

Contact Information

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Awards/Honors/Project

- As a Judge at Agha Khan Higher Secondary School for Researchathon 2025.
- NED Approved Ph. D Supervisor.
- Best Final Year Project 2021 & 2025 by UAFA.
- NEDAASC Best Published Research Award for the year 2019.
- Awarded SRGP/HEC: No. 21-1021/SRGP/R&D/HEC/2016 (0.3935 Million) as PI.
- Passed International (ETS) GRE Subjective in 2009.
- Awarded HEC Indigenous 5000 Scholarship Batch IV (2007).
- Qualified GAT General (NTS) in 2007.
- Gold Medal for Securing 1st Class 1st Position in M.Sc. 2005.

Membership

- Chemical Society of Pakistan

Academic Qualification

Ph. D (Chemistry)	2014	HEJ Research Institute of Chemistry, University of Karachi
M.Sc (Chemistry)	2005	Federal Urdu University of Arts, Science and Technology, Karachi

Teaching Experience

- **Associate Professor:** Department of Chemistry, NED University of Engineering and Technology. (October 2025).
- **Assistant Professor:** Department of Chemistry, NED University of Engineering and Technology. (July 2022 to date).
- **Assistant Professor (Adhoc):** Department of Chemistry, NED University of Engineering and Technology. (March 2019 to June 2022).
- **Co-operative Teacher:** Department of Chemistry, NED University of Engineering and Technology. (May 2017 – March 2019).
- **Assistant Professor (IPFP):** Department of Chemistry, NED University of Engineering and Technology. (April 2016 - April 2017).
- **Co-operative Teacher:** Department of Chemistry, NED University of Engineering and Technology. (July 2014 - April 2016)

1. Academic Activities:

- BE courses: Applied Chemistry and Applied Chemistry for Engineers.
- BS courses: Organic Chemistry I, Organic Chemistry II, Physical Chemistry II, Separation Techniques, Spectroscopy and Textile Sciences, Industrial Chemistry Lab II, Industrial Chemistry Lab III, Industrial Chemistry Lab IV, Industrial Chemistry Lab V and Industrial Chemistry Lab VI.
- MS courses: Natural Product Chemistry, Advanced Spectroscopic Techniques, General Chemistry, Advanced Chromatographic Techniques, Separation Techniques, Instrumental Methods and Techniques, Drug and Heterocyclic Chemistry and Organic Synthesis.
- Ph.D. courses: Retrosynthetic Analysis, Advanced Aspects of Chromatography and Advanced Organic Synthesis.
- Designed and composed Lab manuals for BS(IC): Industrial Chemistry Lab III, Industrial Chemistry Lab V and Industrial Chemistry Lab VI.

2. Administrative Responsibilities:

- Working as a Class advisor for SS(IC) and TS(IC) since spring semester 2015- to date.
- Arranged industrial visit for BS Industrial Chemistry students to Gentipak Industries (General Tyre) in 2016 and 2018.

- Arranged industrial visit for BS Industrial Chemistry (3rd year) students to HEJ Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi in January 2020.
- Arranged industrial visit for BS Industrial Chemistry students (3rd year) to Matco Foods Limited in 2023.
- Working as a Lab Incharge Chemistry Lab II.
- Worked as Member of organizing committee in International Industrial Chemistry Conference 2021 and 2023.
- Working as focal person of Internship coordinator.
- Working as a member of Examination Review Committee.
- Working as a member of Board of Studies.
- Working as ORIC Representative.
- Working as AT member of BS SAR.
- Working as PT member of MS SAR.

