

ANNUAL NEWSLETTER

THE OFFICE OF RESEARCH, INNOVATION & COMMERCIALIZATION



Achievement Alert

ORIC qualifies for the **X** category again for the second consecutive year in the HEC Annual Ranking 2023–2024. We achieved a score of 66.5 in 2023–24, up from 63 the previous year, indicating clear improvement. Congratulations to the FCCU faculty and community on this remarkable achievement!

2024 – 2025 Highlights

- **28+** ongoing funded research projects.
- Active **collaborations** with both international and national organizations.
- **07** partial sponsorship of academic conferences.
- **190** latest research articles archived in the Forman Digital Repository
- Continued recognition for excellence through HEC's **X** category ranking.
- Sponsored **Research thesis exhibitions & academic writing competitions**.
- Signed new **MoUs** and agreements.
- Marking a dynamic year of **academic engagement**, collaboration, and impact.

Rector's Message

I welcome this latest issue of the ORIC Annual Newsletter, highlighting some of the main ORIC achievements over the past year. From my perspective, it provides an impressive compilation of both national and international research projects which ORIC has helped facilitate, adding immeasurably to the vibrant culture of research across the Forman campus.

Importantly, a number of disciplines have been involved in this effort including in both the sciences and social sciences. FCCU's own Internal Research and Innovation Fund (IRIF) has also been an important part of the mix. Together, these partnerships have resulted in an impressive list of conferences, workshops, research articles and other activities, many of which are mentioned in this publication.

Finally, this was the year that we formally launched Forman's Business Incubation Center (BIC), viewing it as potentially a vital catalyst in turning some of the innovative ideas produced into viable commercial projects with wider impact.

Looking ahead, I am confident that the momentum developed this year will continue well into the coming one!



Dr. Johnathan Addleton
Rector FCCU

*PhD, MALD,
BSc
Ambassador (Retired)*



Dr. Kauser Abdulla Malik HI, SI, TI

**Director Office of
Research, Innovation and
Commercialization (ORIC)**

*HEC Distinguished Professor
(Biotechnology)
Fellow Alexander von Humboldt
Foundation
Fellow Pakistan Academy of
Sciences
Fellow Third World Academy of
Sciences*

Director's Message

As we reflect on the accomplishments and advancements of the year 2024-25, I am deeply gratified by our achievement of reaching the X-category of HEC ORIC ranking. We achieved 66.5 in 2023-24, up from 63 the previous year, indicating an improvement.

This accomplishment is a testament of ORIC's unwavering dedication, hard work, and commitment to excellence. It is a reflection of exceptional leadership, vision, and collaborative efforts of ORIC team and faculty members. In a competitive landscape, achieving such recognition speaks volumes about ORIC's capabilities and its significant contribution to advancing the ranking of the institute. ORIC has played a pivotal role in assisting researchers with grant acquisition and management. We have also established meaningful partnerships with government organizations and industries.

It is heartening to observe the wheels of progress turning as faculty members increasingly consider acquiring intellectual property rights for their innovations. ORIC is poised to serve as the vital link between university research and the end-users in industry and society.

I extend my heartfelt appreciation to the leadership of Dr. Jonathan S. Addleton and all our steering committee members, stakeholders, and supporters for their unwavering dedication and support. Your contributions have been instrumental in our success, and I am confident that together, we will continue to chart new paths and achieve even greater heights in the years to come.

