosia’s founding organizing committee, offering an enriching blend of engagement and enjoyment for all the participants.

Academic Activities

Experiential Learning

The Centre for Life Sciences offers state-of-the-art laboratories, enabling experiential learning for B.Tech Biotechnology, B.Tech Computational Biology, PhD students, and faculty. These labs, specializing in Bioprocess Technology, Biochemistry (Enzymes and Metabolism), Cell and Molecular Biology, Cell Culture, Microbiology and Immunology and Computational Biology are fully equipped and adhere to strict protocols for advanced research. By providing hands-on experience with cutting-edge techniques and technologies, the Centre for Life Sciences at Mahindra University empowers students and researchers to conduct innovative experiments and contribute to scientific advancements.

Conferences

Regional Young Investigators' Meeting (RYIM)

The Centre for Life Sciences at Mahindra University hosted the Regional Young Investigators' Meeting (RYIM) on 2nd and 3rd February 2024, with the theme **"Industry Academia Collaborations to Translate Research to Product."**

Key highlights:

- **Insights:** Speakers from academia and industry discussed bridging the gap between academia and industry, addressing real-world challenges and opportunities in collaborative research.
- **Poster session:** Attendees presented research based posters across a diverse range of disciplines, sparking lively discussions and inspiring new collaborations.
- **Panel Discussions:** Leading figures from academia and industry came together for a stimulating panel discussion, "Unmasking the Truth: Animal Models vs. *In vitro* Lab Models."
- **Networking Session:** Dedicated networking sessions offered researchers, industry professionals, and academic leaders, to connect and spark new collaborations.
- **Career Workshop:** 'Crafting Your Career (CYC)' provided students with guidance on career choices in life sciences, securing funding, publishing research, and building professional networks.
- **Follow up:** Participants were encouraged to form collaborative research groups to pursue joint research proposals to secure extramural fundings.

The CLS fosters academia-industry collaboration to drive innovation, ensuring research translates seamlessly into practical applications.

4th International Conference Series on 3R's Research & Progress

Mahindra University's Centre for Life Sciences successfully co-organized the 4th International Conference on 3Rs Advances in Research and Progress, focusing on **"Patient Derived Tumoroids and Humanized Mice,"** held on 4th May 2024. The conference, organized in collaboration with Biotech company, OncoseekBio Pvt Ltd and Acasta Health Pvt Ltd, featured a series of engaging sessions and discussions. These sessions emphasized the crucial need for developing and implementing alternative testing methods, thereby reducing reliance on animal models, and advancing more ethical and effective approaches in drug discovery.

Key highlights:

- **IEFR Lifetime Membership Award:** Presented by Dr. Uday Saxena to Dr. Akella Venkateshwarlu for his mentorship and contributions as Founding Director of Dr. Reddy's Institute of Life Sciences.
- **Research Progress:** Showcased the latest innovations in the field

Recommendation: "During the Panel Discussion, all Industry personnel highly recommended the 3R Conference Series for bringing Industry-Academia together and give latest insights on the testing platforms which are crucial for drug discovery."

The event not only highlighted the advancements in research but also reinforced the collaborative spirit between industry and academia, fostering a community dedicated to scientific progress and ethical research practices.

Guest Visits

Mahindra University's Centre for Life Sciences hosted several esteemed visitors, with the goal of expanding our collaborative efforts and broadening our research horizons. These visits have facilitated valuable interactions, contributing significantly to our academic and research initiatives.

Australian Unity Team

A delegation from Australian Unity, led by Mr. Mark Gay, Group Executive- Technology, and Mr. Marcus Ryan, Executive GM, accompanied by Tech Mahindra representatives including Mr. Harshvendra Soin, Mr. Seshan Ramachandran, Mr. Shyam Deshpande, Mr. Mayank Sharma, Mr. Sai Ram Koushik G, and Mr. Rajeev Kumar Tyagi, visited Mahindra University on May 8, 2024.

They explored some ongoing projects at Biotech and Computational Biology Labs at CLS. During their visit, the team engaged in detailed discussions with faculty members to gain insights into research activities and goals across healthcare and other segments. They also interacted with students enrolled in B.Tech Biotechnology and Computational Biology, sharing valuable advice for career opportunities. This visit aimed to foster collaborative opportunities and exchange knowledge, reinforcing our commitment to advancing research and innovation.

MU Board members: Mrs. Anuja Mahindra Sharma and Mrs. Sheetal Mehta

On 5th March 2024, Mahindra University's Centre for Life Sciences had the privilege of hosting Mrs. Anuja Mahindra Sharma, Advisor and Member of the Board of Management, Mahindra University, and Mrs. Sheetal Mehta, Executive Director of the KC Mahindra Education Trust. They emphasized the future of biotechnology and highlighted the importance of strengthening research in Ayurvedic system of medicine integrated with latest technology.

Centrale Supélec Team

On 21st February 2024, Mahindra University Centre for Life Sciences had the privilege of hosting a distinguished team from Centrale Supélec, including Romain Soubeyran, Dr. Gérard Creuzet, Dr. Gilles Fleury, and Dr. Hervé Arribart.

Dr. Jagadeesh Gandla & Team, FABA

Dr. Jagadeesh Gandla - Chief Operating Officer (COO) at Federation of Asian Biotech Associations (FABA), and his team had an interaction with the faculty of CLS on 13th October 2023, with the goal of learning more about our Biotechnology and Computational Biology programmes for potential future collaborations.

MU BoM Member: Mr. Ranjan Pant

The CLS had an enriching discussion with Mr. Ranjan Pant on 6th March 2024 , a distinguished Board of Management (BoM) member of Mahindra University, CEO Advisor, and Global Strategy Management Consultant.
The discussion focused on technology, industry collaboration, and healthcare advancements. Mr. Pant suggested translating research into valuable products through industry collaboration and shared insights on global management practices of successful multinationals.

Dr. Nirmala Raju & Team, Dr. Reddy's Laboratories Ltd.