3. Research Activities:

- Gas Chromatographic Applications for Analysis of Antidiabetic Drugs in Pharmaceutical Formulation & Spectral Studies of Derivatives of a Triterpenoid (2016): Zainab Qadir. MS Batch 2014-15
- Pharmaceutically Interesting Derivatives of Triterpenoids (2018): Nabila Hassan. MS Batch 2016-17.
- Interaction of metal with heteroatom and their biological effects (2019): Muhammad Hasan Jaliawala. MS Batch 2017-18.
- Synthesis, characterization and biological activities of Schiff bases and their complexes: Zaheer Abbas (2020). MS Batch 2018-19.
- Synthesis of heterocyclic triterpenoid derivatives and their biological activities: Qandeel Batool (2020). MS Batch 2018-19.
- Synthesis, characterization and biological activities of Fusidic acid derivatives: Syed Hamdani Raza (2020). MS Batch 2018-19.
- Pharmaceutically Interesting Derivatives of a Pentacyclic Triterpenoid: Amber Munawwar (2021). MS Batch 2019-20.
- Synthesis and Characterization of the derivatives of Thiosalicylic acid: Hamza Asif (2022). MS Batch 2019-2020.
- Biological evaluation of a Fusidane Triterpene and its Derivatives: Syed Osama Ali (2022). MS Batch 2019-2020.
- Synthesis of ester derivatives of a biologically active Fusidane Triterpenoid: Muhammad Asad (2022). MS Batch 2020-2021.
- Synthesis of biologically active derivatives of Oleanolic Acid: Khubaib Rehan (2022). MS Batch 2020-2021.
- Synthesis of ether and ester derivatives of some Aromatic acids: Rabia Hani Khan (2022). MS Batch 2020-2021.
- Synthesis and biological evaluation of Fusidic acid derivatives: Maham Jabeen (2023). MS Batch 2022.
- SAR Guided Upgradation of Drug and Drug like Compounds: Amber Sardar (2024). MS Batch 2023.
- Chemo and Site-Selective Derivative of Bioactive Natural Product: Syeda Hafsa Imam (2025). MS Batch 2023.
- Isolation, Characterization and Biological Studies of the Natural Products from *Manilkara zapota*: Muhammad Sameer Khan (Ongoing). MS Batch 2024.
- Synthesis, Characterization and Biological Evaluation of some Amlodipine derivatives: Muhammad Ibrahim (Ongoing). MS Batch 2024.
- Phytochemical and Biological Studies of *Plumeria obtusa* L.: Midhat Hameed (Ongoing). MS Batch 2024.
- Synthesis of Azo Dyes (2017): BS Batch 2013-2014.
- Plant Mediated Synthesis and Evaluation of Antimicrobial Activities of Silver Nanoparticles (2017): BS Batch 2013-2014
- Synthesis and Characterization of Zinc Oxide Nano Particles with Green Synthesis and Wet Chemical Method (2017): BS Batch 2013-2014

- Synthesis, Characterization and Activities of the Derivatives of Triterpenoids (2018): BS Batch 2014-2015
- Chemical composition, Antibacterial and Antifungal Activities of *Azadiracta indica* and *Mentha spicata* L. leaves Essential oils (2018): BS Batch 2014-2015.
- Synthesis of bioplastic from plant materials (2020). BS Batch 2016-17.
- Derivatives of heteroatom containing compounds and their metal complexes (2020). BS Batch 2016-17.
- Synthesis of hydrogels (2020). BS Batch 2016-17.
- Synthesis of the Derivatives of carboxylic acids (2021). BS Batch 2017-18.
- Pythochemical Studies of *Adhatoda Vasica* (2021). BS Batch 2017-18.
- Synthesis of the derivatives of a triterpenoid (2022). BS Batch 2018-19.
- Synthesis of the derivatives of a steroidal Triterpene (2022). BS Batch 2018-19.
- Synthesis and derivatives of aromatic acids (2023). BS Batch 2019-20.
- Synthesis and derivatives of biologically active Triterpenoids (2023). BS Batch 2019-20.
- Synthesis and characterization of carboxylic acid derivatives (2024). BS Batch 2020-21.
- Synthesis, characterization and biological activities of terpene derivatives (2024). BS Batch 2020- 21.
- Biological Evaluation of Triterpene and Synthesis of its Derivatives (2025). BS Batch 2021- 22.
- Investigation the Synthesis, Characterization and Bioactive Properties of Thiosalicylic Acid (2025). BS Batch 2021- 22.
- Derivatization of Natural Products enabling Bioactivity (2025). BS Batch 2021- 22.
- Phytochemical Studies of *Manilkara zapota* (Ongoing). BS Batch 2021- 22.
- Chemical Derivatization of an Aromatic Drug (Ongoing). BS Batch 2021- 22.