NATIONAL & INTERNATIONAL RESEARCH PROJECTS CURRENTLY BEING FACILITATED BY ORIC FCCU

Sr.	Researcher	Department	Project Title	Funding Agency	Status
1	Dr. Kauser Abdulla Malik & Dr. Samina Mehnaz	Kauser Abdulla Malik School of Life Sciences	Use of Biofertilizers to improve soil health, fertility and crop yield in Rice-Wheat cropping system.	International Center for Agriculture Research in Dry Areas (ICARDA)	On-Going
2	Dr. Kauser Abdulla Malik & Dr. Muhammad Bilal Sadiq	Kauser Abdulla Malik School of Life Sciences	Combined effect of osmotic pretreatment and low temprature tray to improve the sensory and quality attributes of dehydrated seasonal fruits.	Pakistan Academy of Sciences (PAS)	On-Going
3	Dr. Kauser Abdulla Malik	Kauser Abdulla Malik School of Life Sciences	Exploring the metagenome of Hudiera drain for potential bioremediation, and to determine antibiotic resistant genes along with multidrug-resistant pathogenic bacteria.	Pakistan Science Foundation (PSF)	On-Going
4	Dr. Kauser Abdulla Malik	Kauser Abdulla Malik School of Life Sciences	Combined effect of osmotic pretreatment and low temperature tray to improve the sensory and quality attributes of dehydrated seasonal fruits.	Pakistan Academy of Sciences (PAS)	On-Going
5	Dr. Hamid Latif	Physics	Fabrication of a novel carbon nano-material based Perovskite Solar Cells and its Stability Enhancement by Self-Assembled Monolayers.	National Research Program for Universities - HEC	On-Going
6	Dr. Hamid Latif	Physics	Energy Storing, Lighter And Stronger Textile based on $\text{Li}_{1.2}\text{Mn}_{0.54}\text{Ni}_{0.13}\text{Co}_{0.13}\text{O}_2/\text{C}/\text{Ag}$ Coated Yarn (cathode) and rGO/Unzipped MWCNTs Yarn (anode).	TUBITAK-PSF, 2020, Pakistan Science Foundation (PSF)	On-Going
7	Dr. Hassan Amir Shah	Physics	Dynamics of non-linear structures and chaos in degenerate quantum plasmas.	Pakistan Academy of Sciences (PAS)	On-Going
8	Dr. Shinho Chung	Environmental Sciences	Hydrogeochemical Evaluation of Arsenic in Shallow and Deep Aquifers of Sheikhupura Region of Pakistan.	Korea Mine Rehabilitation and Mineral Resources Corporation (KOMIR)	On-Going

Sr.	Researcher	Department	Project Title	Funding Agency	Status
9	Dr. Samina Mehnaz	Kauser Abdulla Malik School of Life Sciences	Environmentally Safe Polyhydroxy butyrate (PHB) based biodegradable packaging film as an alternative to conventional plastic.	National Research Program for Universities - HEC	On-Going
10	Dr. Muhammad Imran	Kauser Abdulla Malik School of Life Sciences	Isolation, Identification, and Characterization of Novel Microbial S-triazine and dicamba degrading proteins.	National Research Program for Universities - HEC	On-Going
11	Dr. Syed Farhat Ali	Kauser Abdulla Malik School of Life Sciences	Production enhancement and PCR application of an archaeal DNA polymerase – an important diagnostic enzyme.	National Research Program for Universities - HEC	On-Going
12	Dr. Aftab Bashir	Kauser Abdulla Malik School of Life Sciences	CRISPR-Cas mediated targeted mutagenesis of wheat TCP gene family for developing climate smart non-transgenic wheat.. - CS0927.	Pakistan Agriculture Linkages Program (PARC)	On-Going
13	Dr. Shakila Bashir	Statistics	A new family of Distributions to estimate the survivorship functions with an application to the survival time of chronic kidney disease patients.	National Research Program for Universities - HEC	On-Going
14	Dr. Muhammad Irfan	Kauser Abdulla Malik School of Life Sciences	Development of climate-smart cotton by editing Arginase (GhArg) genes using genome editing (CRISPR/Cas) tools.	Local Challenge Fund - HEC	On-Going
15	Dr. Rabia Chaudhary	Center for Public Policy and Governance	Empowering Masses, Bolster Resilience to Adequately Counter Extremism – EMBRACE “USAID Subh- e- Nau under Pakistan Local Works Program”.	United States Agency for International Development (USAID)	Approved
16	Dr. Rukhsana Zia & Dr. Mehwish Raza	Center for Learning and Teaching	Diversity Equity and Inclusion in Higher Education.	Professional and Organizational Development Research Grant	On-Going

RESEARCH PROJECTS FUNDED BY INTERNAL RESEARCH AND INNOVATION FUND (IRIF) FCCU

In the year 2024–2025, the Office of Research, Innovation and Commercialization (ORIC) provided funding of **PKR 3,081,500** for 12 Internal Research and Innovation Fund (IRIF) projects to encourage and foster a culture of research and innovation at Forman Christian College (A Chartered University).