Dr. Nirmala Raju, R&D Head Biologics at Dr. Reddy's Laboratories Ltd., visited CLS on 14th May 2024, to explore enhancing academic-industry collaboration. The meet aimed to establish joint research projects and foster a collaborative mindset among researchers. Dr. Raju is looking forward to potential collaborations in Mass Spectrometry, Bioprocess Engineering, Biomarker Discovery, Gene Therapy, AI & Machine Learning, and Biotherapeutics.

Dr. Shashi Bala Singh, NIPER, Hyderabad

Dr. Shashi Bala Singh, Director of National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, visited on15th November 2022, to share insights on the future prospects of pharmacy education in Hyderabad.

Dr. Sanjay Ranka, University of Florida, USA

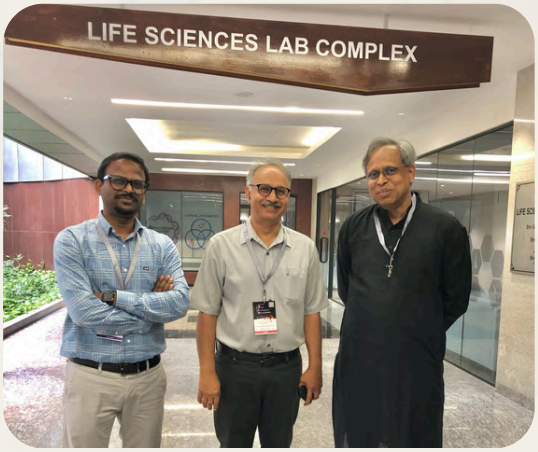
Prof. Sanjay Ranka, Distinguished Professor in the Department of Computer & Information Science & Engineering, University of Florida, visited on 3rd January 2024, to discuss research collaboration in healthcare informatics. The visit aimed at setting up joint PhD supervision, faculty exchanges between institutions, and internship opportunities for students.

IKP Team

The IKP Knowledge Park team visited CLS on November 13th 2022. The visit focused on exploring collaboration opportunities.

Dr. Vinay K. Nandicoori, CCMB

Dr. Vinay K. Nandicoori, Director of the Centre for Cellular and Molecular Biology (CCMB), visited CLS and toured the labs on February 2nd 2024. Additionally, he gave a talk at the Regional Young Investigators' Meeting (RYIM) in Mahindra University.



Industry/Field Visits by Students & Faculty

To augment the theoretical foundations of classroom learning, CLS curates immersive industry/field excursions to expose students to real-world experiences of industry and R&D institutes. Students gain firsthand insights into practical applications of their studies, witness cutting-edge advancements, and engage with experts at the forefront of the field. This comprehensive approach fosters a deeper understanding of the discipline and ignites a passion for potential career paths within the ever-evolving realm of life sciences.

Council of Scientific & Industrial Research-Central Institute of Medicinal and Aromatic Plants (CSIR-CIMAP)

Students from Centre for Life Sciences, visited CSIR-CIMAP (Central Institute of Medicinal and Aromatic Plants) Research Centre in Hyderabad on 11th May 2023. CSIR-CIMAP is a pioneering institute in developing essential oil distillation technologies for high-value medicinal and aromatic crops, specializing in plant-based value-added products and sustainable agriculture. Dr. Kiran Babu, the head scientist, CSIR-CIMAP, apprised the students about various medicinal and aromatic herbs like Mentha, Lemongrass, Geranium, Basils, Ashwagandha, and the cultivation practices involved with their distillation strategies, analysis, and market value of their commercial essential oils. This visit was very enriching for students; they came to know about the novel innovative technology using agricultural biotechnology and commercial application.

Indian Immunologicals Limited (IIL)

Students of second-year B.Tech Biotechnology and Computational Biology students visited Indian Immunologicals Limited (IIL) in Gachibowli, Hyderabad, one of country's premier vaccine manufacturers on 24th December 2023. IIL, known for producing over 150 products including the world's first vaccine for porcine cysticercosis and a leading rabies vaccine, offered students a unique opportunity to learn from esteemed scientists and researchers.

The visit highlighted IIL's state-of-the-art facilities and large-scale vaccine production processes. We are grateful to Dr. Surya Prasad, Senior Manager of Veterinary Services, and Dr. K. Anand Kumar, Managing Director of IIL, for their dedication in hosting the visit.

Biotechnology Incubation Centre (BTIC)

On 6th December 2023, first-year students had the incredible opportunity to tour the esteemed Biotechnology Incubator Centre (BTIC) nestled within Hyderabad Genome Valley. The innovative facility, bolstered by the support of the Government of Telangana and the DBT-BIRAC of the Government of India, stands as a beacon of inspiration and entrepreneurial endeavors in the biotech sector.

The visit provided students and faculty with a valuable opportunity to interact with distinguished scientists from leading biotech firms such as Biological E, Vitane Biologics, CVR Life Sciences, Protigenix Life Sciences, and Apothicon Pharma. These exchanges illuminated the complex journey from lab research to commercialization and deepened their appreciation for the real-world applications of their academic studies.

Centre for DNA Fingerprinting and Diagnostics (CDFD)

Our first-year Biotechnology and Computational Biology students visited the Center for DNA Fingerprinting and Diagnostics (CDFD) on 20th March and 24th April 2024, to learn about its services and facilities. The trips aimed to expose students to advanced scientific equipments and applications in DNA fingerprinting, bioinformatics, and genetic disorders. At the Sophisticated Equipment Facility (SEF), students interacted with scientists and learned about instruments like circular dichroism, Confocal Microscopy, FACS, and FPLC. Additionally, they visited the diagnostic division, where they gained insights into the karyotyping of genetic disorders from Dr. Ashwin Dalal and other scientists. A special highlight was a presentation on DNA fingerprinting by Dr. Varsha Srivastava. These trips provided valuable experiences for the future of these students.

