

CV, and List of Publications

PROF. DR. SAMMER YOUSUF

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EDUCATION

Ph.D. (Organic Chemistry) 2007
H. E. J. Research Institute of Chemistry
University of Karachi, Karachi-75270, Pakistan

M.Sc. (Organic Chemistry) 2000
Jinnah University for Women, Karachi, Pakistan

B.Sc. (Chemistry, Biochemistry, Microbiology) 1998
Jinnah University for Women, Karachi, Pakistan

AWARDS & HONORS (INTERNATIONAL)

- Fellow of the World Academy of Sciences (TWAS) 2026
- Member of the Winning Team of “MRC Impact Prize-2023” (Medical Research Council Prize, UK) under the category of “Outstanding Team Impact” 2024
- Member TYAN Executive Committee (2024-2026) 2024
- COMSTECH Distinguished Scholar 2024
- Elected as Pakistan Hub Participant of “A Global Network of the Tropical Neglected Diseases (NTD)”, funded by “Grand Challenge Research Fund (GCRF)” and managed by the Durham University, UK (<https://ntd-network.org/>) 2019
- TWAS (The World Academy of Sciences for the advancement of science in developing countries) Young Affiliate 2013
- Appointed as Visiting Scientist at Atta-ur-Rahman Institute for Natural Product Discovery (RiND), University Technology Mara (UiTM), Malaysia 2013
- TWAS Regional Prize for Young Scientist from the Third World Academy of Sciences (TWAS) 2011

AWARDS & HONORS (NATIONAL)

- Member of Pakistan Academy of Sciences 2017
- Member of the Pakistan Crystallographic Association (<https://www.iucr.org/world/pk>) 2010
- Merit Scholarship for Ph. D. Students from HEC (Higher Education Commission, Pakistan), 2003
- 1st class 1st position in M. Sc. (Chemistry) 2001
- Al-Haj Molvi-Riazudin Gold Medal for Securing 1st Position in M.Sc. (Chemistry) 2001

EXPERIENCE**Professor (Tenured)**

H.E.J. Research Institute of Chemistry
International Center for Chemical and Biological Sciences
University of Karachi

August 2021
Present

Associate Professor

H.E.J. Research Institute of Chemistry
International Center for Chemical and Biological Sciences
University of Karachi

January 2017-
August 2021

Assistant Professor

H.E.J. Research Institute of Chemistry
International Center for Chemical and Biological Sciences
University of Karachi

July 2010-
Dec. 2016

Research Officer

H.E.J. Research Institute of Chemistry
International Center for Chemical and Biological Sciences
University of Karachi

July 2008 -
July 2010

Post Doctoral Research Associate

Single X-Ray Crystallography Laboratory, School of Chemical
Sciences and Food Technology, Faculty of Science and
Technology, Universiti Kebangsaan, Malaysia

Nov. 2007 -
April 2008

Senior Research Fellow

H.E.J. Research Institute of Chemistry
University of Karachi, Karachi-75270, Pakistan
“Isolation, Structure Elucidation and Biotransformation Studies
on Secondary Metabolites from *Withania somnifera* and related
Plants”

April. 2001-
April. 2007

**Administrative
Experience**

- Incharge Single-Crystal X-ray Diffraction Facility of the ICCBS 2010-2023
- Faculty Incharge HR Office ICCBS (Academic / TTS) 2016 - 2023
- Faculty Incharge HR Office ICCBS (Non-Academic) 2016-2021
- ICCBS Coordinator for “ICCBS-China Cooperation in Science and Technology” 2016 - 2023
- Faculty Incharge Biotechnology Section ICCBS 2017 - 2023
- Incharge Analytical Facility, ICCBS 2021 - 2023
- Incharge Muree campus, ICCBS 2021- 2023
- Incharge IT Section, ICCBS 2025-to date

**OTHER
SERVICES**

- Coordinator, PABIC (Pakistan Biotechnology Information Center, <https://www.pabic.com.pk/contact/>) 2007 - date
- Actively involved as team member for organizing scientific events, such as workshops and conferences for both ICCBS and PABIC (Pakistan Biotechnology Information Center).