Sr.	Researcher	Department	Project Title	Amount Funded by ORIC	Status
1	Dr. Martin Thomas	Education	A Continuing Professional Learning and Development (CPLD) Program.	PKR 300,000/-	On-Going
2	Dr. Muhammad Vaqas Ali	Sociology	A phenomeno-logical understanding of Family Planning' reflected through the lived experiences of residents of a rural community in Punjab.	PKR 240,000/-	On-Going
3	Dr. Muhammad Tariq	Chemistry	Green Surface active 10111Cliquids and traditional surfactants: Comparisons for solubilizing anti-cancer phytochemicals.	PKR 300,000/-	On-Going
4	Dr. Muhammad Nadeem Asghar	Chemistry	Synthesis and Characterization of Metal oxides-Graphic carbon nitride heterostructures for Photocatalytic Applications.	PKR 300,000/-	On-Going
5	Ms. Itrat Batool Naqvi	Statistics	Tooth Eruption Time in Children of Lahore.	PKR 300,000/-	On-Going
6	Dr. Ayra Indrias Patras	Political Science	Religion, National Identity and Civil Rights of Minorities- A comparative study of closing down of Christian places of worship in Punjab (2019-2024).	PKR 103,000/-	On-Going
7	Dr. Ashar Johnson Khokhar	Education	Chronicles of Resilience and Coping Strategies (of the Christian affectees of Mob Violence in Punjab, Pakistan).	PKR 300,000/-	On-Going
8	Dr. Syed Wasif Azim	Political Science	Media freedom and capacity-building of journalists in Pakistan.	PKR 300,000/-	On-Going
9	Dr. Tanvir Ahmed	Economics	Exploratory Analysis of market participation choices and wellbeing of farmers in Punjab.	PKR 298,500/-	On-Going

Sr.	Researcher	Department	Project Title	Amount Funded by ORIC	Status
10	Dr. Muhammad Rauf Butt	Computer Science	Eye Tracking Wheelchair.	PKR 190,000/-	On-Going
11	Dr. Muhammad Arslan	Kauser Abdulla Malik School of Life Sciences	Analysis of Growth Hormone Dynamics in Severely Obese Children and Adolescents using Multi-Biomarkers.	PKR 300,000/-	On-Going
12	Dr. Abeeda Qureshi	Political Science	A Comparative Analysis of the Indian Lunacy Act 1912 and Pakistan's Mental Health Ordinance 2001.	PKR 150,000/-	On-Going

FORMAN DIGITAL REPOSITORY

Forman Digital Repository now hosts **1706** publications, freely accessible for content information.

To access the full text of a research article under the ORIC community, please email your request to oric@fccollege.edu.pk. The requested article will be sent to you upon approval.



SCAN ME

190 new Research articles were made part of the Forman Digital Repository published by faculty members of Forman Christian College (A Chartered University) during the year 2024–2025.

LIST OF ARTICLE PROCESSING CHARGES FUNDED BY ORIC DURING YEAR 2024-2025

In the year 2024–2025, ORIC funded **PKR 550,000** in Article Processing Charges (APCs) for six articles published by the faculty, PhD scholars, and Research students of Forman Christian College (A Chartered University).

Sr.	Author(s)	Journal Name	Title of Article	Amount Funded by ORIC
1	Dr. Ayesha Junaid <i>Assistant Professor, Center of Language Development</i>	Remittances Review	A Comprehensive Analysis of Visualizing Metaphors: Linguistic Decoding of Meaning in the Movie Donkey King.	PKR 50,000/-
2	Dr. Hassan Amir Shah <i>Dean of Natural Sciences</i>	Scientific Reports	Kinetic Alfven-acoustic waves at relativistic and ultra-relativistic Fermi energies.	PKR 100,000/-
3	Hina Farzana <i>PhD Scholar KAM School of Life Sciences</i>	Journal of Tuberculosis Research	Antigen-Specific Antibody Profiles in TB-Exposed and Infected Patients: A Cohort Study from Pakistan.	PKR 100,000/-
4	Ms. Sana Afzal, <i>PhD scholar Department of Chemistry</i> First author, Dr. Saeed Iqbal, <i>Professor, Department of Chemistry,</i> Corresponding author & Dr. Abdul Haleem Khan, <i>Associate Professor/Chairperson, Department of Pharmacy</i> co-author	Current Medicinal Chemistry.	Mechanochemical Synthesis of Ulcer Safe COX- 2 Selective Anti-Inflammatory Conjugates of Diclofenac with Glucosamine and Chitosan.	PKR 100,000/-
5	Ms. Arooj Azhar <i>Research Student</i> First author, & Dr. Aftab Bashir <i>Professor, KAM School of Life Sciences</i> Corresponding author	Current Plant Biology	The transcription factor TaNF-YB4 overexpression in wheat increases plant vigor and yield.	PKR 100,000/-
6	Dr. Shazma Massey Azeem <i>Chairperson, Department of Chemistry</i>	International Journal of Polymer Science	A Study of Pharmaceutical Applications of Hemicelluloses from Nine Food Materials.	PKR 100,000/-