Guest Lectures

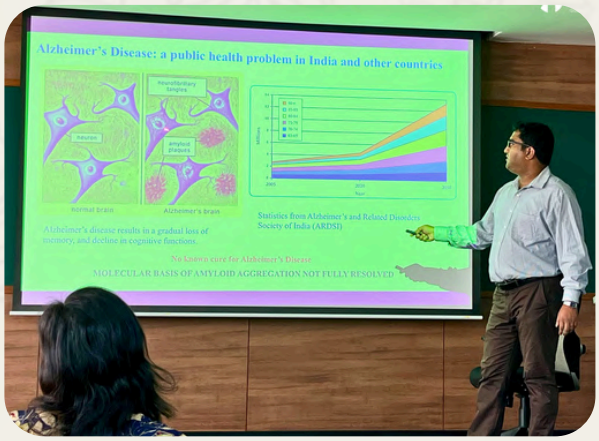
"Thinking About Science"- Dr. George D. Rose, Johns Hopkins University, USA

Prof. George D. Rose, Emeritus Professor at the Department of Biophysics, Johns Hopkins University, USA, presented his insightful thoughts on "Thinking About Science" on 24th November 2023. He discussed key topics such as scientific thinking, reductionism, and the impact of Artificial Intelligence (AI) on scientific advancements. Dr. Rose particularly highlighted the groundbreaking work of AlphaFold and delved into the future of AI in protein folding and structure prediction. His lecture has left us inspired and eager to witness the continued evolution of this transformative technology and its profound implications for the future of scientific discovery.

"Role of cholesterol in the structural and functional dynamics of Smoothened (SMO)" - Prof. Gopalakrishnan Bulusu, IIIT Hyderabad

Prof. Gopalakrishnan Bulusu presented a lecture titled "Role of cholesterol in the structural and functional dynamics of Smoothened (SMO)" on September 27th, 2023. He discussed his research on cholesterol's impact on SMO receptor dynamics, contributing to the molecular understanding of SMO-cholesterol interactions. Prof. Bulusu's visit aims to share valuable insights into potential cancer drug targets.

"Critical Role of Computational Simulation and Modelling in Deciphering Amyloid Aggregation in Alzheimer's Disease" - Dr. Debayan Chakraborty, Institute of Mathematical Sciences, Chennai



Dr. Debayan Chakraborty, a renowned computational biologist, PhD from Cambridge and Professor at The Institute of Mathematical Sciences, Chennai, on 19th February 2024, delivered a lecture on the critical role of computational simulation and modelling in deciphering amyloid aggregation in Alzheimer's disease. He further emphasized the importance of integrating experimental biology with computational modelling to understand a disease mechanism.

The faculty and students at CLS learnt that by integrating experimental biology with computational modelling, researchers can gain a deeper understanding of the complex disease mechanisms and develop more effective treatments.

"Life Sciences Industry work culture, in particular regulatory affairs" - Dr. Sudha Chennasamudram, Novartis

Dr. Sudha Chennasamudram, Group Head of Regulatory Affairs at Novartis India, gave an insightful talk on 18th March 2024, sharing her expertise on industry work culture, focused on Regulatory Affairs. Her presentation provided a structured approach to planning, launching, and transforming careers in pharma and biotech sectors, empowering students at CLS with confidence and clarity.

“Shrimp Aquaculture” - Mr. Madhu Talluri and Ms. Padmavathi Talluri, SGS Aqua Solutions

Mr. Madhu Talluri, Technical Director, and Ms. Padmavathi Talluri, Operations Head and Proprietor of SGS Aqua Solutions, recently conducted a captivating session titled "Shrimp Aquaculture: Insights from a Biologist's Perspective" on 20th March 2024, for our students and faculty at CLS. Students and faculty had an informative session on shrimp culturing, shrimp feeding and delving into the market value of crustaceans in our country. This talk provided our students with valuable insights and opened new avenues for research and innovation in shrimp aquaculture.

“All about Start-Up” - Dr. Divya Sriram and Dr. Sujoy Deb, D-NOME Pvt. Ltd.

Dr. Sujoy Deb, Chief Technology Officer and Co-founder, and Dr. Divya S, Co-founder of D-NOME Pvt. Ltd., a pioneering molecular diagnostic startup, for an engaging student interaction session titled "All about Start-Up" on 3rd April 2024. Our faculty had enriching discussions on potential collaboration in bioinformatics, biomaterials, microbiology, and more. Their informative session with our students explored the intricacies of entrepreneurship, providing invaluable insights into startup vetting and the journey to success.

“Biopharmaceuticals: Challenges and Future of the Industry”- Dr. Tathagata Dutta, Jodas Expoim

Dr. Tathagata Dutta, President, and CTO of Jodas Expoim, delivered a guest lecture on 15th May 2024, on "Biopharmaceuticals: Challenges and Future of the Industry." The talk focused on developing Antisense Oligonucleotides (ASOs) for treating spinal muscular atrophy (SMA) and further emphasized the importance of innovative delivery systems, such as liposomes, to enhance the efficacy and safety of ASO-based therapeutics. His insights provided valuable perspectives on future possibilities and challenges in biopharmaceutical innovation, fostering a deeper understanding of the field.

MoUs

Absolute

Absolute, an Agri-Tech research firm, on behalf of Esco Global Pvt Ltd has partnered with CLS on 16th June 2023, leveraging its expertise in Nature, Science and Exponential Innovations to explore new frontiers in Agriculture, Materials and Care.

OncoseekBio Pvt. Ltd.

OncoseekBio Pvt. Ltd., Biotech company led by Dr. Suresh Poosala, has forged a collaboration with CLS on 30th January 2024. The company focuses on drug screening, toxicity profiling, and disease model evaluations for NASH/NAFLD, cancers, and oncolytic viruses. The objective of this MOU is to strengthen research collaboration and facilitate internships for students in Biotechnology and Computational Biology.

Malla Reddy Health City

CLS has established collaborative partnerships with four esteemed institutes at Malla Reddy Health City, Hyderabad: Malla Reddy Institute of Medical Sciences (MRIMS), Malla Reddy Medical College for Women (MRMCW), Malla Reddy Institute of Dental Sciences (MRIDS), and Malla Reddy Dental College for Women (MRDCW) on 30th January 2024. These agreements aim to enhance joint efforts in clinical and biomedical research. Collaborative research initiatives in medical technology, diagnostics, study of disease mechanisms, drug discovery, and health epidemiology aim to promote innovation and professional development amongst students and experts.

Dr. Reddy's Lab Ltd.