A. BOOKS EDITED

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|----|--|-----------|
| 1. | “Science of Spices and Culinary Herbs: Latest Laboratory, Pre-clinical and Clinical Studies Vol. 1”, Atta-ur-Rahman, Choudhary M. I. and Yousuf S. , Bentham Science Publishers, Singapore (2019). ISBN (Print): 978-1-68108-752-8, ISBN (online): 978-1-68108-751-1 | Singapore |
| 2. | “Science of Spices and Culinary Herbs: Latest Laboratory, Pre-clinical and Clinical Studies Vol. 1I”, Atta-ur-Rahman, Choudhary M. I. and Yousuf S. , Bentham Science Publishers, Singapore (2020). ISBN (Print): 978-981-14-4147-9, ISBN (Online): 978-981-14-4149-3 | Singapore |
| 3. | “Science of Spices and Culinary Herbs: Latest Laboratory, Pre-clinical and Clinical Studies Vol. 1II”, Atta-ur-Rahman, Choudhary M. I. and Yousuf S. , Bentham Science Publishers, Singapore (2020). ISBN (Print) : 978-981-14-6834-6, ISBN (Online): 978-981-14-6836-0 | Singapore |
| 4. | “Science of Spices and Culinary Herbs: Latest Laboratory, Pre-clinical and Clinical Studies Vol. 1V”, Atta-ur-Rahman, Choudhary M. I. and Yousuf S. , Bentham Science Publishers, Singapore (2021). ISBN (Print): 978-981-4998-13-0, ISBN: (Online)978-981-4998-12-3 | Singapore |
| 5. | “Science of Spices and Culinary Herbs: Latest Laboratory, Pre-clinical and Clinical Studies Vol. V”, Atta-ur-Rahman, Choudhary M. I. and Yousuf S. , Bentham Science Publishers, Singapore (2021). ISBN (Print): 978-981-4998-16-1, ISBN (Online): 978-981-4998-15-4 | Singapore |
| 6. | “Science of Spices and Culinary Herbs: Latest Laboratory, Pre-clinical and Clinical Studies Vol. VI”, Atta-ur-Rahman, Choudhary M. I. and Yousuf S. , Bentham Science Publishers, Singapore (2024). ISBN (Print): 978-981-5274-39-4, ISBN (Online): 978-981-5274-37-0 | Singapore |

B. CHAPTERS IN BOOKS**Published in**

- | | | |
|----|---|---------|
| 1. | “Seperation of Phenyl Propanoids and Evaluation of Their Antioxidant Activities”, Yousuf S. , Choudhary M. I. and Atta-ur-Rahman, Advance Protocols in oxidative Stress II (appear in a series, Methods in Molecular Biology, 594), <i>The Humana Press</i> , 357 (2010). | USA |
| 2. | Agriculture Biotechnology in OIC Countries-Role of COMSTECH and PABIC, Choudhary M. I., and Yousuf S. , Communication Challenges and Convergence in Crop Biotechnology, Published by ISAAA and SEARCA, (2011). | USA |
| 3. | Publications: Contributing to the Robust Knowledge on Crop Biotechnology and Science Communication, Arujnan M., Odhong J., Zhang T., Abdalla N., Choudhary B., Yousuf S. and Attathom S. published in ISAAA Breifs 45, From Monologue to Stakeholders Engagement: The Evaluation of Biotech. Communication. Published by ISAAA (2013). | USA |
| 4. | “Withanolides- Chemistry and Antitumor Activity”, Choudhary M. I. Yousuf S. , and Atta-ur-Rahman, Hand Book of Natural Products, published by Springer, 3465 (2013). | Germany |
| 5. | “Lichens: Chemistry and Biological Acitivites”, Yousuf S. , Choudhary M. I. and Atta-ur-Rahman, Studies in Natural Product Chemistry, published by Elsevier 3465 (2014). | USA |

C. RESEARCH PUBLICATIONS**Published in**

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|----|---|-------------|
| 1. | Choudhary M. I., Yousuf S. , Nawaz S. A., Ahmed S., Atta-ur-Rahman, “Cholinesterase Inhibiting Withanolides from <i>Withania somnifera</i> ”, <i>Chem. Pharm. Bull.</i> , 58(11) 1358 (2004). | Japan |
| 2. | Choudhary M. I., Yousuf S. , Ahmed S., Samreen, Yasmeen K., Atta-ur-Rahman, “Antileishmanial physalins from <i>Physalis minima</i> ”, <i>Chemistry and Biodiversity</i> , 2 1164 (2005). | Switzerland |