CONFERENCES AND EVENTS PARTIALLY FUNDED BY ORIC IN YEAR 2024-2025

ORIC proudly contributes to sponsorship for conferences and events held on campus. These initiatives are designed to strengthen the research ecosystem, promote inter and intra-departmental collaboration, and build vital linkages with industry on research commercialization and collaboration. Through this support, ORIC continues to champion a culture of innovation and impactful research at FCCU.



The 3rd International Education Conference - Shaping Equitable Education: Inclusion, Innovation & Impact in collaboration with department of Education.



The 4th International Conference on Chemical and Pharmaceutical Sciences: Innovation to Commercialization in collaboration with department of Chemistry.



ICA Regional Conference 2024, Pakistan in collaboration with department of Mass Communications.



3rd International Conference on Recent Trends in Physics in collaboration with department of Physics.



1st Forman International Pharmaceutical Consortium (FORMAN PHARMACON) in collaboration with department of Pharmacy.



Kauser Abdulla Malik (KAM) School of Life Sciences, in collaboration with the Pakistan Academy of Sciences, hosted a three-day international conference titled "Cultivating Wellness: Bridging Agriculture, Food, and Health."



Conference: Challenges and Transformations in Contemporary Pakistan in collaboration with Centre for Public Policy and Governance (CPPG).



ACS Punjab, the ACS International Student Chapter at Forman Christian College (A Chartered University), secured two prestigious "Festival Grants" worth USD 1,500 each from the American Chemical Society (ACS). The achievement was met with appreciation from the Chairperson of the Department of Chemistry and the Office of Research, Innovation and Commercialization (ORIC).



The Writing Center - Forman Christian College successfully hosted the third edition of the Ink-it Competition generously funded by ORIC.



The Department of Statistics hosted the Symposium on Data Analytics and Statistics 2025 partially sponsored by ORIC.



Department of Sociology hosted the Sociology Thesis Poster Competition, where both MPhil and undergraduate students showcased their groundbreaking research.

ORIC ANNUAL STEERING COMMITTEE MEETING



The Office of Research Innovation and Commercialization - ORIC Steering Committee was an in person meeting held on 14th June 2024, at 3:00 pm in Conference room E-002, Elahi Building, attended by the following:

- Dr. Jonathan Addleton, Chair/Rector
- Dr. Kauser Abdulla Malik, Director ORIC
- Mr. Hammad Naqi Khan, Director General, World Wildlife Fund
- Mr. Aezaz Hussain, Chairman, Systems Ltd.
- Engineer Javed Qureshi, Chief Executive, 4B Group of Companies
- Mr. Sheikh Waqar Ahmad, Head of Corporate Affairs & Sustainability, Nestle Pakistan
- Dr. Gloria Caleb, Associate Vice-Rector
- Dr. Hassan Amir Shah, Dean of Natural Sciences
- Dr. Farid A. Malik, Professor of Operations Management
- Dr. Dildar Ahmed, Professor Department of Chemistry
- Dr. Mubashar Mushtaq, Chairperson Computer Sciences Department
- Ms. Badia Raza, Chief Marketing & Outreach officer
- Mr. Haroon Samson, Senior Manager Research Operations & Development
- Ms. Ayesha Aslam, Manager Innovation and Commercialization



ORIC SPONSORED FACULTY AND STUDENT PARTICIPATION ON DIFFERENT PLATFORMS

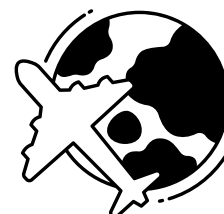
The Office of Research, Innovation and Commercialization (ORIC) at Forman Christian College (A Chartered University) is pleased to have sponsored Dr. Hira's participation at a One-Day Seminar titled **"Innovative Chemical Solutions: Driving a New Era of Sustainability in Energy and Healthcare"**, held on February 21, 2025, at The Islamia University of Bahawalpur.



