

Chandigarh Region Innovation and Knowledge Cluster (CRIKC)

Annual Report 2025-2026

In the period from August 2025 to April 2026, CRIKC continued its usual activities of organizing lectures/conferences/seminars as well as interaction with several organizations. A brief report on CRIKC activities is as follows.

August 08–12, 2025: A five-day GIAN course on “*Healthcare Quality Management*” was organized at Panjab University, Chandigarh, with the objective of providing a comprehensive understanding of quality improvement and patient safety in modern healthcare systems. The course was designed for healthcare administrators, policy-makers, researchers, and students from health sciences and management disciplines, aiming to equip them with the knowledge and tools required to enhance healthcare service delivery. The programme focused on key aspects such as quality improvement initiatives to reduce medical errors, patient safety protocols, evidence-based clinical practices, performance measurement using data analytics, regulatory compliance and accreditation standards, patient-centred care, inter-professional collaboration, and the integration of health information technologies such as Electronic Health Records. It also addressed legal, ethical, leadership, and communication dimensions essential for effective healthcare management. The course featured distinguished faculty, including Dr. Perjit Kaur Charanjit Singh from the National Kidney Foundation Malaysia, along with Dr. Aman Khera, Dr. Ajay Kumar Dogra, and Dr. Pooja Dogra, who contributed their expertise in healthcare management and policy. The academic structure included lectures, tutorials, and case discussions, ensuring a balance between theoretical concepts and practical applications. Participation was limited to 50 attendees to facilitate effective interaction and learning. The course was coordinated by Dr. Aman Khera. Overall, the programme served as a valuable platform for interdisciplinary learning and capacity building, enabling participants to lead quality transformation initiatives, improve patient outcomes, and contribute to the advancement of healthcare systems at both national and global levels.

September 15–19, 2025: A five-day GIAN course on “*Innovation Capitalized: Harnessing Licensing, Technology Transfer, and Product Expansion for Success*” was organized at Panjab University, Chandigarh, with the objective of providing comprehensive insights into the processes of intellectual property (IP) management, licensing, and technology commercialization. The course emphasized the critical role of licensing and technology transfer in translating research innovations into marketable products, thereby fostering economic and societal development. The academic programme

comprised **12 hours of lectures and 10 hours of tutorials**, integrating theoretical concepts with practical applications through case studies and assignments. Key topics covered included fundamentals of technology transfer in drug development, strategies for commercialization, drafting licensing agreements, market analysis, intellectual property management, regulatory considerations, financing and funding strategies, and emerging trends in technology commercialization. The course also included hands-on tutorials on developing commercialization plans, valuation and pricing strategies, negotiation of licensing agreements, and assessment of market readiness. The programme featured distinguished faculty, including Prof. Sanjay Garg from the University of South Australia and Prof. Indu Pal