3. Choudhary M. I., Nawaz S. A., Zaheer-ul-Haq, Lodhi A., Jalil S., Riaz N., **Yousuf S.**, Malik A., Atta-ur-Rahman, "Withanolides, a new calss of cholinesterase inhibitors with calcium antagonistic properties", *BBRC*, 334, 276-287 (2005). UK
4. Choudhary M. I., **Yousuf S.**, Anjum S., Atta-ur-Rahman, Fun Hoong-Kun, Ali S., "5 α -Chloro-16,24-cyclo-13,14-secoergost-2-ene-18,26-dioic acid-14:17,14:27-diepoxy-6 α ,13,20,22-tetrahydroxy-1,15-dioxo- γ -lactone δ -lactone meth- anolsolvate monohydrate", *Acta cryst. E*, **61** 3523 (2005). USA
5. Choudhary M. I., **Yousuf S.**, Samreen, Shah S. A. S., Ahmed S., Atta-ur-Rahman "Biotransformation of physalin H and antileishmanial activity of transformed products", *Chem. Pharm. Bull.* **54(7)** 927-930, (2006). Japan
6. Yamin B. M., Deris H., Malik Z. M., **Yousuf S***, "N-(Biophenyl-4-yl-carbonyl)-N-(2-pyridyl-methyl) thiourea", *Acta Cryst. E*, **64** o360 (2007). USA
7. Choudhary M. I., **Yousuf S.**, Samreen, Ahmed S., Atta-ur-rahman, "New leishmanicidal physalins from *Physalis minima*", *Nat. Prod. Res.*, **21(10)** 877 (2007). UK
8. Yamin B. M., **Yousuf S***, Yousof M. S. M., Joushu R. H., "N-(2,4-dimethylphenylcarbamoithioryl)-2-methylbenzamide", *Acta Cryst. E*, **64** o832 (2008). USA
9. Yamin B. M., **Yousuf S.**, Yousof M. S. M., Joushu R. H., "2-Methyl-N-(3-methylpyridine-2-yl)carbamoithiorylbenzamide", *Acta Cryst. E*, **64** o833 (2008). USA
10. Yamin B. M., **Yousuf S***, Yousof M. S. M., Zakaria T. N. T. D., "(2-Methylbenzoyl)-3m-tolythiourea", *Acta Cryst. E*, **64** o1227 (2008). USA
11. Koko W. S., Mesaik M. A., **Yousuf S.**, Choudhary M. I., 'In Vitro immunomodulatory properties of selected sudanese medicinal plants", *J. Ethnopharmacology.*, **118** 26, (2008). The Netherlands
12. Ashiq U., Jamal R. A., Tahir M. N., **Yousuf S***, Khan I. U., "4-Methoxybenzohydrazide", *Acta Cryst. E*, **65** o1551 (2009). USA
13. Owoeeye O., **Yousuf S.**, Akhter M. N., Qamar K., Dar A., Farombi E O., Onwuka S., Choudhary M. I., "Another anticancer elemanolide from *Vernonia amygdalina* Del", *Int. J. Biol. Chem. Sci.*, **4(1)** 226 (2010). Australia
14. Choudhary M. I., Hussain S., **Yousuf S.**, Muddasar, Dar A., Atta-ur-Rahman, "Chlorinated and diepoxy withanolides from *Withania somnifera* and their cytotoxic effects against human cancer cell lines", *Phytochemistry*, **17(16)** 2205 (2010). UK
15. **Yousuf S***, Zafar S., Choudhary M. I., Ng S. W., "17 β -Hydroxy-17 α -(hydroxymethyl)estr-4-en-3-one", *Acta cryst. E* **66** o2894 (2010). USA
16. **Yousuf S***, Latif A., Arfan M., Choudhary M. I., "1,2,4-Trimethoxy dibenzofuran-3-ol", *Acta Cryst. E*, **66** o3066 (2010). USA
17. Ali Q., **Yousuf S***, M. R. Shah,Ng S. W., "tert-Butyl 2-[4-(2-{4-[(tert-butoxycarbonyl)methoxy]-3-methylphenyl}-2-propyl)-2- methylphenoxy]- acetate", *Acta Cryst. E*, **66** o1750 (2010). USA
18. Ali Q., **Yousuf S***, M. R. Shah,Ng S. W., "Di-tert-butyl 2,2'-[(biphenyl-4,4'-diyl)dioxy]diacetate", *Acta Cryst. E*, **66** o1739 (2010). USA
19. K. Shah, S. **Yousuf***, Shah M. R., S. W. Ng, "Di-tert-butyl 2,2'-[9H-fluorene-9,9-diylbis(p-phenyleneoxy)]diacetate", *Acta Cryst. E*, **66** o1705 (2010). USA
20. **Yousuf S***, Ahmad R., Ali Z., Choudhary M. I., Ng S. W., "(20S)-20-Acetoxy-4-pregnene-3,16-dione from *Commiphora weightii*", *Acta Cryst. E*, **66** o3301 (2010). USA
21. Yousaf A., **Yousuf S***, Yu P., Nighat A., Ali M. K., "1-Oxo-2,3-dihydro-1-H-pyrrolizine-2,2-diyl)bis(methylene)dibenzoate", *Acta Cryst. E*, **67** 0172 (2011). USA
22. Musharraf S. G., Ali A., Ali R. A., **Yousuf S***, Atta-ur-Rahman, Choudhary M. I., "Analysis and development of structure-fragmentation relationships in withanolides using an electrospray ionization quadropole time-of-flight tandem mass spectrometry hybrid instrument", *Rapid Commun. Mass Spectrom.*, **25** 104 (2011). UK
23. **Yousuf S.**, Kamdem R. S. T., Nagadjui B. T., Wafo P., Hoog-kun Fun, "3 α -Hydroxytriucalla-8,24-diene-21-oic acid", *Acta Cryst. E*, **67** o937-o938 (2011). USA
24. **Yousuf S.**, Kamdem R. S. T., Nagadjui B. T., Wafo P., Hoog-kun Fun, "A cocrystal of 3 α -Hydroxytricucalla-8,24-diene-21-oic acid and 3 β -flurotriucalla-7,24-diene-21-oic acid (0.897:0.103)", *Acta Cryst. E*, **67** o1015-o1016 (2011). USA
25. **Yousuf S.**, Johnson A. S., Kazmi S. A., Offiong O. E., Hoog-kun Fun, "3,5-Diamino-4H-1-1,2,4-triazol-1-ium(6-carboxylacto)cuprate (II) trihydarte", *Acta cryst. E*, **67** m509-m510 (2011). USA
26. **Yousuf S.**, Musharraf S. G., Khan I., Samiullah., Hoog-kun Fun, "Absolute configuration of (2S)-4-(4-hydroxyphenyl)butane-2-ol", *Acta Cryst. E*, **67** o952-o0960 (2011). USA
27. Sultana R., Hossain R., Adhikari A., Ali Z, **Yousuf S***, Choudhary M. I., Ali M. Y., Zaman M. S., "Drimane-type sesquiterpenes from *Polygonum hydropiper*", *Planta Medica*, **77(16)**, 1848-51 (2011). USA