ORIC sponsored 7 students from FCCU Physics department to attend the **18th National Symposium on Frontiers in Physics** organized by the National Centre of Physics and Quaid-i-Azam University, Islamabad held on 11th-13th February 2025.



IN THE YEAR 2024-2025 ORIC FACILITATED 07 FACULTY MEMBERS IN APPLYING FOR INTERNATIONAL TRAVEL GRANTS.

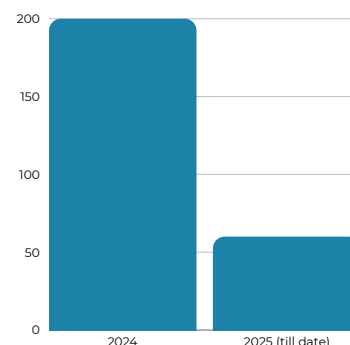


INSTITUTIONAL REVIEW BOARD

The Institutional Review Board (IRB) at FCCU, under ORIC, reviewed a total of **260** research proposals during the period 2024–2025:

- **200** proposals in 2024
- **60** proposals in 2025 (till date)

Led by Dr. Sharoon Hanook (Convener) and Mr. Haroon Samson (Secretary), the IRB ensures compliance with ethical standards in human and animal research. Guided by the Belmont Report and federal regulations, the board plays a vital role in safeguarding participants and strengthening FCCU's research integrity and culture.



INTELLECTUAL PROPERTY AWARENESS

In the year 2024-2025, ORIC has focused on creating awareness among FCCU researchers regarding Intellectual property rights and the importance of acquiring them. For this purpose Director ORIC, Dr. Kauser Abdulla Malik conducted various one on one meetings with all faculties of Forman Christian College (A Chartered University).

ACADEMIC LINKAGES

Forman Christian College University has joined as a Vision Partner of the Arfa Karim Fellowship Program, Pakistan's first leadership initiative focused on Artificial Intelligence and Blockchain initiative dedicated to bridging the gap between education and industry in the fields of AI and Blockchain. Mr. Haroon Samson, Senior Manager Research & Development ORIC and Dr. Mubashar Mushtaq, Chair of the Department of Computer Sciences, have been inducted as Academic Council Members of the Fellowship Program.

Powered by the Arfa Karim Foundation, this pioneering initiative is committed to empowering the next generation of Pakistani youth through a dynamic blend of technology, leadership, and innovation.

The Arfa Karim Fellowship Program is designed to:

- Cultivate leadership and entrepreneurial abilities in young minds.
- Advance academic and professional excellence.
- Strengthening linkages between academia and industry, preparing students for real-world impact.

We look forward to contributing to this transformative journey and shaping a future-ready generation of tech leaders in Pakistan.



ORIC - BUSINESS INCUBATION CENTER



The Office of Research, Innovation and Commercialization (ORIC) proudly inaugurated its Business Incubation Center on June 5, 2025, marking a significant milestone in fostering entrepreneurship and innovation at FCCU.

The ribbon-cutting ceremony was led by Dr. Johnathan S. Addelton, *Rector FCCU*, accompanied by Dr. Douglas Trimble, *Vice Rector*, Dr. Kauser A. Malik, *Director ORIC*, and Dr. Rao Raza Hashim, *Dean of Business and Management*. Their presence underscored the university's commitment to empowering aspiring entrepreneurs and providing a nurturing ecosystem for startups.

This center aims to support innovative ideas, promote collaboration between academia and industry, and provide resources for the commercialization of research.

ORIC-BIC Key Functions & Facilities:

- Provide lectures, seminars, mentorship support and training sessions.
- Implement organized networking mechanisms to foster interaction between startups and corporate entities.
- Create opportunities for collaboration and partnership between emerging businesses and established companies.
- Seed funding.
- Technical advisory board for startups.
- Create internships and part-time job opportunities for students.
- Access to laboratories, libraries, and ICT facilities will be provided.
- Co-working space for 25 incubates. (i.e students, faculty members, alumni and anyone with the start-up idea)
- One large meeting room and two smaller meeting rooms with high-tech facilities.
- Two accelerator rooms and two private meeting pods.



**FORMAN
CHRISTIAN
COLLEGE**
(A CHARTERED UNIVERSITY)



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