4. Training/Webinar Attended:

- "Objective 2016" and submitted report of Instructional Plans.
- "Duties and Responsibilities of Class Advisors" January, 2017.
- "Orientation Program of Online Library Services & Digital Resources" February 2017.
- "Importance of Feedback Analysis" March 2017.
- "Faculty Development Program" February 2018.
- "OBE System Learning" October 2019.
- Attended Road show on new R and D framework of HEC on November 2019.
- QEC training on online assessment.
- QEC training of management of online classes-Operation+ Security.
- COMSTECH Webinar on "Opportunities for Production of Affordable Biosimilar Medicines, and Plant-Based Novel Therapeutics, in the Islamic World" held on 12th November, 2020.
- Webinar on "Understanding the Kashmir Challenges" held on 4th February, 2021.
- COMSTECH Webinar on "International Workshop on Drug Discovery & Medicinal Chemistry" held on 26th & 27th July, 2021.
- COMSTECH Webinar on "Advanced Methods for Structure Determination of Proteins and their complexes: Drug Discovery for Motor Neuron Disease to COVID-19" on 9th September, 2021.
- Hands on Work Shop "High Performance Liquid Chromatography" 23-24th December, 2021, Department of Chemistry, NED University of Engineering & Technology.
- ORIC Training on "The Role of ORIC for Management and Improvement of Research, Innovation and Commercialization Activities in the line of University and HEC Policies" held on 28th February, 2022.
- COMSTECH Webinar on "Publication Ethics and Research Integrity in Science" on 11th May, 2022.
- QEC Training on "How to write effective research proposal" held on 15th November, 2022.
- COMSTECH Webinar on "Enabling a perfect research ecosystem with science direct" on 28th November, 2022.
- Guest Lecture on "How to balance inside and outside life of university" held on 20th December, 2022.
- COMSTECH Webinar on "World Food Day 2022; Addressing Pakistan Food Security Challenge - Post Floods" on 11th October, 2022.

- COMSTECH Webinar on “Justifying one health; A developing Country Experience” on 12th October, 2022.
- COMSTECH Webinar on “Development of Novel anticancer compounds targeting mitochondrial protein homeostasis” on 30th November, 2022.
- COMSTECH Webinar on “World Food Day 2022; Addressing Pakistan Food Security Challenge - Post Floods” on 11th October, 2022.
- Training on “How to balance inside and outside life of University” held on 20th December, 2022.
- COMSTECH Training on “Technical training course on vacuum Applications in Applied Surface Science” held on 24th-26th October, 2023.
- COMSTECH Webinar on “Intersection of Engineering & Biology Across the Scales; Opportunities for Personalized Diagnostic and Printing Cellular Machine” on 30th October, 2023.
- Turnitin Training on “Turnitin: Instructor Training Session” on 22th May, 2024.
- COMSTECH Webinar on “Armed Conflicts, War and Brain Health” on 24th May, 2024.
- DIL Training on “Academics and Industrial Linkages” held on 31st May, 2024.
- ORIC meeting arranged for ORIC representatives on “Interactive Session on Newly Developed RIC Data Sharing Mechanism” on 4th June, 2024.
- NED Training on “CAS Scifinder Pilot Program” held on 28th August, 2024.
- QEC Training on “Development of SAR as per HEC Guidelines” held on 6th September, 2024.
- NED Meeting on “Agenda of IP Regulations Interactive Session with Faculty” held on 30th September, 2024.
- NED Training on “How to effectively use using ScienceDirect- Read Quality Publish Quality” held on 6th November, 2024.
- NED Training on “Maximizing your Wiley Online Librarysearch with Boolean Operators” held on 6th November, 2024.
- QEC Training on “Generative Artificial Intelligence (AI) tools in office work” held on 17th December, 2024.
- DIL Training on “Online Internship Portal Guideline Session for Internship” held on 4th February, 2025.
- QEC Meeting on “Self-Review of Institutional Performance and enhancement-Self RIPE 2024-25” held on 27th May, 2025.
- COMSTECH Webinar on “Advances in sustainable Materials for Renewable Energy and Environmental Applications by Prof. Dr. Abdolreza (Arash) Simch” on 11th June, 2025.
- Wiley Publishers Webinar on “Role of AI in Open Access Publishing” on 13th August, 2025.
- Wiley Publishers Webinar on “Master the act of Open access Publishing with Wiley” on 9th September, 2025.
- ICCBS Alumni Webinar on “AI as an Enabling Technology: A Perspective from Healthcare for the Chemical and Biological Sciences” 18th September, 2025.