28. **Yousuf S.**, Johnson A. S., Kazmi S. A., Hemamalini. M., Hoog-kun Fun, “3,5-Diamino-4H-1-1,2,4-triazol-1-ium hydroxonium bis (pyridine-2,6-dicarboxylato)Cobalt (II) pyridine-2,6-dicarboxylic acid monohydrate”, *Acta Cryst. E* **67**, m1105-m1106 (2011). USA
29. Jamal R. A., Ashiq U., **Yousuf S***, Qurat-ul-Ain, “3-Amino-N₂-(2-oxo-2,3-dihydro-1H-indol-3-ylidene)benzohydrazide”, *Acta Cryst. E*, **67** o2166- (2011). USA
30. Ashiq U., Jamal R. A., **Yousuf S***, “3,4,5-Trihydroxybenzohydrazide”, *Acta Cryst. E*, **67** o2462-o2463 (2011). USA
31. Zeb. A., **Yousuf S***, “(E)-1-(1-(3-nitrophenyl)ethylidene)-2-O-tolylhydrazine”, *Acta Cryst. E*, **67** o2801-o2802 (2011). USA
32. **Yousuf S.**, Musharraf S. G., Iqbal N., Adhikari A., Choudhary M. I., “3 α -Dimethylamino-20-(N-methylacetamido)pregn-5-ene”, *Acta Cryst. E*, **67** o2918-o22920 (2011). USA
33. **Yousuf S***, Bibi M., Choudhary M. I., “21-Hydroxypregna-1,4-diene-3,20-dione”, *Acta Cryst. E*, **67** o2122-o2124 (2011). USA
34. Ramsay S. T. K., Wafo P., **Yousuf S.**, Ali, Adhikari A., Rasheed S., Khan I. A., Ngadjui B. T., Hoong-Kun Fun, and Choudhary M. I., “Canarene: A triterpenoid with a unique carbon skeleton from *Canarium schweinfurthii*”, *Org. Lett.*, **13** (20), 5492–5495 (2011). USA
35. Choudhary M. I., Alam M. S., Atta-ur-Rahman, **Yousuf S.**, Wu Yang-Chang, Lin An-Shen, and Shaheen F. “Pregnenolone derivatives as anticancer agents”, *Steroids*, **76**, 1554–1559 (2011). The Netherlands
36. Aslam M., Anis I., **Yousuf S***, Afza N., Nelofar A., “5-Chloro-2-(4-nitrobenzylideneamino)phenyl(phenyl)methanone”, *Acta Cryst. E.*, **67** o3215-o03216 (2011). USA
37. Aslam M., Anis I., **Yousuf S***, Afza N., Nelofar A., “5-Chloro-2-(2-hydroxybenzylideneamino)phenyl(phenyl)methanone”, *Acta Cryst. E*, **67** o3442-o3443 (2011). USA
38. Jamal R. A., Ashiq U., **Yousuf S***, “(3Z)-3-Hydrazinylideneindoline-2-one”, *Acta Cryst. E*, **67** o2576 (2011). USA
39. Choudhary M. I., Zafar S., **Yousuf S.**, Kayani H. F., Saifullah, Khan S., “Biotransformation of oral contraceptive ethynodiol diacetate and methyloestrenolone by cell suspension cultures of medicinal plants”, *Chemistry Central Journal*, **6**(1), 109 (2012). USA
40. Khan T. M., Bibi M., **Yousuf S.**, Qureshi I. H., Atta-ur-Rahman, Al-Majid A. M., Mesaik M. A., Khalid S., Sattar S., Atia-tul-Wahab, Choudhary M. I., “Synthesis of some potent immunomodulatory and anti-inflammatory metabolites by fungal transformation of anabolic steroid oxymetholone”, *Chemistry Central Journal*, **6**, 153 (2012). USA
41. Atta-ur-Rahman., Haroone M. S., Tareen R. B., Mesaik M. A., Jan S., Abbaskhan A., Asif M., Gulzar T., Al-Majid A. M., **Yousuf S.**, Choudhary, M. I. M.I., “Secondary Metabolites of *Sophora mollis* subsp. griffithii (Stocks) Ali”, *Phytochem. Lett.*, **5**, 613–616 (2012). UK
42. Elhassan O. M. G., **Yousuf S.**, Adhikari A., Rehman M. H., Khalid A., Omer H., Hoong-Kun Fun., Jahan H., Choudhary M. I., Yagi S., “Phytochemistry and antiglycation activity of *Aloe sinkatana* Reynolds”, *Phytochem. Lett.*, **5**, 725–728 (2012). UK
43. Musharraf, S. G., Uddin J., Akhter M., Parvez M., Khan S., **Yousuf S.**, Khan S., Choudhary M. I., “Biotransformation of an antimalarial drug, artemether by plant and fungal cell cultures”, *J. Molecular Catalysis B. Enzymatic*, **82** 80-85 (2012). UK
44. Firdous S., Ansari, N. H., Ng S. W., **Yousuf S***, Malik A., “Crystal structure of a novel furo-furan lactone from *Heliotropium eichwaldi*”, *Z. Naturforsch.*, **67(B)** 269-271 (2012). UK
45. Hameed A., Anwar A., **Yousuf S.**, Khan K. M., Basha F. Z., “Tetra-*n*-butylammonium fluoride-mediated dimerization of (α -methylbenzylidene)malononitriles to form polyfunctional 5,6-dihydropyridines derivatives under solvent-free conditions”, *Eur. J. Chem.*, **3**(2) 179-185 (2012). UK
46. Aslam M., Anis I., Afza N., Ibrahim M., **Yousuf S***, “17-(Pyrimidin-2-yl)-8,16-dioxo-17-azatetracyclo[7.7.1.0^{2,7}.0^{10,15}]heptadeca-2,4,6,10,12,14-hexaene”, *Acta Cryst. E*, **68** o440 (2012). USA
47. Aslam M., Anis I., Afza N., Safdar M., **Yousuf S***, “[2-[(3-Bromobenzylidene)amino]-5-chlorophenyl(phenyl)methanone”, *Acta Cryst. E*, **68** o645 (2012). USA
48. **Yousuf S.**, Khan M., Fazal S., Butt N., Basha, F. Z., 5-(Prop-2-ynyl)-5H-dibenzo[*b,f*]azepine”, *Acta Cryst. E*, **68** o1101 (2012). USA
49. Warad I., Alruwaili A., Al-Resayes S. I., Choudhary M. I., **Yousuf S***, “5,5-Dimethyl-2,2-bis(pyridin-2-yl)-1,3-diazinane”, *Acta Cryst. E*, **68** o1786 (2012). USA
50. **Yousuf S***, Zeb. A., Basha, F. Z., “2-(2-Methyl-5-nitro-1H-imidazol-1-yl)-ethyl 4-fluorobenzoate”, *Acta Cryst. E*, **68** o952 (2012). USA
51. Aslam M., Anis I., Afza N., Yasmeen S., **Yousuf S***, “[5-Chloro-2-[(4-chlorobenzylidene)-amino]phenyl(phenyl)methanone”, *Acta Cryst. E*, **68** o644 (2012). USA