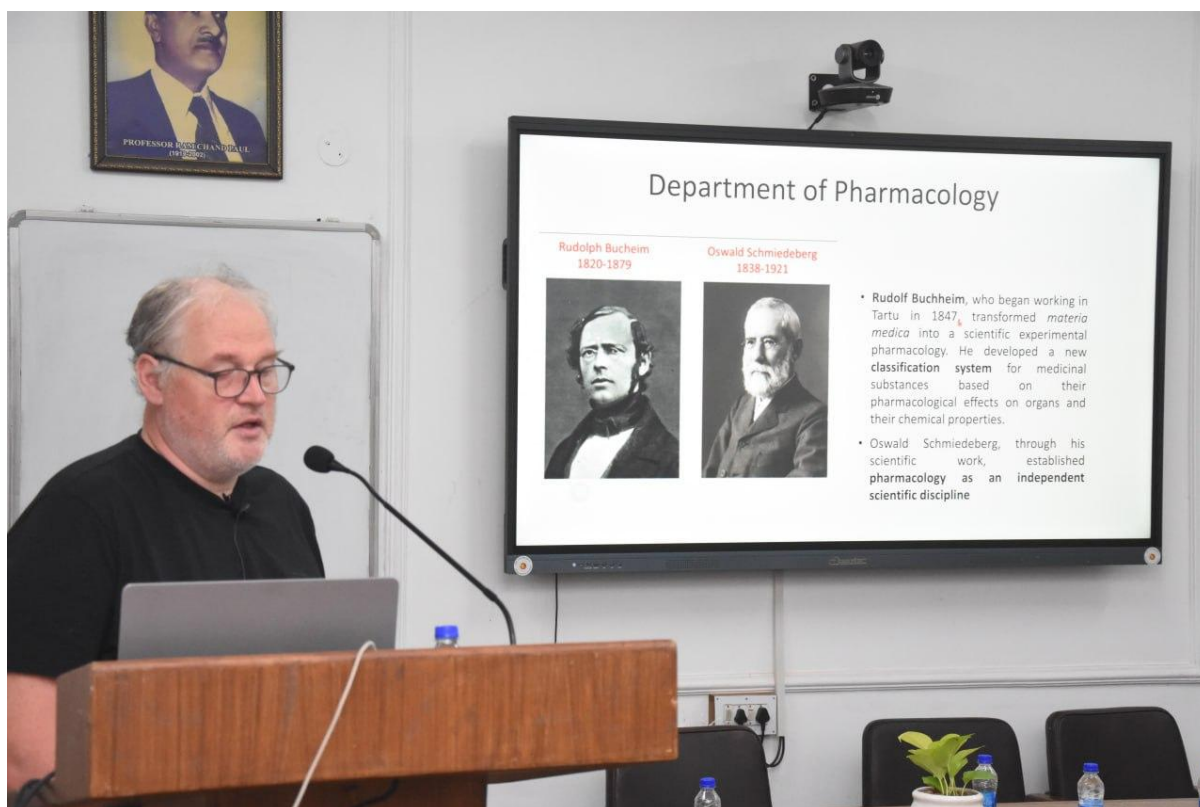
Kaur, who shared their expertise in pharmaceutical innovation, intellectual property, and translational research. The course was conducted under the patronage of Prof. Renu Vig, with Prof. Gurjaspreet Singh serving as the Local GIAN Coordinator and Prof. Indu Pal Kaur as the Course Coordinator. The programme was open to researchers, faculty members, industry professionals, entrepreneurs, and students from diverse disciplines, with participation limited to 40 attendees to ensure effective interaction. Overall, the course provided a valuable platform for interdisciplinary learning, equipping participants with essential skills in IP strategy, commercialization, and technology transfer, thereby strengthening the innovation ecosystem promoting academia and industry–



collaboration.



October 13–17, 2025: A five-day GIAN international course on “*The Growth and Collapse of Orogens and the Exhumation of Deep-Seated Rocks in the Himalayas*” was organized by the Department of Geology, Panjab University, Chandigarh. The course aimed to provide an advanced understanding of Himalayan tectonics, focusing on the evolution of collisional orogenic belts, deformation processes, metamorphism, and exhumation mechanisms of deep-seated rocks. The programme emphasized the integration of structural geology, petrology, and petrochronology to analyse stress, strain, and kinematics of geological formations, along with the interplay between tectonics, erosion, and climate. Participants were introduced to various exhumation models, including extension, extrusion channel flow, and in-sequence shearing, supported by case studies from the Himalayan, Variscan, and Alpine orogenic belts. The course combined theoretical lectures with applied perspectives, enabling participants to address practical geological problems related to deformation, metamorphism, and high-strain shear zones. The programme featured distinguished experts, including Prof. Rodolfo Carosi, an eminent researcher in structural geology and orogenic processes, and Dr. Mahesh Thakur, who contributed expertise in Himalayan geology, landslides, and neotectonics. The course was coordinated by Dr. Mahesh Thakur, with Prof. Gurjaspreet Singh serving as the Local GIAN Coordinator. It was open to students, faculty members, and professionals from academia, industry, and research organizations, with participation limited to 50 attendees to ensure effective interaction. Overall, the course provided a valuable platform for interdisciplinary learning in Earth Sciences, enhancing participants’ understanding of tectonic processes and strengthening their analytical and research capabilities in the field of geology.



