SWAMI VIVEKANANDA UNIVERSITY,
BARRACKPORE

SCHOOL OF LIFE SCIENCES

DEPARTMENT OF BIOTECHNOLOGY

MAY-JUNE NEWSLETTER 2024

SWAMI VIVEKANANDA UNIVERSITY,
BARRACKPORE

CONTENT

1. About The Department
2. Mission
3. Vision
4. Progress Report (April-May), 2024
5. Planning (June-2024)
6. Departmental Roadmap
7. Editorial- From HoD's Desk

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ABOUT THE DEPARTMENT

The Department of Biotechnology, part of the School of Life Sciences at Swami Vivekananda University, is dedicated to supporting a group of ambitious individuals on their journey to excellence, providing them with an ideal platform for self-redefinition. The department accommodates a diverse range of students, including postgraduates, undergraduates, and PhD scholars, in addition to academic staff that includes emerging researchers.

With a focus on achieving great heights, the department offers a highly specialized laboratory infrastructure that encompasses four labs specializing in Biotechnology, Microbiology, Molecular Biology & Biochemistry, Plant Biotechnology, and Bioengineering. The library is stocked with a collection of well-informed books in relevant fields, creating a continuous space for students to explore the latest developments. The perfect blend of theoretical knowledge and practical application is facilitated through classes held in spacious classrooms and well-equipped labs. This setup provides students with an essential environment for experiential learning, personal development, and successful placement in reputable industries. The department places a strong emphasis on exposure through internships, hands-on training, and industry visits, ensuring a comprehensive educational experience for its students.

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MISSION

Our mission lies in the translation of academic knowledge into practical application is a key focus, emphasizing outcome-based teaching approaches. Central to our educational philosophy is the establishment of a cooperative relationship between the industry and academia, fostering a dynamic exchange of ideas and experiences. Our commitment extends to conducting research that addresses local, national, and global challenges, ensuring that our academic endeavors have a meaningful impact on the broader community.

Furthermore, we are dedicated to developing graduate students who are not only well-versed in their academic disciplines but also equipped with robust analytical and leadership skills. Through this holistic approach, we aim to prepare our students to navigate and contribute effectively to the complex demands of their chosen fields, fostering a new generation of professionals capable of making significant and positive contributions to society.

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VISION

In the Biotechnology department, our focus lies in seamlessly translating academic knowledge into practical applications. We employ outcome-based teaching methodologies to enhance the learning experience, ensuring that students acquire not only theoretical understanding but also practical skills. A key aspect of our approach involves establishing a cooperative relationship between the industry and academia, creating opportunities for students to engage with real-world challenges and industry practices. Our commitment extends to conducting impactful research that addresses issues at local, national, and global levels, contributing to the advancement of biotechnological knowledge. Moreover, we aim to develop graduate students who not only possess a strong academic foundation but are also equipped with analytical and leadership skills, empowering them to thrive in the dynamic field of biotechnology.

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OBJECTIVE

1. **Academic Excellence:** Our commitment is to deliver high-quality education and training across diverse academic levels within the expansive field of biotechnology.

2. **Cutting-Edge Research:** We foster a culture that encourages innovative and impactful research, pushing the boundaries of biotechnological sciences.

3. **State-of-the-Art Facilities:** Our dedication extends to maintaining and upgrading specialized laboratories that provide students with practical learning experiences at the forefront of biotechnology.

4. **Interdisciplinary Collaboration:** We actively seek collaborations with other departments, research institutions, and industries, fostering interdisciplinary approaches to biotechnological research.

5. **Holistic Learning:** Through the integration of theoretical knowledge and hands-on practical experiences, we emphasize the diverse applications of biotechnology to provide a comprehensive educational experience.

6. **Library Resources:** Our comprehensive library boasts a rich collection of resources tailored to the field of biotechnology, supporting the academic endeavors of our students.

7. **Industry Exposure:** Students benefit from internships, hands-on training, and industry visits, gaining valuable insights into the real-world applications of biotechnological principles.

8. **Ethical Practices:** We instill a strong sense of ethical conduct and responsibility in both research and professional practices within the field of biotechnology.

OBJECTIVE

9. **Global Perspective:** Our programs are designed to prepare students for success in a diverse and interconnected professional landscape, providing a global perspective on biotechnological challenges and opportunities.