52. Zeb. A., **Yousuf S***, Basha, F. Z., "2-(2-Methyl-5-nitro-1*H*-imidazol-1-yl)-ethyl 2-bromobenzoate", *Acta Cryst. E*, **68** o1218 (2012). USA
53. Aslam M., Anis I., Afza N., Hussain, M. T., **Yousuf S***, "2-[(2-Methoxybenzylidene)amino]phenol", *Acta Cryst. E*, **68** o1447 (2012). USA
54. **Yousuf S***, Arshad M., Butt, M. H., Saeed S., Basha, F. Z., "2-Azido-1-(4-fluorophenyl)ethanone", *Acta Cryst. E*, **68** o1268 (2012). USA
55. **Yousuf S***, Bano S., Choudhary M. I., "17 α -Acetoxy-11 β -hydroxy-6 α -methylpregn-4-ene-3,20-dione", *Acta Cryst. E*, **68** o2006 (2012). USA
56. Arshad M., **Yousuf S***, Butt, M. H., Saeed S., Basha, F. Z., "2-Azido-1(4-methylphenyl)ethanone", *Acta Cryst. E*, **68** o1608 (2012). USA
57. **Yousuf S***, Arshad M., Butt, M. H., Saeed S., Basha, F. Z., "2-Azido-1(4-nitrophenyl)ethanone", *Acta Cryst. E*, **68** o1952 (2012). USA
58. **Yousuf S***, Khan M., Fazal S., Butt M., Basha, F. Z., "5-(Prop-2-ynyl)-5*H*-dibenzo[b,f]azepine", *Acta Cryst. E*, **68** o1101 (2012). USA
59. **Yousuf S***, Siddiqui H., Farooq R., Choudhary M. I., "N-(4-Methoxy-2-nitrophenyl)-N-(methylsulfonyl)methanesulfonamide", *Acta Cryst. E*, **68** o2090 (2012). USA
60. **Yousuf S***, Younas S. M., Ambreen N., Khaild K. M., Miana G. A., "3,5a,9-Trimethyl-8-(2-phenylhydrazin-1-ylidene)-4,5,5a,9btetrahydro-3a*H*,8*H*-naphtho[1,2-*b*]furan-2(3*H*)-one", *Acta Cryst. E*, **68** o2112 (2012). USA
61. **Yousuf S***, Younas S. M., Ambreen N., Khaild K. M., Miana G. A., "8-[(2-Hydroxyphenyl)imino]-3,5a,9-trimethyl-a,4,5,5a,8,9bhexahydronaphtho[1,2-*b*]furan-2(3*H*)-one", *Acta Cryst. E*, **68** o2158 (2012). USA
62. Warad I., Aldwayyan, A. S., Al-Jekhedab F. M. Choudhary M. I., **Yousuf S.**, "[1,2-Bis(diphenylphosphanyl)ethane-k2P,P']dichloridopalladium(II) dimethyl sulfoxide monosolvate", *Acta Cryst. E*, **68** m984-m985 (2012). USA
63. Ashiq U., Jamal R. A., Ismail H., Khaild K. M., **Yousuf S***, "3-(2-Ethyl-2-phenylhydrazin-1-ylidene)indoline-2-one", *Acta Cryst. E*, **68** o3473 (2012). USA
64. **Yousuf S.**, Iqbal S., Ambreen N., Khaild K. M., "1-(3-Methoxyphenyl)-2-(phenylsulfonyl)ethan-1-one", *Acta Cryst. E*, **68** o2562 (2012). USA
65. Syukri M., Baharudin., Taha M., Ismail N. H., Ali Shah S. A., **Yousuf S***, "N'-(E)-2-Hydroxy-5-methoxybenzyl-idene]-2-methoxybenzohydrazide", *Acta Cryst. E*, **68** o3255 (2012). USA
66. **Yousuf S***, Siddiqui H., Farooq R., Choudhary M. I., "2-[3-(1,3-Benzothiazol-2-yl)-2,2-dimethylpropyl-2-methyl-2,3)-dihydro-1,3-benzothiazole", *Acta Cryst. E*, **68** o2349 (2012). USA
67. Taha M., Syukri M., Baharudin., Ismail N. H., Ali Shah S. A., **Yousuf S***, "N'-[(E)-2,3-Dihydroxybenzylidene]-2-methoxybenzohydrazide", *Acta Cryst. E*, **68** o3256 (2012). USA
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D. INTERNATIONAL PATENTS GRANTED / FILED