Research Skills

- Detailed knowledge of almost all-organic laboratory equipment, especially UV, IR, NMR (including H¹ and C¹³-NMR and 2D-NMR), EI-MS and HREI-MS.
- Isolation and derivatisation of natural products. Structure elucidation with modern NMR techniques including acquisition of 2D experiments.
- Use of current analytical and predictive tools including HPLC, GC and GC-MS chromatography.

Courses Attended from International Scientists

- Course 6 credit hours taken by **Prof: Dr. Daniel D. Traficante** (Director of NMR Concepts), University of Rhode Island, in November **2007**, in H. E. J Research Institute of Chemistry.
- “**Lecture Series on Modern Mass Spectrometry**”, delivered by Prof. Dr. David Smith, Department of Chemistry, University of Nebraska, USA, during February 07-29, **2008**, held at H. E. J Research Institute of Chemistry.
- Course 2 credit hours on “**Total Synthesis of Natural Products**”, delivered by Prof. Dr. Dieter Scholz, during 14-26 November, **2011**, organized at the L.E.J. National Science Information Center, University of Karachi.
- Certificate Course on “**Applied Biomedical AI**” during 23rd July-31st August & 11th -20th August, **2025**,

Publications

- A new 28- noroleanane triterpenoid from the aerial parts of *Lantana camara* Linn., Sabira Begum, Syeda Qamar Zehra, **Anjum Ayub**, Bina Shaheen Siddiqui, *Nat. Prod. Res.*, **24**, 1227-1234, **2010**.
- Chemical Constituents from the aerial parts of *Lantana camara* Linn., Sabira Begum, **Anjum Ayub**, Syeda Qamar Zehra, Bina Shaheen Siddiqui., *Chem. Nat. Compd.* **49**, 566-567, **2013**.
- Leishmanicidal Triterpenes from *Lantana camara*, S. Begum, **Anjum Ayub**, S. Q. Zehra, B. S. Siddiqui, M. I. Choudhary, Samreen, *Chem. Biodivers.*, **11**, 709-718, **2014**.
- Mosquito Repellent Activity and Toxicity of Flower Buds (Cloves) of *Syzygium aromaticum* Linn., S. Begum, Sara, **Anjum Ayub**, R. M. Tariq, B. S. Siddiqui, *Am. J. Pharm. Health Res.*, **2** (11), 55-62, **2014**.
- Luteolin and kaempferol from *Cassia alata*, antimicrobial and antioxidant activity of its methanolic extracts, A. Wahab, Tahira, S. Begum, **Anjum Ayub**, I. Mahmood, T. Mahmood, A. Ahmed, N. Fayyaz, *FUUAST J. Biol.*, **4**, 1-5, **2014**.
- Nematicidal triterpenoids from *Lantana camara*, S. Begum, **Anjum Ayub**, B. S. Siddiqui, S. Fayyaz, F. Kazi, *Chem. Biodivers.*, **12**, 1435-1442, **2015**.
- Suppression of thermal and chemical nociception in rats by methanol extracts and its sub-fractions from *Lantana camara*, S. U. Simjee, H. Parveen, S. Q. Zehra, **Anjum Ayub**, B. S. Siddiqui and S. Begum, *J. Chem. Soc. Pak.*, **38**, 685-692, **2016**.
- Antibacterial activity of methanolic extracts from some selected medicinal plants, S. T. Ali, **Anjum Ayub**, S. N. Ali, S. Begum, B. S. Siddiqui, N. Mahmood and K. A. Khan, *FUUAST J. Biol.*, **7**, 123-125, **2017**.