10. **Community Engagement:** We actively engage with the community through outreach programs and collaborative initiatives, emphasizing the application of biotechnological solutions for societal benefit.

11. **Continuous Improvement:** In response to evolving trends and challenges in biotechnology, we maintain a dynamic curriculum, ensuring the highest standards of education and research.

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PROGRESS REPORT

April- 2024

World Earth Day observance

On World Earth Day, the Departments of Microbiology and Biotechnology collaboratively organized an online event focusing on the importance of the planet and the imperative of sustainability. Dr. Mrittika Sengupta, Associate Professor at the Centre of Life Sciences, Mahindra University, delivered a thought-provoking presentation on environmental preservation, human impact on ecosystems, and innovative sustainability methods. Key themes encompassed the Earth's environmental status, the role of microorganisms, biotechnology advancements, and strategies for minimizing environmental impact. Interactive discussions enabled participants to exchange ideas with Dr. Sengupta, exploring actionable measures to safeguard our planet. The event effectively brought together students, faculty, and experts, deepening their awareness of sustainability. The departments extend appreciation to Dr. Sengupta and attendees, and intend to continue hosting similar initiatives to foster environmental consciousness and advance research endeavors.

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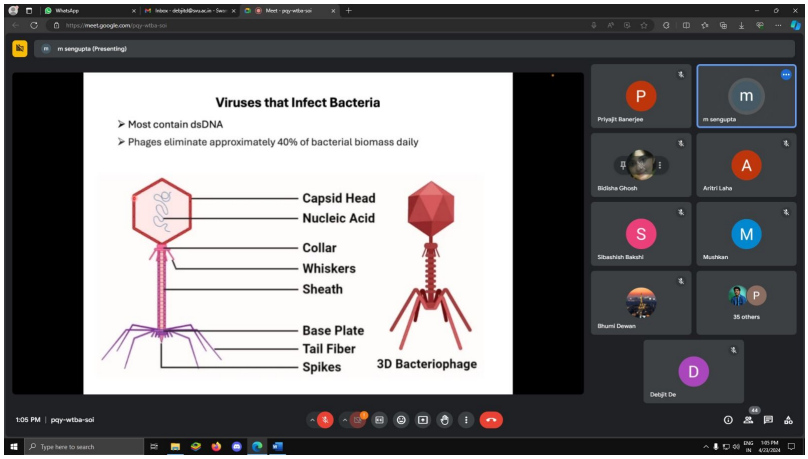
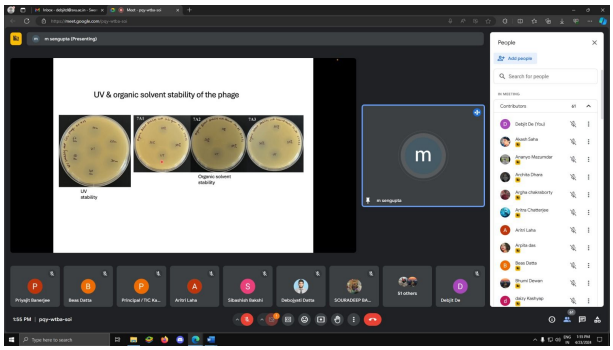
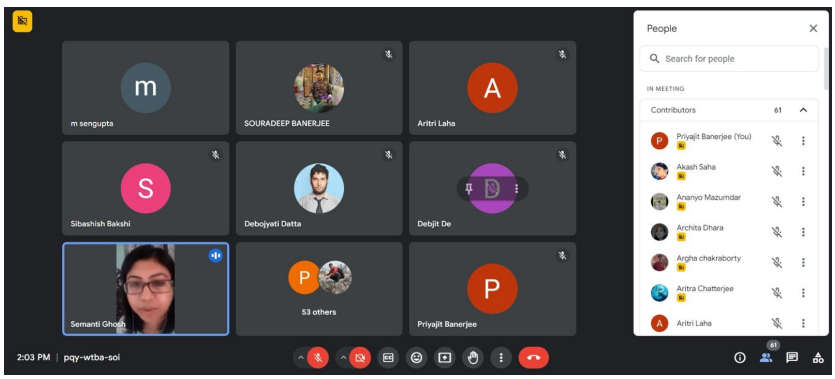
PROGRESS REPORT