CLS has joined forces with Dr. Reddy's Laboratory Ltd., Hyderabad, on 14th March 2024 to offer a specialized Master of Science program in Biotechnology centered on Biologics. This collaboration includes tailored modules and training in aspects of biopharmaceutical product discovery and development, regulatory approvals, and computer-aided drug designing.

Additionally, the program also integrates industrial exposure for B.Tech. Biotechnology and Computational Biology students through interaction with Dr. Reddy's working professionals.

AHERF (Apollo Hospitals Educational and Research Foundation)

AHERF (Apollo Hospitals Educational and Research Foundation) has entered an MoU with CLS on 3rd May 2024, centered on exploring collaborative research areas such as extracellular vesicles for drug delivery, biomarkers for early disease diagnosis, nanomedicine, and biosensors. The partnership aimed to provide internships and research opportunities to B.Tech. students intended to foster innovation and advance scientific boundaries together.

Centre's Spotlight

1.	No. of Paper Publications	22
2.	No. of Book & Chapters Publications	6
3.	No. of Papers presentation at the Conference	4
4.	No. of Patents Published	1
5.	No. of Seed Grants	8
6.	No. of External Grants	7
7.	No. of Faculty Awards	4
8.	No. of Faculty Development Programs Presentation	2
9.	No. of Conferences Organized {Received External Grant}	2
10.	No. of Student's Awards	3

Faculty Achievements

Patents Published

FUNCTIONAL NUCLEIC ACID ASSEMBLY AND USES THEREOF,
Indian Patent, Published
Inventors: Dr. Souradyuti Ghosh, **Dr. Mrittika Sengupta**, Mr. Shrawan Kumar, Ms. Saba Parveen, Ms. Chandrika Sharma

Dr. Souradyuti Ghosh
Associate Professor

Dr. Mrittika Sengupta
Associate Professor

Ms. Saba Parveen
PhD Student

Mr. Shrawan Kumar
PhD Student

Ms. Chandrika Sharma
PhD Student

Internal Research Funding

Seed Grants

1. Proposal Investigator: Dr. Mrittika Sengupta; Dr. Gomathi Anandhanatarajan
Project Title: Fabrication of Food Packaging Material with Active Antimicrobial Properties to Increase Food Safety and Shelf-life of Packaged Food
Budget: INR 6.9 lakhs

2. **Proposal Investigator**: **Dr. Bipin Singh, Dr. Mrittika Sengupta;** Dr. Rajiv Raman
Project Title: Validation and Re-engineering of Peptides Derived from Bevacizumab in Combination with Moxifloxacin for Ocular Tuberculosis
Budget: INR 4.7 lakhs

3. Proposal Investigator: Dr. Pijus Kanti Barman
Project Title: Mechanism of altered monocyte function in cardiovascular disease risk during aging
Budget: INR 10.0 lakhs

4. Proposal Investigator: Dr. Yugandhar Kamma; Dr. Arun K. Chelluboyina
Project Title: A Quantitative Proteomics Platform to Predict Drug Side Effects Using an Interactome-centric Approach
Budget: INR 11.98 lakhs

5. Proposal Investigator: Dr. Sanjeev K. Choudhry
Project Title: Defining the role of surface adhesion proteins in virulence and anti-fungal resistance of the pathogenic Candida species
Budget: INR 8.9 lakhs

6. Proposal Investigator: Dr. Runa Kuley
Project Title: Development of biomarkers based on neutrophil activation to assess prognosis and monitoring of Oral lichen planus (OLP) patients
Budget: INR 7.9 lakhs

7. Proposal Investigator: Dr. Akanksha Singh, Dr. Ravi Kiran, Dr. Varun Kumar
Project Title: Effect of Host genomic variation on microbiome metabolite diversity in the Indian population
Budget: INR 6.0 lakhs

Internal Research Funding

Establishment of an Interdisciplinary Centre for Nanosensors and Nanomedicine Research

Proposal Investigators

Dr. Souradyuti Ghosh; Dr. Manu Smriti Singh; Dr. Aruna K Chelluboyina; Dr. Bhargava Rajaram; Dr. Sebastian U; Dr. Sonu Kumar; Dr. Chitra Gurnani; Dr. Anil Annadi

Project Titles:

1. Characterization of viscoelasticity of sputum towards point of care detection in microfluidic system

2. a) Split aptamer platforms for antibiotic detection and
   b) Electrolysis platform

3. Transition metal dichalcogenides based electrochemical sensor development

4. Developing biosensing field-effect transistors

5. Development of PDMS-based microfluidics chips using 3D bioprinting for nanoparticle synthesis

6. Gene therapy with pDNA-complexes towards personalized cancer nanomedicine

7. Platform for multiplexed antisense therapy using triplex forming nucleic acids on a nanotetrahedron motif

8. Synthesis of novel biomaterials for photodynamic therapy of oral cancer

9. Formulation, physicochemical characterization, functional assessment and in vivo delivery of nanomedicine.

Budget: INR 1.05 Cr.

External Research Funding

External Sanctioned Grants

1. Prof. Rajinder S. Chauhan
Project Title: "Developing Nutrient-Enrichment Technologies & Products of Commercial Value in a Nutraceutical Food Crop, Buckwheat (Fagopyrum spp).
Funding Agency: DBT
Budget: INR 1.05 Cr.

2. Dr. Pijus Kanti Barman
Project Title: "Mechanism of beta adrenoreceptor signaling regulation in mesenchymal stromal cells during aging."
Funding Agency: DST SERB-SRG
Budget: INR 32.49 Lakhs

3. Dr. Manu Smriti Singh
Project Title: "Development of a novel ECM-scaffold-based patient-derived tumoroid model as a robust high-throughput drug screening platform."
Funding Agency: BIRAC
Budget: INR 10 Lakhs

External Approved Grants

1. Dr. Souradyuti Ghosh
Project Title: "Aptamer discovery and electrochemical biosensing of bioactive metabolites during gamma irradiation induced elicitation and sterilization."
Funding Agency: DST CEFIPRA
Budget: INR 40 Lakhs