- Antimicrobial activity of *Lantana camara* Linn., **Anjum Ayub**, S. Touseef, S. Q. Zehra, S. Begum, B. S. Siddiqui and A. Ahmed, *FUUAST J. Biol.*, **7**, 127-130, **2017**.
- Antioxidant activity of the medicinal plant *Lantana camara* L., **Anjum Ayub**, S. Touseef, S. T. Ali, S. Begum, B. S. Siddiqui and A. Ahmed, *FUUAST J. Biol.*, **7**, 227-230, **2017**.
- Optimization of invertase and alpha-amylase production, K. Ahmed, **Anjum Ayub** and S. Naz, *Int. J. Biol. Biotechnol.* **15**, 351-355, **2018**.
- Synthesis and biological evaluation of harmol derivatives as potential nematicidal agents, **Anjum Ayub**, S. Begum, A. Khan, S. N. Ali, S. T. Ali and B. S. Siddiqui, *J. Chem. Soc. Pak.*, **40**, 933-940, **2018**.
- Triterpenoids from aerial parts of *Lantana camara*, **Anjum Ayub**, S. Begum, S. N. Ali, S. T. Ali and B. S. Siddiqui, *J. Asian Nat. Prod. Res.*, **21**, 141-149, **2019**.
- Camaridin, A new triterpenoid from roots of *Lantana camara*, S. N. Ali, O. H. Mustafvi, S. Begum, **Anjum Ayub**, and B. S. Siddiqui, *Chem. Nat. Comp.*, **55**, 296-299, **2019**.
- Isolation and spectral studies of a new lactone triterpenoid from *Lantana camara*, **Anjum Ayub**, S. Begum, Sara, S. T. Ali and B. S. Siddiqui, *Chem. Nat. Comp.*, **55**, 478-481, **2019**.
- Chemical composition, antibacterial and antifungal activities of *Azadirachta indica* and *Mentha spicata* L. leave essential oils K. Ahmed, **Anjum Ayub**, M. Umar bin Aamir, *Int. J. Biosci.*, **15**, 478-482, **2019**.
- Liquid chromatographic method for simultaneous determination of alprazolam with NSAIDs in bulk drug, pharmaceutical formulation and human serum, S. N. Ali, S. Akram, A. Qayoom, N. Naz, **Anjum Ayub**, *Pak. J. Pharm. Sci.*, **33**, 121-127, **2020**.
- Volatile constituents and *in vitro* activity of *Syzygium aromaticum* flower buds (clove) against human cancer cell lines Sara, S. Begum, S. N. Ali, A. D. Farooq, F. Siddiqui, B. S. Siddiqui, **Anjum Ayub**, M. Fatima, *Pak. J. Pharm. Sci.*, **33**, 2659-2665, **2020**.
- Nematicidal Activity of Oleanolic acid Derivatives on *Meloidogyne incognita*. Z. Kiran, N. Hassan, **Anjum Ayub**, Sara, Z. Bano, S. Begum, B. S. Siddiqui, S. Fayyaz, E. Iqbal, *Nat. Prod. Res.*, **35**, 5138–5144, **2021**.
- Nematicidal activity of the derivatives of oleanolic acid. **Anjum Ayub**, Zainab Qadir, Nuzhat Arshad, Nabila Hassan, Salma Javed, *J. Biodivers. Environ. Sci.*, **18**, 102-108, **2021**.
- Spectrophotometric determination of Phosphate in water and sugarcane sample, Nuzhat Arshad, **Anjum Ayub**, Mahnoor Nafees, Ahmed Abdullah, Zain Sultan, *J. Biodivers. Environ. Sci.*, **19**, 111-115, **2021**.
- Preparation and Antimicrobial Evaluation of 3, 5-Disubstituted Tetrahydro-2H-1, 3, 5-Thiadiazine-Thione Derivatives. Nuzhat Arshad, **Anjum Ayub**, Rafia Usman Khan, Jamshed Hashim, Shumaila