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2. Bio-catalyzed Synthesis of Potent Anti-Inflammatory Agents from Medroxyprogesterone Acetate, M. Iqbal Choudhary, Saira Bano, Atia-tul-Wahab, Zaheer-ul-Haq, **Sammer Yousuf**, Almas Jabeen, and Atta-ur-Rahman; Application No. US20220145335 A1, Date of publication: 12/05/**2022** USA
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E. NATIONAL PATENTS GRANTED / FILED

1. Anti-Alzheimer's Butyrylcholinesterase Inhibitors and Anti-Leishmanial New Derivatives of 4-Aminoantipyrine; Hina Siddiqui, Fazila Rizvi, SheebaWajid, Atia-tul-Wahab, **SammerYousuf**, Atta-ur-Rahman, and M. Iqbal Choudhary; Pakistan Patent Application No. 244/2021, Filing Date: 26/03/**2021** Pakistan
2. 1-Dehydro-11 α -hydroxy-canrenone for Treating ER+ Breast Cancers; Atia-tul-Wahab, M. Iqbal Choudhary, Ambreen Aziz, Nimra Naveed Shaikh, **Sammer Yousuf**, and Atta-ur-Rahman; Pakistan Patent Application No. 608/2021, Filing Date: 20/08/**2021** Pakistan
3. New Urease Inhibiting Co-Crystals of Coumarine-3-carboxylic acid, **Sammer Yousuf**, M. Shahbaz, M. Amjad, M. Iqbal Choudhary; Pakistan Patent Application No. 268/2022, Filing Date: 21/04/**2022**. Pakistan

E. Lectures in International Conferences / Workshops

- Lecture as Invited Speaker in 6th International Conference on the Science and Engineering of Materials (ICoSEM 2025), held at the Kuala Lumpur, Malaysia, November 26-27, 2025, entitled, "Antileishmanial Leads - Examples of Our Work".