2. Dr. Souradyuti Ghosh; Dr. Rajaram Bhargava**; Dr. Mrittika Sengupta**
Project Title: "Evaluation of in-house designed portable electrochemical workstation device and screen-printed electrodes against their commercial counterparts for nucleic acid amplification and ELISA method."
Funding Agency: IHub-Data, IIIT - Hyderabad
Budget: INR 10 Lakhs

3. Dr. Bipin Singh; Dr. Santosh Thakur; Dr. Aruna Kumar Chelluboyina
Project Title: "Development of an AI-based platform for Glaucoma detection tailored to work with handheld fundus cameras in readl-life settings."
Funding Agency: IHub-Data, IIIT - Hyderabad
Budget: INR 10 Lakhs

4. Dr. Manu Smriti Singh
Project Title: "Image-guided surgery using fluorescent Bionanodots probes for surgical resection of metastatic cancers."
Funding Agency: DST-SERB-POWER
Budget: INR 30 Lakhs

Panel Discussion

Dr. Mrittika Sengupta, Associate Professor at Mahindra University Centre for Life Sciences, participated in a panel discussion on **"Emerging Trends and Innovation in Health & Life Sciences Industries"** at the esteemed Indo-French Health & Life Sciences Seminar. Organized by the Indo-French Chamber of Commerce & Industry **(IFCCI)**, the event took place at Novotel HICC, Hyderabad, on November 9, 2023. The panelists discussed the role of academia in training professionals for the healthcare sector.

Invited Talks

The faculty of Centre for Life Sciences at Mahindra University are actively contributing to advancement of scientific knowledge and innovation. They have shared their expertise through various prestigious talks, workshops, and conferences. Here are some notable achievements:

1. **Dr. Manu Smriti Singh** introduced **3D Model as a predictive platform for pre-clinical drug/ nanomedicine screening and personalized medicine** at Mahindra University, Hyderabad on May 4, 2024.
2. **Dr. Manu Smriti Singh** shared insights on **FDP on Journal Publication** at Malla Reddy Institute of Medical Sciences, Hyderabad on April 26, 2024.
3. **Dr. Sanjeev Kumar Choudhry** discussed about **FDP on Grant Writing** at Malla Reddy Institute of Medical Sciences, Hyderabad on April 26, 2024.
4. **Dr. Mrittika Sengupta** presented a lecture on **Bacteriophage based antimicrobials: a sustainable solution to reduce food waste** at Swami Vivekananda University, Kolkata on April 23, 2024.
5. **Dr. Santosh Thakur** presented on **parallelizing genetic algorithms and analytical learning** at CMR Engineering College on March 16, 2024.
6. **Dr. Mrittika Sengupta** addressed the global challenge through her talk about **Waging a War Against AMR** at South Asian University, Delhi on March 15, 2024.
7. **Dr. Jayato Nayak** delivered a talk on **Interpretation of Process intensification in Green Biomanufacturing and Sustainability**: **Comprehension based on a case study** at Brainware University Online Conference on February 24, 2024.
8. **Dr. Manu Smriti Singh** conducted a workshop on **Evaluation of tumoroid growth kinetics towards drug screening and its correlation to in vivo therapeutic efficacy** at AIC-CCMB, Hyderabad on December 12, 2023.
9. **Dr. Ravi Kiran Donthu** delivered a talk on **Adaptive Evolution in Agricultural Pests and Honeybee Diversity: A Genomic Perspective** at ICAR-IIR, Hyderabad on December 7, 2023.
10. **Dr. Jayato Nayak** delivered a talk on **Graphene integrated photocatalyst development for transformation of anthropogenic CO2 to Bio-methanol at Save the Environment** Online Conference on January 12, 2023.
11. **Dr. Jayato Nayak** presented **Process intensification: Advanced approach in Judgement of Green Technology and Sustainability** at KIITS Bhubaneswar on September 15, 2022.

Prof. R. S. Chauhan's Outreach Engagements

Invited talk on the topic "**Education & Learning Ecosystems for Today & Tomorrow"** at Institute of Counsel Training,
Chandigarh - May 4th, 2023

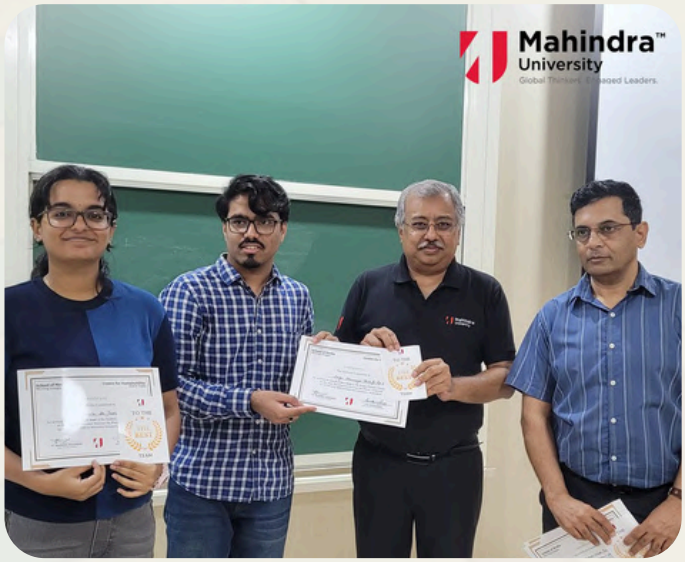
Asian Summit on Education & Skills 2022 (ASES) and DIDAC India 2022 Exhibition and Conference, Bangalore, October 16-17th, 2022

Student Achievements

Bhavikka Agarwaal, a second-year student of B.Tech. Computational Biology, gained recognition for her participation in the 'Diabetes Hack – Code for Life' hackathon, organized by the Regional Student Group India of the International Society for Computational Biology (ISCB), based in Maryland, USA. Her project focused on unraveling the complexities of protein-coding and long non-coding RNAs (lncRNAs) in Type-I Diabetes.

Bhavikka analyzed extensive datasets comprising of 83,652 genes expressed in insulin-producing cells across various developmental stages to decode crucial insights. Bhavikka's contributions exemplify CLS's dedication to cultivating innovation and scientific inquiry in critical health sciences.