- Jawaid, Mahreen Latif, *Int. J. Biosci.*, **19**, 248-253, **2021**.
- 1-Phenyl ethyl substituted tetrahydro-2H-1,3,5-thiadiazine thione derivatives as promising antimicrobial agents. Nuzhat Arshad, Jamshed Hashim, **Anjum Ayub**, Rafia Usman Khan, Shumaila Jawaid, Irfan Ullah and Aamir Akhtar, *Pak J. Pharm Sci.*, **35**, 665-669, **2022**.
 - GC/GC-MS Analysis and Biological Activities of *Lantana camara* Linn., Riffat Abdul Ghafoor, **Anjum Ayub**, Syed Nawazish Ali, Aneela Wahab, Sabira Begum, Bina Shaheen Siddiqui, Saima Tauseef, Muhammad Tariq Rajput, *Journal of Sustainable Environment*, **02**, 39-51, **2024**.
 - A novel approach to urease inhibition and antioxidant therapeutics by using AgNPs-doped TiO₂NPs stabilized by short chain pyrazole carbothioamide derivatives., Rafia Usman Khan , Faiza Saleem, Mehreen Lateef, **Anjum Ayub**, Saman Fatima, Huzifa Ahmed, Hassan Munir and Khalid Mohammed Khan, *Pak. J. Pharm. Sci.*, **38**(4), 1484-1497, **2025**.

Conferences & Workshops

- Participated in **"11th International Symposium on Natural Product Chemistry"** 29th October -1st November **2008**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- Participated in **One day Workshop on "Natural Product-Based Drugs and Other Botanicals-Present Status and Future Prospects"** 16th May **2009**. Organized by British Council in International Center for Chemical and Biological Sciences.
- Participated in **"12th International Symposium on Natural Product Chemistry"** 22nd -25th November **2010**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- Participated in **On-line Workshop on "Modern Techniques in Combinatorial Chemistry"** held on 14th -16th June **2011**. Organized by the L.E. J. National Science Information Center, International Center for Chemical and Biological Sciences, University of Karachi. Pakistan.
- Participated in **On-line Workshop on "How to write Scientific Manuscripts for High Impact Factor Journals?"** held on 23rd July **2011**. Organized by the L.E.J. National Science Information Center under the Virtual Education Project Pakistan (VEPP) and Higher Education Commission, Pakistan.
- Participated in **On-line Workshop on "How to write a Winning Scientific Research Proposal?"** held on 24th September **2011**. Organized by the L.E.J. National Science Information Center under the Virtual Education Project Pakistan (VEPP) and Higher Education Commission, Pakistan.
- Participated in **On-line Workshop on "Developing Skills for the Interpretation of 1D and 2D NMR Spectral Data for the Structure Determination of Organic Molecules"** held on 25-26 April, **2012**. Organized by the L.E.J. National Science Information Center under the Virtual Education Project Pakistan (VEPP) and Higher Education Commission, Pakistan.
- Participated in **"13th International Symposium on Natural Product Chemistry"** 22nd -25th November **2011**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- Participated in one day workshop on **"Identify Your Research "BUG": API Kit Systems"** 16th September **2013**, organized by Department of Microbiology, Federal Urdu University in collaboration HEC KU-ORIC, Karachi, Pakistan.
- Participated in **"14th Asian Symposium on Medicinal Plants, Spices and Other Natural Products (ASOMPS)"** 9th-12th December **2013**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- Participated in **Workshop on "Developing Industry Driven Technologies"** held on 5th -Jan **2015**. Organized by the PASTIC-PSF and NED University of Engineering and Technology. Karachi. Pakistan.
- Participated in **"1st International Conference on Advanced Materials & Process Engineering-2015"** held on 14th-15th December **2015**, organized by Department of Chemical Engineering and Department of Polymer & Petrochemical Engineering, NED University of Engineering and Technology. Karachi. Pakistan.
- Participated in **"Lecture on Drawing Lewis Structure"** held on 18th February **2016**, organized by QPSP in NED University of Engineering & Technology, Karachi. Pakistan.
- Participated in **"14th Eurasia Conference on Chemical Sciences"** 15th-18th December **2016**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.