- Lecture as Guest Speaker in Faculty of Natural Sciences, University Sumatera Utara, Medan, Indonesia, July 29, 2025, entitled, “Medicinal Plants Based Anti-leishmanial Lead”.
- Lecture as Guest Speaker in Faculty of Pharmacy, University Sumatera Utara, Medan, Indonesia, July 29, 2025, entitled, “Crystal engineering- A promising approach to modify biological activities”.
- Lecture as resource person in international Workshop entitled, “Natural Product Isolation, Purification and X-ray Diffraction Techniques”, University Sumatera Utara, Medan, Indonesia, July 30-31, 2025, entitled, “An overview of natural products isolation and purification techniques” and “Basic principles and applications of X-ray diffraction techniques”.
- Lecture as resource person in international Workshop entitled, “ICESCO’s 1st International Health Conference: Transforming Global Health – Tackling Neglected Tropical Diseases (NTDs)”, at ICESCO Headquarter, Rabbat, Morocco, February 17-19, 2025, entitled, “Co-crystallization an effective tool to manipulate the anti-leishmanial potential”.
- Lecture as resource person in international Workshop entitled, “NTD and CDT Africa, AAU Training Workshop on Leishmaniasis held at Addis Abbaba, Ethiopia, May 28-30, 2024, entitled, “Co-crystallization an effective tool to manipulate the anti-leishmanial potential of Amphotericin B and other bioactive compounds”.
- Lecture as resource person in “International Workshop entitled, “Identification of New Lead Compounds and Diagnostic Tools for Leishmaniasis: Concepts, Approaches, and Capacity Building”, held at the University of Nairobi, Kenya, February 22-24, 2023, entitled, “Co-crystallization to accelerate our discovery and understanding of anti-leishmaniasis”.
- Lecture in one-day workshop Role of Co-crystallization to improve biological activities, School of Chemical Sciences and Food Technology, Faculty of Science and Technology, Universiti Kebangsaan, Malaysia 28th July, to 30th July 2022, entitled, “Role of Crystal Engineering Approach to Manipulate Biological and Physical Properties of Active Pharmaceutical Agents”.
- Lecture in Chemistry Department, Durham University, UK, 6th July, 2022, entitled, “An Overview of Recent Outbreak of Cutaneous Leishmaniasis in Pakistan and use of *Physalis minima* based topical formulation”.
- Lecture delivered in 1st international Conference on Applied Physics and Engineering 2021 (ICAPE2021), NED University of Engineering and Technology, Karachi, Pakistan, September 16-17, 2021, entitled, “Women in Physical Sciences”.
- Invited Lecture in Virtual Conference on Zoom CEFMC-2020, Crystal Engineering: From Molecule to Crystal, June 19-20, 2020, “Biological Activities Tuning of Active Pharmaceutical Ingredients via Co-crystallization”.
- Lecture in 16th Conference of the Asian Crystallographic Association (AsCA 2019), UTown, National University Singapore, December 17- 20, 2019, “Crystal Engineering of Natural Products– An Efficient Approach Towards Enhanced Biological Activities”.
- Lecture in Chemistry Department, Durham University, UK, 15th August, 2019, entitled, “Role of Crystal Engineering Approach To Manipulate Anti-leishmanial Activities of Natural Products”.
- Lecture in 5th Science Technology Exchange Program on Challenges of Communicable- and Non-Communicable Diseases (STEP-5), International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan, February 27 to March 02, 2019, entitled, “Crystal Engineering Approach To obtain Co-crystals with Improved Anti-leishmanial Activities”.
- Asian Symposium on medicinal Plants, Spices and Other Natural Products XVI, December 12-14, 2018, organized by the Ministry of Science, Technology and Research, and Department of Chemistry, University of Sri Jayewardenepura, Colombo, Sri Lanka, lecture entitled, “Crystal Engineering of Natural products– An Efficient Approach Towards Enhanced Biological Activities”.
- 2nd South East Asian Conference on Crystal Engineering (SEACCE-2), August 6-9, 2018, organized by Research Centre for Crystalline Materials (RCCM), School of Science and Technology, Sunway University,