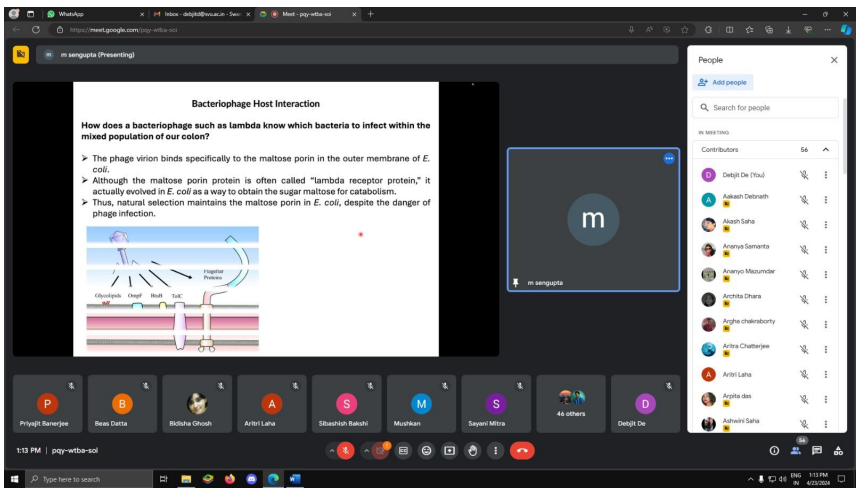
April- 2024

World Earth Day observance









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PROGRESS REPORT

May- 2024

Faculty Skill Development Programme

A collaborative Faculty Skill Development Programme was organized by the E-Yuva Centre at Adamas University and Swami Vivekananda University, with support from the Biotechnology Industry Research Assistance Council (BIRAC). The program focused on various themes including translational research, innovation, entrepreneurship, industry-academic collaboration, and intellectual property rights (IPR).

The main objective of the program was to equip faculty members with skills relevant to industry, empowering students to explore career paths beyond academia and research, with an emphasis on practical implementation and job creation. Spanning 30 hours, the program involved participants in extensive brainstorming sessions aimed at fostering critical thinking and collaborative problem-solving.

Dr. Srijan Haldar, Associate Professor in the Department of Biotechnology, School of Life Sciences at Swami Vivekananda University, acted as the convenor, while Dr. Aritri Laha, Assistant Professor in the Department of Microbiology, School of Life Sciences at Swami Vivekananda University, played a crucial role as one of the key resource persons. Their expertise significantly enriched the program, enhancing participants' understanding and application of the discussed topics.

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PROGRESS REPORT

May- 2024

Faculty Skill Development Programme

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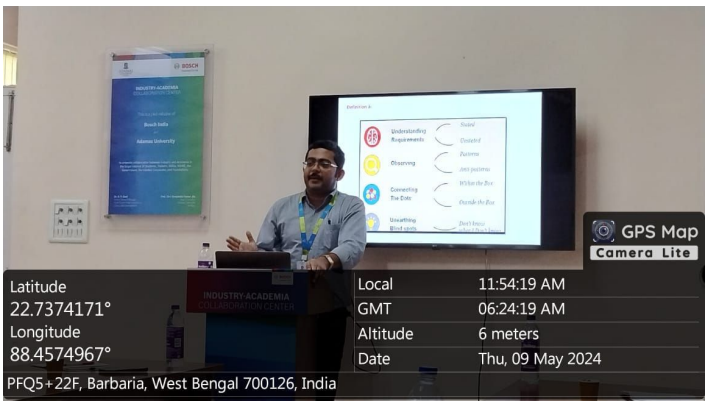
PROGRESS REPORT

May- 2024

Faculty Skill Development Programme



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Planning (June-2024)

World Environment Day Celebration

With the esteemed leadership of Shri Saurabh Adhikari, Chief Operating Officer of Swami Vivekananda University, the Departments of Microbiology and Biotechnology within the esteemed School of Life Sciences are preparing to celebrate World Environment Day on June 5th. This event holds great importance as it provides an opportunity for the academic community to unite and reiterate their dedication to environmental stewardship and sustainability. Through a range of educational programs, dialogues, and awareness initiatives, the departments seek to raise awareness about environmental issues and advocate for responsible actions to safeguard our planet.

