

The Faculty Development Programme on Environmental Sustainability and Green Technologies in Research and Education

(May 18-24, 2024)

The Faculty Development Programme, titled "Environmental Sustainability and Green Technologies in Research and Education," commenced on May 18th, 2024, at the AIU-Chitkara University Himachal Pradesh - Academic and Administrative Development Centre (AIU-CUHP-AADC) in collaboration with the Internal Quality Assurance Cell (IQAC). The inauguration of the week-long Faculty Development Program took place on May 18th, 2024 at 11.00AM. Seventy Eighty participants from Higher Education Institutions (HEIs) across India are attending the FDP. During the inaugural session of the Faculty Development Program, Dr. Nitin Verma, Principal, Chitkara School of Pharmacy Chitkara University, welcomed the participants and emphasized the significance of embracing sustainability and green technological innovations in research and education. Dr. Rajnish Sharma, the Hon'ble Vice Chancellor, elaborated on the implications of incorporating sustainability concepts and green technologies into their teaching modules and promoting collaborative research initiatives addressing complex environmental challenges. Eminent advisors like Dr. Amarendra Pani, Joint Director & Head of Research at AIU, New Delhi, and Dr. (Mrs.) Pankaj Mittal, Secretary General of AIU, New Delhi, backed the program with their support. AIU-AADC-FDP was coordinated by Dr Usha Rai Negi, Consultant Research Division, AIU. The session concluded with a vote of thanks to all attendees.

Dr. Abhishek Thakur, Assistant Professor from School of Engineering and Technology, Chitkara University, Baddi, Himachal Pradesh addressed on topic "Data Representation" from 2.00 PM to 4.00 PM. Dr. Thakur emphasized the role of data representation in making presentations and thus saving time and energy. Participants were engaged in creating charts, graphs, and maps. They practiced importing datasets, choosing appropriate visualization types, and customizing visual elements to highlight key insights. Participants discussed the challenges they face in data representation within their own research. Dr. Thakur answered questions on best practices for data visualization and provided tips on avoiding common pitfalls, such as misinterpretation and overcomplication of visual data.

On 20th May in the morning session at 10.30 AM Dr. Dharmendra Kumar Khatri, Assistant Professor, Department of Pharmacology, NMIMS, Mumbai, India addressed the FDP

audience on topic “A paradigm shift in drug discovery: Leveraging multi-omics integrative approaches for precision targets in Parkinson's disease”. He emphasized that traditional methods often fail to capture the complex, multifactorial nature of diseases like Parkinson's. By integrating diverse omics data, researchers can obtain a holistic view of the biological pathways involved in disease progression. The speaker provided a more comprehensive understanding of the disease's molecular underpinnings and these approaches promised to pave the way for more effective and precise treatments. Dr. Khatri called for continued innovation and collaboration across disciplines to harness the full power of molecular approaches in the fight against Parkinson's disease.

In the afternoon session on the same day Dr. Nitin Verma, Principal, Chitkara School of Pharmacy, Chitkara University, Baddi, Himachal Pradesh, India delivered his talk on “Optimizing Healthcare Management through Sustainability”. The session focused on integrating sustainability into healthcare management practices, emphasizing the importance of environmental stewardship in improving healthcare outcomes and operational efficiencies. The speakers discussed strategies to reduce the environmental footprint of healthcare facilities, promote sustainable practices, and the benefits of such practices for patient care and the broader community. The speaker called for a concerted effort to integrate sustainability into all aspects of healthcare management, highlighting the need for collaboration, innovation, and continuous improvement.

The 3rd day of FDP on “Exploring telemedicine and remote healthcare delivery models lowering carbon emissions” was held successfully on Tuesday, 21st May 2024 at 10.30 AM. Dr. Neha Bajwa’s speech highlighted the significant potential of telemedicine and remote healthcare delivery models to reduce carbon emissions and promote environmental sustainability. By reducing the need for travel and optimizing healthcare resource use, telemedicine offers a practical solution to some of the environmental challenges facing the healthcare sector. The session concluded with a call to action for stakeholders to invest in telemedicine infrastructure, develop supportive policies, and promote awareness of the environmental benefits of remote healthcare delivery.

In the afternoon session on 21st May at 2.30 PM Dr. Meenu Khurana, Pro-Vice Chancellor, School of Engineering and Technology, Chitkara University, Himachal Pradesh was the resource person. The topic of the talk was “Creating clean green and smart learning spaces in campus”. The session focused on the integration of clean, green, and smart technologies in creating sustainable and efficient learning spaces on university campuses. Dr. Meenu opened the session by highlighting the importance of sustainability in educational institutions. She provided an overview of the environmental challenges posed by traditional campus operations, including high energy consumption, waste generation, and resource inefficiency. Dr. Khurana emphasized that adopting sustainable practices in campus design and operation not only helps protect the environment but also creates healthier and more conducive learning spaces for students and staff.