Aditya Chourasia and Yashica Anumala from B.Tech. Biotechnology first year and B.Tech. Computational Biology second year respectively, clinched the Best Team title at the **"MUving Images & SOCH Talks Debate"** for their stance on "Development destroys the Planet". Aditya Chourasia further received the Best Speaker award for his expertise on the topic.



"The MUving Images & SOCH Talks Debate" featured a thought-provoking 20-minute short film, "The Feast", screened at a French film festival, followed by an engaging interaction with Dr. Neal Philip from CUNY (City University of New York) USA. This enriching experience culminated in a resounding victory for the Centre for Life Sciences team, highlighting their commitment to critical discussions about development and environmental impact.

BIRAC E-YUVA

Diagnostic kit for Respiratory Virus Detection: Five second-year B.Tech Biotechnology and Computational Biology students- **Achala Shriraghu, Rutvik Gannarapu, Shancy Mishra, Sanjana Siripurapu, and Ushasri K-** under the guidance of **Dr. Aruna Kumar Ch.** were shortlisted by the Biotechnology Industry Research Assistance Council (BIRAC) for a prestigious presentation at the BIRAC EYUVA Fellows evaluation event held at the University of Agricultural Sciences, Dharwad on May 8th, 2024. This esteemed platform provided the team with an opportunity to highlight their innovative proposal for a "One-shot diagnostic kit capable of identifying multiple respiratory viruses in a single test."

AI Solution for Real-Time Crop Disease Detection: On 25th April 2024, at the E-YUVA Centre at Tamil Nadu Agricultural University, Coimbatore, a team consisting of two ambitious second-year B.Tech Computational Biology students, **Bhavikka Agarwaal and Yashica Anumala,** alongside Aashi Gupta from B.Tech. Artificial Intelligence, under the guidance of **Dr. Bipin Singh**, presented their idea of "Advancements in digital image processing for real-time disease detection across various Indian crops." This presentation was part of the BIRAC EYUVA Fellows evaluation, showcasing their dedication to utilizing AI and computer vision to drive agricultural innovation, aimed at enhancing crop resilience and improving farmer livelihoods.

The team's presentation was evaluated by a distinguished panel comprised of BIRAC representatives, university professors, and subject matter experts during the Technology Enhancement Program (TEP) evaluation. Beyond the evaluation itself, the event proved to be a rich learning experience. The exposure broadened their perspectives and further fueled their passion for research and development. Furthermore, the teams are poised to make a continued positive impact in the future.

Bhavikka Agarwaal

Yashica Anumala

Internships Secured by Batch 2022

Student Name: Achala Shriraghu, Bhavikka Agarwal, Shancy Mishra
Internship Field: Mega-Bioinformtics Internship
Student Name: Bhavya Adusumilli, Vishrutha Udandra
Internship Field: CRISPR Technology

Student Name: Yashica Anumala
Internship Field: Healthcare Business Programming

Student Name: Priyanshu Roy
Internship Field: LENR Technology

Student Name: G Medha Reddy
Internship Field: Cytogenetics

Student Name: Aadhya Raut
Internship Field: Biopharmaceuticals

Student Name: Jagriti Madishetti
Internship Field: Genomics

Student Name: K. Shri Harshitha
Internship Field: Medical Microbiology

Student Name: Shancy Mishra
Internship Field: Research on Microbial Biofertilizer

Student Name: Nandana Reddy
Internship Field: Bioinformatics

Faculty Profile

Prof. Rajinder Singh Chauhan
Dean, Centre for Life Sciences
PhD: HPAU, Palamnpur, H.P. India
Visiting Scientist: University of Wisconsin, Madison, USA.
Specialization: Genomics for gene discovery

Dr. Mrittika Sengupta
AssociateProfessor
PhD: Illinois State University, USA
Postdoc: University of Miami, USA
Specialization: Molecular Mechanisms of AMR & regulation of bacterial biofilms

Dr. Souradyuti Ghosh
Associate Professor
PhD: Johns Hopkins University, Baltimore, USA
Postdoc: Cornell University, Ithaca
Specialization: Biomedical sensing processes & devices

Dr. Manu Smriti Singh
Associate Professor
PhD: University of Bonn, Germany
Postdoc: Tel Aviv & Hebrew Universities of Jerusalem, Israel
Specialization: Cancer Nanomedicine; Tumor microenvironment

Dr. Bipin Singh
Assistant Professor
PhD: IIIT-Hyderabad
Specialization: Computational Drug Discovery, Machine learning, AI for Healthcare

Dr. Akanksha Singh
Assistant Professor
PhD: Banaras Hindu University, Varanasi, India
Postdoc: Cornell University, USA; NIH, USA
Specialization: Development genetics, Genetics of human diseases, Systems Genetics & Gene Editing

Dr. Bhaskar Paidimuddala
Assistant Professor
PhD: Indian Institute of Technology (IIT) Madras, Chennai, India.
Postdoc: Harvard Medical School and Oregon Health & Science University, USA. H
Specialization: Immunity, Host-Pathogen Molecular interactions, Structural Biology, Cryo-EM.

Dr. Pijus K.Barman
Assistant Professor
PhD: ILS, Bhubaneswar, India
Postdoc: University of Illinois, Chicago & Cedars-Sinai Medical Center, Los Angeles, USA
Specialization: Immunobiology of Infectious Diseases & Metabolic Disorders

Dr. Priyadarshini
Assistant Professor
PhD: JUIT, Solan, H.P., India
Specialization: Proteomics, Phytotherapy & Urolithiasis

Dr. Runa Kuley
Assistant Professor
PhD: Wageningen University & Research, The Netherlands
Postdoc: University of Washington, Seattle, USA
Specialization: Rheumatology, Microbial Genomics, Immunology & Autoimmune Diseases

Dr. Jayato Nayak
Assistant Professor
PhD: National Institute of Technology Durgapur
Specialization: Green Biochemicals & Bioenergy

Dr. Ravi Kiran Donthu
Assistant Professor
PhD: University of Illinois at Urban-Campaign, Illinois,USA
Specialization: Bioinformatics, Agricultural genomics, Microbiome data analysis

Dr. Sanjeev Kumar Choudhry
Assistant Professor
PhD: University of Groningen, The Netherlands
Postdoc: Institute for Systems Biology and Seattle Children's Research Institute, Seattle, USA
Specialization: Molecular Cell Biology & Systems Biology