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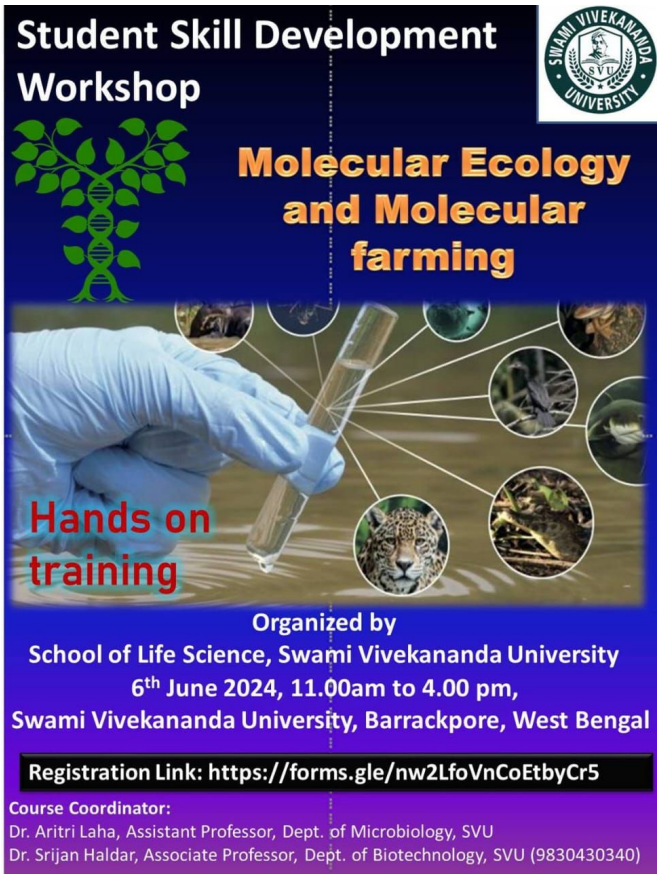
Planning (June-2024)

Student Skill Development Workshop



SWAMI VIVEKANANDA UNIVERSITY,
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Planning (June-2024)

Student Skill Development Workshop

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Planning (June-2024)

Student Skill Development Workshop - Molecular Ecology and Molecular Farming

In June, the Departments of Microbiology and Biotechnology at Swami Vivekananda University, School of Life Sciences, in line with the vision of honorable Shri Saurabh Adhikari sir, Chief Operating Officer, Swami Vivekananda University, will collaborate to host a series of Student Skill Development Workshops. These workshops aim to enhance technical expertise and expand the university's influence, with a focus on attracting external students.

Beginning on June 6th, a series of three workshops focusing on Molecular Ecology and Molecular Farming will commence at the university campus. Led by Dr. Srijan Haldar, an Associate Professor in the Department of Biotechnology, and Dr. Aritri Laha, an Assistant Professor in the Department of Microbiology, these workshops promise to provide a comprehensive understanding of these specialized fields. The curriculum has been thoughtfully developed to offer participants hands-on experience and in-depth knowledge, tailored to meet industry demands. Through a combination of theoretical lectures, practical demonstrations, and interactive sessions, participants will not only enhance their academic prowess but also acquire practical skills essential for professional growth. This initiative underscores the university's commitment to nurturing a generation of skilled professionals equipped to make meaningful contributions in the fields of molecular ecology and farming.

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Planning (June-2024)

Student Skill Development Workshop - Next-Gen Sequencing (NGS) & Computational Biology

On June 13th, an impactful event is on the horizon as the Departments prepare to host a specialized workshop dedicated to Next-Gen Sequencing (NGS) and Computational Biology. Led by the expertise of Dr. Semanti Ghosh and Dr. Debjit De, both esteemed Assistant Professors in the Department of Biotechnology, this workshop promises to delve into the intricacies of cutting-edge technologies shaping the biological landscape. Working in tandem as the coordinator with them is Dr. Srijan Haldar, an Associate Professor renowned for his expertise in the Department of Biotechnology within the School of Life Sciences.
The primary goal of this workshop is to provide participants with a hands-on experience in navigating the realms of biological data digitization and algorithmic applications. In an era where such skills are not just desirable but imperative for success in the job market, this workshop serves as a gateway to unlocking opportunities in various sectors. NGS and computational biology stand at the forefront of contemporary biological research, driving innovations in genomics, personalized medicine, and biotechnology. Mastery of these domains not only opens doors to esteemed research institutions but also paves the way for impactful contributions in healthcare, pharmaceuticals, and biotech companies.