On the 4th day of FDP, on 22nd May at 10.30 AM, Dr. Rupesh K. Gautam, Professor & Head, Department of Pharmacology, Indore Institute of Pharmacy, Indore, Madhya Pradesh, India addressed the session on the topic “Telemedicine, Environment, and Healthcare: A Systematic Approach”. His speech delved into the intersection of telemedicine, environmental sustainability, and healthcare delivery. It highlighted how telemedicine can contribute to environmental goals by reducing carbon emissions and improving resource efficiency, while also enhancing healthcare accessibility and quality. By reducing the need for travel and optimizing resource use, telemedicine can help lower the carbon footprint of healthcare and support broader environmental goals.

In the evening session on the same day at 2.30 PM, Dr. Prabodh Chandar Sharma, Associate Professor, Department of Pharmaceutical Sciences, Delhi Pharmaceutical Sciences and Research University (DIPSRU), New Delhi, India delivered his lecture on the topic “Green Chemistry for creating a sustainable tomorrow: Progress and Barriers”. The session focused on the advancements in green chemistry aimed at promoting sustainability and reducing environmental impact. It highlighted recent progress in the field, discussed the barriers to wider adoption, and explored strategies to overcome these challenges. Dr. Sharma called for increased investment in green chemistry research, supportive regulatory frameworks, and greater public awareness to drive the adoption of sustainable chemical practices.

On the 5th day (23rd May) of FDP, the morning session (10.30 AM) was delivered by Dr. Arun Lal Srivastav Associate Professor & Assistant Director (Research Grants), Chitkara University, Himachal Pradesh, India delivered his session on Sustainable practices regarding waste management. In his talk, Dr. Srivastava highlighted that waste management is a critical aspect of sustainability that aims to reduce the environmental impact of waste, conserve resources, and improve the quality of life. The session began with an overview of the increasing amounts of waste being generated globally, exacerbated by urbanization and population growth. The worthy speaker emphasized on importance of composting organic waste to reduce landfill burden and produce valuable compost for agriculture.

For the afternoon session, at 2.30 PM we have Dr. Rajesh Verma, Group Lead, from R & D-Analytical Development, Dabur India Pvt. Ltd. He delivered his speech on Role of Advanced Chromatographic techniques to sustain the best quality herbs. The session focused on the critical role of advanced chromatographic techniques in maintaining the quality, safety, and efficacy of herbal products. Participants explored the latest advancements in chromatography and their application in the herbal industry to ensure high standards and regulatory compliance. The speaker highlighted the overview of international regulatory

requirements for herbal products, emphasizing the importance of compliance to avoid market recalls and ensure consumer trust.

The morning session of day 6 (24th May) was delivered by Dr. Amanpreet Kaur, Assistant Professor, School of Pharmaceutical Sciences, Delhi Pharmaceutical Sciences and Research University (DIPSRU) New Delhi. She delivered her talk on “Strategies for Sustainable development in Drug Discovery and Development”. The speaker encouraged participants regarding the adoption of green chemistry in drug discovery to reduce environmental impact and improve safety. Moreover the speech incorporated the latest techniques of drug discovery like precision medicine, drug repurposing, sustainable drug discovery practices etc.

In the afternoon session, at 2.30 PM, Dr. Neetu Mittal, Professor, Amity Institute of Information Technology (AIIT), Amity University, Noida, India delivered her lecture on “Exploring telemedicine and remote healthcare delivery”. The speaker discussed the transformative impact of telemedicine on the healthcare industry. The focus was on understanding the benefits, challenges, and future potential of remote healthcare delivery systems. Dr. Mittal covered the benefits of telemedicine emphasizing upon how telemedicine can bridge the gap in healthcare access, especially in rural and underserved areas.

On the same day, the culminating event of the 6-day-long Faculty Development Program drew to a close with a valedictory session following expert sessions. Dr. Meenu Khurana, the esteemed Pro-VC of Chitkara University, extended heartfelt thanks to participants, organizers, resource persons, and AIU authorities for their unwavering support and encouragement, which paved the way for the successful culmination of this FDP. She acknowledged the support of our administrative staff, who ensured that all logistical aspects were handled efficiently. Dr. Khurana emphasized the imperative for more hands-on FDPs in upcoming sessions to foster skill enhancement among educators. In concluding remarks, Dr. Pradeepta Sarangi expressed gratitude to all involved and officially declared the closure of the six-day long Short-Term Capacity Building Program under AIU-CU-AADC-IQAC collaboration.

The programme witnessed the active participation of 78 attendees from Higher Education Institutions (HEIs) across India, reflecting the widespread interest and commitment for environmental Sustainability in Research and Education. Hosted at Chitkara University, Solan, Himachal Pradesh, India, the event provided a conducive environment for learning and collaboration, fostering academic and administrative excellence through the strategic use of technology. Overall, the FDP served as a platform for bringing together experts and

educators to explore innovative approaches to achieve environmental Sustainability through different technologies/approaches/practices in Research and Education.