- Participated in “**One Day Training Workshop on “Approaching Towards Comprehensive Elimination of Persistent Organic Pollutants (Pesticides) in Pakistan”**” Organized by UNDP & gef in **2017**.
- Participated in “**One Day Workshop on Laboratory Safety and Security**” on 30th October **2017**, organized by International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- Participated in 16th **International and 28th National Chemistry** Conference. 20th-22nd November **2017** Islamabad, Pakistan. Organized by Federal Urdu University in collaboration HEC, Karachi, Pakistan.
- Participated in “**14th International Symposium on Natural Product Chemistry (ISNPC-14)**”, in Karachi, Pakistan, during **November 6 - 8, 2018** organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- Member of organizing committee in the “**International Industrial Chemistry Conference**” 26th – 28th February **2021**.
- Participated in “**15th International Symposium on Natural Product Chemistry (ISNPC-15)**”, in Karachi, Pakistan, during **February 21 - 24, 2022** organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- Participated in “**International Symposium on Excellence in Science (ISES)**”, in Karachi, Pakistan, during **22nd September, 2022** jointly organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi and the Organization of Islamic Cooperation Standing Committee on Scientific and Technology Cooperation (COMSTech) Pakistan.
- Member of organizing committee in the “**International Industrial Chemistry Conference**” 3rd -4th March, **2023**.
- Attended COMSTech, NTD and AUU CDT Africa Training Workshop on “**Leishmaniasis**” on 28th-30th May, **2024**.
- Attended Author Workshop on “**Essential of Writing a Research Article for High Impact Journals**” on 22nd October, **2024**.
- Participated in “**16th International Symposium on Natural Product Chemistry**” 17th -20th February **2025**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.

Presentation in Conferences/Symposia

- **Presentation** on “**Chemical Constituents of *Lantana camara* Linn.**” in **8th International and 20th National Chemistry** Conference. 15th-17th February **2010** Islamabad, Pakistan. Organized by Chemical Society of Pakistan in Quaid-e-Azam University Islamabad, Pakistan.
- **Presentation** on “**Leishmanicidal activity of aerial parts of *Lantana Camara* Linn.**” in **9th International and 21st National Chemistry** Conference. 14th-16th March **2011** Karachi, Pakistan. Jointly organized by The Department of Chemistry & International Center for Chemical and Biological Sciences University of Karachi, Pakistan.
- **Presentation** on “**Bioactive Triterpenoids from *Lantana Camara* Linn.**” in “**13th International Symposium on Natural Product Chemistry**” 22nd -25th September **2012**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.
- **Presentation** on “**Bioassay Guided Isolation of Chemical Constituents from the Fresh Leaves of *Psidium guajava***” in “**Regional Conference of Young Scientists on Recent Trends in Physical & Biological Sciences**” 7th- 8th March, **2014**, organized by The world Academy of Science (TWAS)-for the advancement of Science in Developing Countries Regional Office for Central & South Asia at Jawahirlal Nehru Centre For Advanced Scientific Research, Bangalore, India.
- **Presentation** on “**Bioactive Triterpenoids from the Aerial Parts of *Lantana camara* Linn.**” in “**11th International Symposium on Analytical and Environmental Chemistry**” 7th -8th March **2016**, organized by National Centre of Excellence in Analytical Chemistry, University of Sindh, Jamshoro, Pakistan.
- **Presentation** on “**Dengue Mosquito Repellent and Larvicidal Spice, Clove**” in “**8th Chemistry Conference 2016 on Chemistry in Engineering and Life Sciences**” 28th-30th November **2016** Islamabad, Pakistan. Organized by Chemistry Division, Pakistan Institute of Nuclear Science and Technology (PINSTECH) In Collaboration with Directorate General of Nuclear Fuel Cycle (DGNFC),

New Chemical Complex (NCC) and Pakistan Institute of Engineering and Applied Sciences (PIEAS).