November 03–07, 2025: A five-day GIAN course on “*Understanding the Mysteries of Fluorination in Medicinal Chemistry*” was organized at the Department of Chemistry, Panjab University, Chandigarh. The course focused on the fundamental and applied aspects of

fluorination in medicinal chemistry, highlighting its significant role in modulating physicochemical, pharmacokinetic, and pharmacodynamic properties of drug molecules. The programme was designed to provide participants with a strong foundation in the physical organic chemistry principles underlying fluorination and its application in modern drug discovery. The academic schedule comprised **15 hours of lectures and 10 hours of tutorials**, ensuring a balanced integration of theoretical knowledge and practical learning. The course covered diverse topics, including the physical principles and reactivity patterns of fluorinated compounds, conformational control using fluorine substituents, structural diversity of fluorinated bioactive molecules, fluorination reagents, metal-catalyzed fluorination reactions, characterization techniques, and regulatory aspects associated with perfluorinated compounds. The programme featured distinguished resource persons, including Prof. Ryan A. Altman from Purdue University, along with Dr. Deepak B. Salunke and Dr. Madhuri Tanaji Patil, who shared their expertise in medicinal and synthetic organic chemistry. The course was coordinated by Dr. Deepak B. Salunke and Dr. Madhuri Tanaji Patil. It was open to students (B.Sc., M.Sc., M.Pharma, Ph.D.), faculty members, and industry professionals, with participation limited to 50 attendees to ensure effective interaction. The programme successfully provided an interdisciplinary platform for academic exchange, equipping participants with advanced knowledge and practical insights into fluorination strategies in drug design and development, thereby contributing to capacity building in the field of medicinal chemistry.





February 26, 2026: The Department of Chemistry and Centre for Advanced Studies in Chemistry, Panjab University, Chandigarh, organized the *Professor Dip Singh Gill Memorial Lecture* at the Seminar Hall, Department of Chemistry, Panjab University. The lecture was delivered by Prof. Narinder Singh from the Indian Institute of Technology Ropar. The event was organized to commemorate the academic legacy and contributions of Prof. Dip Singh Gill to the field of chemical sciences and to promote scientific interaction among researchers, faculty members, and students. During the lecture, Prof. Narinder Singh shared insights from his research in environmental monitoring, chemosensors, biomedical applications, catalysis, and waste management, highlighting the growing importance of interdisciplinary approaches in addressing contemporary scientific and environmental challenges. The lecture provided participants with exposure to recent developments in chemical and biomedical research and encouraged discussions on innovative analytical and sustainable technologies. The programme was conducted under the guidance of Prof. Ganga Ram Chaudhary, Chairperson, Department of Chemistry, with Prof. Gurjaspreet Singh serving as the Convener. The event was attended by faculty members, research scholars, and students, and served as a meaningful academic platform fostering scientific exchange and commemorating the enduring contributions of Prof. Dip Singh Gill to higher education and research.

•**February 26–27, 2026:** The Department of Chemistry and Centre for Advanced Studies in Chemistry, Panjab University, Chandigarh, organized the *Prof. Ram Chand Paul Symposium “Cheminnovate 2026: Bridging Science, Startups, and Employability”* under the sponsorship of RUSA 2.0 at Panjab University, Chandigarh. The symposium served as an interdisciplinary platform bringing together academicians, researchers, students, industry professionals, entrepreneurs, innovators, and policy makers to deliberate upon the growing interconnection between scientific research, innovation, entrepreneurship, and employability in chemical sciences. The programme focused on contemporary themes including advances in materials