Dr. Swarit Jasial
Assistant Professor
PhD: University of Bonn, Germany
Postdoc: Nara Institute of Science and Technology, Japan
Specialization: Chemoinformatics or Computer-Aided Drug Design, Machine Learning, Data Mining

Dr. Sabeeha Hasnain
Assistant Professor
PhD: Jawaharlal Nehru University, New Delhi, India.
Postdoc: The University of Texas at Austin, Austin, TX, USA.
Specialization: Computational Biology and Biophysics

Dr. Varun Kumar
Assistant Professor
PhD: JUIT, Solan, H.P., India
Postdoc: ARO, Israel; Center for Plant Biotechnology & Genomics(CBGP), Madrid, Spain
Specialization: Plant Metabolic engineering

Dr. Santosh Thakur
Assistant Professor
PhD: IIT(ISM) Dhanbad.
Specialization: Data Science, Bio-Image Analytics & Decision Support Systems

Dr. Yugandhar Kamma
Assistant Professor
PhD: IIT Madras
Postdoc: Cornell University, USA
Specialization: Proteomics and Systems Biology

Dr. Aruna Kumar Chelluboyina
Assistant Professor
PhD: IIT Madras
Postdoc: Harvard Medical School, Boston, USA
Lerner Research Institute, Cleveland, Ohio, USA.
Case Western Reserve University, Cleveland, Ohio, USA.
Specialization: CRISPR Editing, Gene Therapy & Cancer Biology

RSG - ICSB India (Mahindra University, Hyd)

Mahindra University has officially affiliated with Regional Student Group (RSG India) of International Society of Computational Biology (ISCB) which is a student led-group guided by faculty advisors.The ISCB headquarter is based in Virginia, USA and currently led by Dr. Predrag Radivojac, President, ISCB and Professor of Computer Science at Northeastern University, USA. This affiliation has established Mahindra University as the Nodal Representative of RSG-India in Hyderabad.

RSG-India fosters a national network of students and researchers passionate about the interdisciplinary field through events, workshops, lectures and more. RSG India provides a platform for students to explore the vast potential of Computational Biology and Bioinformatics and connect with a global community of peers across 26 other students' groups around the world. This affiliation will provide Mahindra University students with access to a global network of researchers and students in computational biology. Mahindra University's RSG chapter stands firmly behind RSG-India's objectives and strives to work collaboratively to achieve them.

RSG Node Board Members

Dr. Bipin Singh
Faculty Advisor

Dr. Santosh Thakur
Faculty Advisor

Dr. Swarit Jasial
Faculty Advisor

Achala Shriraghu
President

Nandana Reddy
Secretary

Bhavikka Agarwaal
Technical Head

Rutvik Gannarapu
Outreach Head

A. Sai Yashica
Treasurer

A. Aishwarya
Treasurer

Shancy Mishra
Node Representative

Board of Studies (BoS)

NAME	DESIGNATION	AFFILIATION	BoS
Prof. Rajinder Singh Chauhan	Dean	Centre for Life Sciences, Mahindra University	Chairman
Prof. Yajulu Medury	Vice-Chancellor	Mahindra University	Member
Prof. Bishnu Pal	Dean, Academic	Mahindra University	Member
Dr. Shekhar C. Mande	Former, Director General	CSIR, Govt of India	External member
Prof. Hesham Ali	Director, Bioinformatics Core Facility &Former Dean	CIST, College of Information Science & Technology, University of Nebraska Omaha (UNO), USA	External member
Dr. M. Aslam	Former Advisor, (Scientist 'G'), Consultant (DBT-ILS)	NER-BPMC, Department of Biotechnology & Ministry of Science & Technology, Govt of India, New Delhi	External member
Dr. Sumathy K.	R&D Head	Bharat Biotech, Hyderabad	External member
Dr. Shriram Raghavan	Senior Vice President & Member, Leadership Team Jananom Private Ltd.,	Jananom Private Ltd.,Coimbatore and Bangalore	External member
Dr. Anuj Goel	SVP	Biocon Biologics, Bangalore	External member
Dr. Viswanadham D	VP - Biopharma Innovations and Head	Life Science Incubation, IKP Knowledge Park, Hyderabad	External member
Dr Gopalakrishnan Bulusu	Adjunct Faculty & Academic Programs Head, iHub-Data & Consultant	IIIT-Hyderabad & TCS Research, Hyderabad	External member
Dr. V.K. Srinivas	President- Technical Operations and Product Services	Bharat Biotech, Genome Valley, Hyderabad	External member

Institutional Bio Safety Committee (IBSC) & Institutional Ethics Committee (IEC) Board Members

MU Institutional Bio Safety Committee (IBSC) members

Prof. Rajinder Singh Chauhan, Mahindra University – Chairman
Dr. Sangita Mukhopadhyay, Staff Scientist VII, CDFD, Hyderabad – DBT Nominee
Dr. Sanjeev Kumar Choudhry, Mahindra University – Member Secretary
Prof. Suresh Yenugu, University of Hyderabad – Outside expert
Dr. Aruna Basireddy, Mahindra University – Biosafety officer
Dr. Akanksha Singh, Mahindra University – Internal member
Dr. Runa Kuley, Mahindra University – Internal member
Dr. Varun Kumar, Mahindra University – Internal member

MU Institutional Ethics Committee (IEC) members

Dr. Prakash Babu Phanithi, University of Hyderabad - Chair Person
Dr. Pijus Kanti Barman, Mahindra University - Member Secretary
Dr. Aruna Basireddy, Mahindra University - Basic Medical Scientist
Dr. Sarika Vangari, Mahindra University - Clinician
Dr. N Mythili, Mahindra University – Social Scientist
Dr. Rishi Raj Bhardwaj, Mahindra University – Legal Expert
Mr. Y. Pattabhi, Business, Self Employed – Lay Person
Dr. Gomathi Anandhanatar Ajan, Mahindra University –Member
Dr. Ayushi Tandon, Mahindra University – Member

Educational Programmes

4 year B.Tech in Computational Biology with specializations in:

- Computational Drug Discovery
- Health Informatics
- Genomic Data Science
- BioImage Analytics & Decision Support
- Pathogens Genomics
- Computation In Agriculture
- Biological Systems Modelling

4 year B.Tech in Biotechnology & 5 year integrated B.Tech-M.Tech Biotechnology with specializations in:

- Diagnostics And Biomarkers
- Pharmaceutical Biotechnology
- Green Chemicals & Bio-Products
- Digital Agriculture
- Precision Medicine
- Gut Microbiome
- Food Processing And Nutrition
- Biopharmaceutical Technology
- Biomanufacturing And Green Products

M.Sc. in Biotechnology

M.Tech. in Biomedical Data Science

Ph.D. in Life Sciences with Specialized areas in:

- Synthetic Biology
- Microbial & Plant Cell Factory
- Cell/ Gene Therapy
- Biomarkers
- Pathogen Genomics & Surveillance
- Protein Engineering & Structures
- Generative AI for Biologics
- Predictive Models for Diseases

Upcoming Events

5-days International Workshop

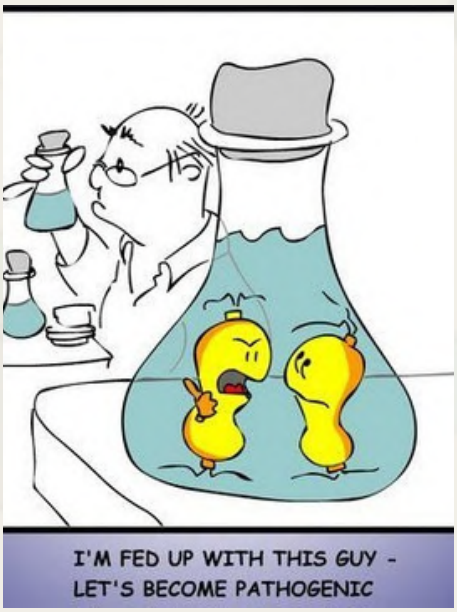
"AI in Healthcare - Discovery to Delivery"

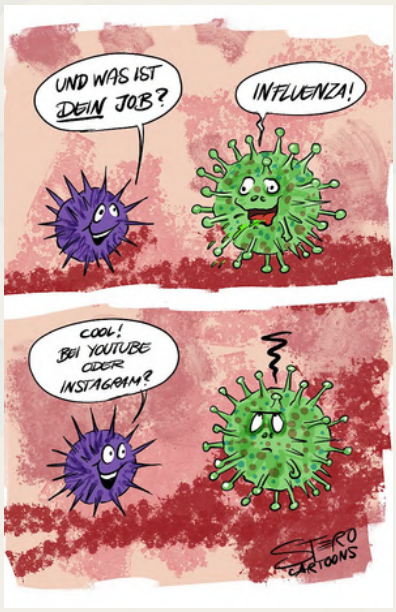
August 2024

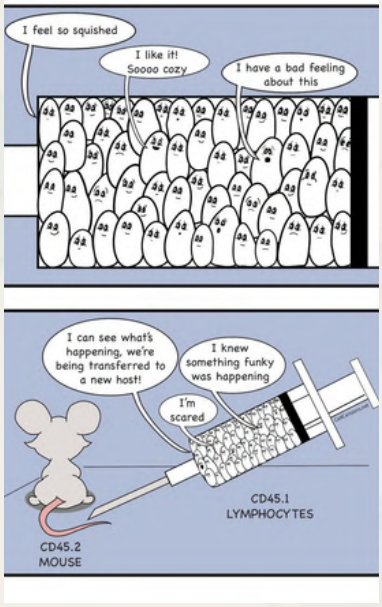
Focus Areas:

AI in Biomarker Discovery & Precision Medicine
AI in Drug Discovery & Disease Modelling
Generative AI in Healthcare

Ambrosia's Bio-toons Event







"BioToons" - where complex biological concepts are vividly brought to life through engaging cartoons and animations. Discover the wonders of the living world in a dynamic, visual storytelling experience that makes learning about biology more accessible and engaging.

CLS Corner

M.Sc. in Biotechnology for Dr. Reddy's Batch 2023-25

B.Tech. in Biotechnology & Computational Biology Batch 2022-26 & 2023-27

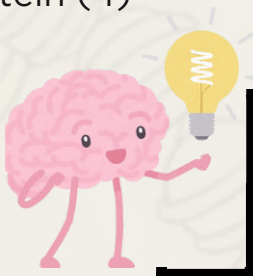
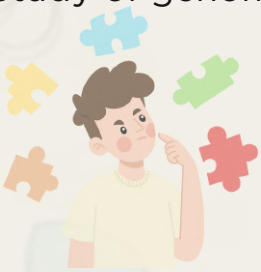
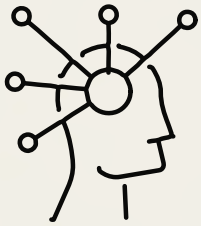
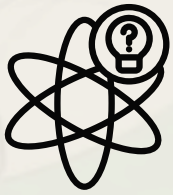
Fun Activity

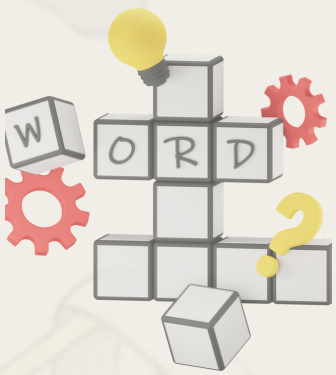
Across

1.Genetic material (3)
3.Building block of proteins (5)
5.Technique to amplify DNA (3)
7.Study of genes and heredity (7)
9.Method to sequence DNA (3)
11.A segment of DNA that codes for a protein (4)

Down

2.The genetic material of a virus (3)
4.A microscopic organism, such as bacteria, virus, or fungus. (6)
6.Study of proteins (10)
8.The process of making an identical copy of an organism. (4)
10.A biological catalyst made of proteins (6)
12.Study of genomes (8)

“Innovation is not a destination; it’s a journey. The key is not to be afraid to experiment and take risks along the way.”

- Anand Mahindra

2024