- **Presentation** on “**Pharmaceutically active derivatives of oleanolic acid**” in **16th International and 28th National Chemistry Conference**. 20th-22nd November **2017** Karachi, Pakistan. Organized by Department of Chemistry, Federal Urdu University of Arts, Science and Technology, Gulshan-e-Iqbal Campus, Karachi, Pakistan.
- **Presentation** on “**Synthesis and Nematicidal Activity of Derivatives of Oleanolic acid**” in **4th International Conference on Bioscience and Biotechnology (Bio-Tech 2019)**. 21st-22nd February **2019** Kuala Lumpur, Malaysia.
- **Presentation** on “**Chemical composition, antibacterial and antifungal activities of *Azadirachta indica* and *Mentha spicata* leaves essential oils**” in **4th International Conference on Bioscience and Biotechnology (Bio-Tech 2020)**. 27th-28th February **2020** Kuala Lumpur, Malaysia.
- **Oral Presentation** in **IICC-2021** on “**Mosquito repellent and larvicidal activity of *Lantana camara* Linn.**” in **1st International Industrial Chemistry Conference 2021 (IICC 2021)**. 26-28th February, **2021**, Organized by Department of Chemistry, NED University of Engineering and Technology. Karachi.
- **Oral Presentation** in **IICC-2021** on “**Synthesis and Characterization of Oximes Exhibiting Antibacterial Activity**” in **1st International Industrial Chemistry Conference 2021 (IICC 2021)**. 26-28th February, **2021**, Organized by Department of Chemistry, NED University of Engineering and Technology. Karachi.
- **Presentation** in **IICC-2021** on “**Synthesis of the antimicrobial derivatives of Oleanolic acid**” in **1st International Industrial Chemistry Conference 2021 (IICC 2021)**. 26-28th February, **2021**, Organized by Department of Chemistry, NED University of Engineering and Technology. Karachi.
- **Presentation** in **IICC-2023** on “**Host-Guest Inclusion Complex Based on NMR Spectroscopic Characterization and Molecular Docking of Poly (Ethylene Glycol)-Oleanolic acid**” in **2nd International Industrial Chemistry Conference 2023 (IICC 2023)**. 3-4th March, **2023**, Organized by Department of Chemistry, NED University of Engineering and Technology. Karachi.
- **Presentation** in **IICC-2023** on “**Synthesis of Schiff Bases and their Applications in Search of Therapeutic Agents**” in **2nd International Industrial Chemistry Conference 2023 (IICC 2023)**. 3-4th March, **2023**, Organized by Department of Chemistry, NED University of Engineering and Technology. Karachi.
- **Presentation** in **IICC-2023** on “**Synthesis of Ester Derivatives of Antimicrobial Fusidane Triterpenoid**” in **2nd International Industrial Chemistry Conference 2023 (IICC 2023)**. 3-4th March, **2023**, Organized by Department of Chemistry, NED University of Engineering and Technology. Karachi.
- **Presentation** in **16th International Symposium on Natural Product Chemistry** on “**Synthesis of the Bioactive Fusidic Acid Derivatives**” 17th -20th February **2025**, organized by the H.E.J Research Institute of Chemistry, International Center for Chemical and Biological Sciences, University of Karachi, Pakistan.

Projects

- SRGP/HEC: No. 21-1021/SRGP/R&D/HEC/2016 (0.3935 Million) as PI. (Completed)
- Submitted IGNITE Project on Favipiravir and its derivatives efficacy for the prevention COVID 19. August 2022 (Not approved)
- Submitted SHEC Project on Modifications of a Naturally abundant Nematicidal Triterpenes based compounds for Agricultural Support. January 2023 (Not approved)

Patents Filed

- Patent filed on the topic “**Novel Crown Ether Based on Fusidic Acid C-21 Butyl Ester: Preparation of Potent Antioxidant and antiulcer Agents**” on 21st April 2025.
- Patent filed on the topic “**Novel Fusidic Acid-linked Crown Ethers as Potent Antioxidant and Urease Inhibitors**” on 22nd July 2025.