science, green chemistry, analytical and synthetic innovations, commercialization of research, startup development, industry–academia collaboration, and skill development for emerging career opportunities. Through scientific presentations, startup showcases, panel discussions, and networking sessions, the symposium highlighted the translation of bench-scale research into viable technologies and sustainable industrial solutions. Abstracts and research papers from diverse domains of chemical sciences were invited for oral and poster presentations, providing participants with opportunities to present innovative research and interact with experts from academia and industry. The symposium was organized under the patronage of Prof. Renu Vig, Honourable Vice Chancellor, Panjab University. Prof. Ganga Ram Chaudhary served as Chairperson of the organizing committee, while Dr. Gurpreet Kaur acted as Convener, and Dr. Subash C. Sahoo served as Secretary of the symposium. The event successfully promoted scientific exchange, innovation-driven entrepreneurship, and collaborative learning, thereby strengthening the linkage between academia, startups, industry, and employability in the field of chemical sciences.



April 16–22, 2026: The Department of Chemistry and Centre for Advanced Studies in Chemistry, Panjab University, Chandigarh, organized a seven-day Faculty Development Programme (FDP) on the theme “*Advancing Eco-Friendly Materials: Integrated Spectroscopic, Electrochemical, Computational and Biological Perspectives*” at the Department of Chemistry, Panjab University, Chandigarh. The programme served as a multidisciplinary platform for academicians, researchers, faculty members, and students to explore recent advances in sustainable and functional materials through integrated spectroscopic, electrochemical, computational, and biological approaches. The FDP comprised a series of invited lectures and interactive academic sessions delivered by distinguished experts from premier institutions including the Indian Institute of Technology Ropar, National Institute of Pharmaceutical Education and Research Mohali, Indian Institute of Science Education and Research Mohali, Punjab Engineering College, Institute of Nano Science and Technology, and Postgraduate Institute of Medical Education and Research. The lectures covered diverse contemporary themes including advanced functional materials,

environmental remediation technologies, biomass valorisation, medicinal and pharmaceutical chemistry, molecular simulations, NMR spectroscopy, peptide engineering, supramolecular chemistry, forensic spectroscopy, nanomaterial-based chemosensors, and sustainable synthetic methodologies. The programme highlighted the importance of interdisciplinary scientific research in addressing emerging environmental, biomedical, and technological challenges through innovative and eco-friendly approaches. The FDP facilitated meaningful academic interaction and knowledge exchange among participants, thereby strengthening research orientation and promoting collaborative learning in the fields of chemical, material, and biological sciences.



April 27–29, 2026: The Department of Chemistry, Panjab University, Chandigarh, in association with Punjab Engineering College and under the aegis of RUSA 2.0, organized a three-day workshop on *“Recent Advancements in Affordable and Sustainable Point of Care Sensors for Healthcare & Environmental Applications”* at the Department of Chemistry, Panjab University, Chandigarh. The workshop was conducted with the objective of promoting interdisciplinary research and innovation in the development of sustainable and cost-effective point-of-care sensing technologies for healthcare diagnostics and environmental monitoring. The programme brought together academicians, researchers, faculty members, and students

to deliberate upon recent advances in sensor technologies, analytical methodologies, and their practical applications in biomedical and environmental sciences. The workshop featured lectures and interactive sessions by distinguished experts including Prof. Stefano Cinti, who shared insights into emerging trends and innovations in point-of-care sensing systems and sustainable analytical technologies. The programme was organized under the patronage of Prof. Renu Vig, Honourable Vice Chancellor, Panjab University. Dr. Savita Chaudhary served as Convener, while Prof. Sandeep Kumar, Head, Department of Physics, PEC, acted as Co-Convener. Prof. Ganga Ram Chaudhary served as the Local Coordinator under RUSA 2.0. The workshop successfully facilitated scientific interaction and knowledge exchange among participants, thereby strengthening collaborative research efforts in the fields of healthcare diagnostics, environmental monitoring, and sustainable sensor technologies.