Through interactive sessions and hands-on exercises, participants will not only gain proficiency in essential skills but also cultivate a deeper understanding of their practical applications.

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Planning (June-2024)

Student Skill Development Workshop - Next-Gen Sequencing (NGS) & Computational Biology

The workshop series will conclude on June 19th with a hands-on session focusing on Nano-Biotechnology & Fourier Transform Infrared (FTIR) Spectroscopy. Dr. Sabyasachi Ghosh and Dr. Priyankar Pal, Assistant Professors in the Department of Biotechnology and Microbiology respectively at the School of Life Sciences, Swami Vivekananda University, will lead this enlightening session.

Nano-Biotechnology and FTIR Spectroscopy have become indispensable tools in research, highlighting their crucial role. This workshop is carefully designed to not only provide students with practical skills required for their research endeavors but also to ignite their passion for scientific exploration.

Through immersive hands-on experiences guided by experienced mentors, participants will gain valuable insights into the applications and methodologies of Nano-Biotechnology & FTIR Spectroscopy. This transformative experience aims to cultivate a deep appreciation for research and innovation among students, empowering them to embark on their academic and professional journeys with confidence and enthusiasm.

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Planning (June-2024)

World Environment Day Celebration

The Departments of Microbiology and Biotechnology, housed within Swami Vivekananda University's School of Life Sciences, will collaboratively observe World Microbiome Day on June 27th. This occasion provides an opportunity to acknowledge the complex ecosystems of microorganisms and their significant influence on diverse aspects of our world, including environmental sustainability and human health. Through a carefully crafted agenda comprising interactive activities, thought-provoking discussions, and educational endeavors, our aim is to enhance awareness regarding the pivotal role of microbiomes in shaping both our environment and our lives.

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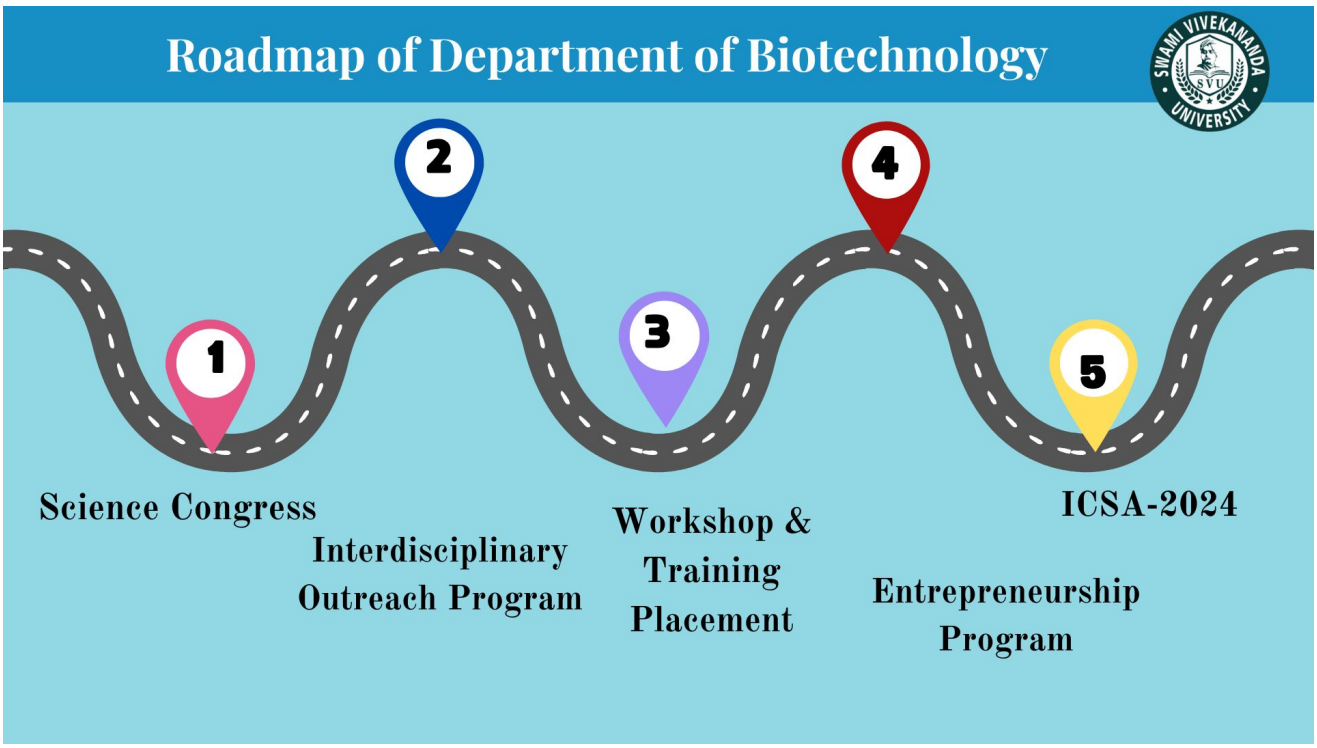
Departmental Roadmap



The Biotechnology department's strategic plan places a premium on academic excellence through pivotal initiatives. Active participation in science congress events enhances the visibility of our research, and outreach programs with interdisciplinary approaches promote collaborative efforts. The forthcoming International Conference, ICSA-2024, serve as noteworthy global platforms for knowledge exchange. Furthermore, our integrated entrepreneurship program empowers students to practically apply microbiological innovations. This roadmap epitomizes our dedication to excellence, collaboration, global engagement, and the cultivation of an entrepreneurial mindset among our students..

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Editorial - From HoD's Desk

Dr. Pritha Pal
Head, Department of Biotechnology
School of Life Sciences
Swami Vivekananda University

Despite the relentless heat waves of May, the Department of Biotechnology has remained steadfast in its commitment to fostering student development through a series of engaging events. Despite the challenges, World Earth Day was celebrated online, highlighting the imperative of sustainability. Co-hosted by the Departments of Microbiology and Biotechnology, the virtual event featured Dr. Mrittika Sengupta as a distinguished guest speaker. Dr. Sengupta's extensive experience and research acumen left an indelible impact on the students, and her presence as a resource person was a source of great honor for the department.

The departmental faculty actively contributed to organizing the Faculty Skill Development Programme in collaboration with the E-Yuva Centre at Adamas University and Swami Vivekananda University, with support from the Biotechnology Industry Research Assistance Council (BIRAC). This program aimed to equip faculty members with industry-relevant skills, empowering students to explore diverse career opportunities beyond academia and research. Dr. Srijan Haldar and Dr. Aritri Laha played instrumental roles in enriching the program with their expertise, thereby enhancing participants' understanding and application of key themes. The involvement of faculty members from various institutions further elevated the event's quality.

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Editorial - From HoD's Desk

Dr. Pritha Pal
Head, Department of Biotechnology
School of Life Sciences
Swami Vivekananda University

Regardless of the busy exam season in May-June, our department remains resolute in maintaining its momentum. We are preparing to organize World Environment Day on June 5th and World Microbiome Day on June 27th, ensuring continued student engagement and involvement. Additionally, throughout June, collaborative efforts between the Departments of Microbiology and Biotechnology will facilitate a series of Student Skill Development Workshops, covering topics such as Molecular Ecology, Molecular Farming, Next-Gen Sequencing (NGS) & Computational Biology, and Nano-Biotechnology & Fourier Transform Infrared (FTIR) Spectroscopy. These workshops are designed to enhance technical skills and expand institutional reach, with a primary focus on external student participation. Our faculty members remain dedicated to advancing research and fostering student development, contributing to the overall excellence of the department.

We express our sincere appreciation to the university's senior leadership, which includes the esteemed Chancellor, Vice Chancellor, Chief Operating Officer, Registrar, Deputy Registrar, and all esteemed members of the governing body, for their consistent support. With their invaluable guidance, we are resolute in our commitment to upholding academic excellence and fostering a culture of scientific inquiry and innovation within the School of Life Sciences.