- invited lecture entitled, “Crystallization as Crystal Engineering Approach To obtain Co-crystals with Improved Biological Activities”.
- SKLEOC-ICCBS Chemistry Forum meeting, January 2-6, 2018, organized by the State Key Laboratory of Elemento-organic Chemistry (SKLEOC), Nankai University, Tianjin, China lecture entitled, “Introduction of Ongoing Research Activities at the Crystallography Laboratory of the ICCBS” was delivered to explore possibilities of collaboration between two institutions.
 - 1st South East Asia Conference on Crystal Engineering (SEACCE), September 5-7, 2016, organized by Department of Chemistry, Sri Jayewardenepura University, Sri Lanka and International Union of Crystallography, invited lecture entitled, “Co-Crystallization- A Crystal Engineering Approach Towards Enhanced Biological Activities”.
 - 5th International Symposium-cum- Training Course on Molecular Medicine and Drug Research, January 12-15, 2015, organized by International Center for chemical and Biological sciences, University of Karachi. Session lecture entitled, “Co-crystallization and Biotransformational Studies of Bioactive Natural Products- Strategies towards Enhanced Bioactivities”.
 - International Pharmacy Conference on “Emerging Fields of Pharmacy”, September 19-21, 2014, organized by Ziauddin Medical University, Department of Pharmacy, Session lecture entitled, “A Nature’s Remedy Based Treatment of Cutaneous Leishmaniasis”.
 - IYCr South Asia Regional Summit on Vistas in Structural Chemistry, April 28-30, 2014, organized by International Center for chemical and Biological sciences, University of Karachi. Session lecture entitled “Discovery of Anti-Leishmanial Leads from Natural Leads”.
 - Two days Workshop related to Single-Crystal X-ray Diffraction Technique, December 19-20, 2013, organized by the Atta-ur-Rahman Institute for Natural Product Discovery (RiND), University Technology Mara (UiTM), lecture entitled, “Fundamental of Single-Crystal X-ray Diffraction Techniques”.
 - Two days Workshop related to Single-Crystal X-ray Diffraction Technique, December 19-20, 2013, organized by the Atta-ur-Rahman Institute for Natural Product Discovery (RiND), University Technology Mara (UiTM), lecture entitled, “How to Grow a Good Quality Single-Crystal?”.
 - 14th Asian Symposium on Medicinal Plants, Spices and Other Natural Products (ASOMPS-XIV), 9-12 December, 2013, Organized by the H.E.J. Research Institute of Chemistry, International Center for chemical and Biological sciences, University of Karachi. Lecture entitled, “Biotransformation of Anabolic Steroid Oxymetholone to obtain some Potent Immunomodulatory and Anti-inflammatory Metabolites”.
 - 4th International Symposium-cum-Training Course on Molecular Medicine and Drug Research, January 7-10, 2013, Organized by the Dr. Panjwani Center for Molecular Medicine and Drug Research, University of Karachi, entitled, “New Formulation Based on *Physalis minima* to treat Cutaneous Leishmaniasis”.
 - 13th International Symposium of Natural Product Chemistry, November 22-25, 2012, Organized by the International Center for Chemical and Biological Sciences, H. E. J. research institute of chemistry, University of Karachi, Pakistan, entitled, “Expanding Chemical Space- Recent Examples of Structure Determination of New and Novel Natural Products by Single-Crystal X-Ray Diffraction Studies”.
 - AFRO ASIA Workshop on Advanced Topics in Chemistry, 13 TO 17TH June 2011, Organized by the TWAS Regional Office for Central and South Asia (TWAS-ROCASSA) at: Jawaharlal Nehru Centre for Advanced Scientific Research, Jakkur, Bangalore – 560 064, India, entitled, “Isolation, Structure Elucidation, X-ray Diffraction and Anti-leishmanial Studies of Bioactive Compounds”.
 - International Chemistry Conference and its Role in Science, 4-7 January, 2011, Organized by the Jinnah University for Women, Karachi, entitled, “Bio-transformational Structure Modification and Single-Crystal X-Ray Diffraction Studies of Bioactive Physalins H”.
 - 12th International Symposium of Natural Product Chemistry, entitled, November 22-25, 2010, Organized by the International Center for Chemical and Biological Sciences, H. E. J. research institute of chemistry, University of Karachi, Pakistan, entitled, “The Single-Crystal X-Ray Diffraction and Biotransformation Studies of Oxymetholone”.

- 3rd Bi-National Symposium France-Pakistan, Besançon, 15-18 of July, 2010, France, entitled, "Biotransformation and Single-Crystal X-Ray Diffraction Studies on Antileishmanial Physalins H".
- 11th International Symposium on Natural Product Chemistry, International Center for Chemical and Biological Sciences, H. E. J. Research Institute of Chemistry, University of Karachi, Pakistan, in October 2008, entitled, "Antileishmanial Physalins from *Physalis minima*".

F. Research Projects (International)

S. No	Project Title	Funding Agency	Amount	Duration / Status	In Capacity
1					
2	Synthesis of diverse libraries of naturally occurring Physalin H and their evaluation against multidrug-resistant strains of <i>Leishmania tropica</i> , and <i>Leishmania major</i>	NTD Global Network- Equipment Fund	£ 27,061	2021-2026 / On-going	P.I.
3	Synthesis and <i>in vitro</i> Study of Therapeutic Potential, and Cytotoxicity of Novel Co-crystals of Natural Products Against Multidrug-resistant Strains of <i>Leishmania</i>	NTD Global Network- Equipment Fund	£ 10,000	2019-2026 / On-going	P.I.
4	Co-crystallization of Amphotericin B- An Approach to Improve Solubility, Safety and Anti-leishmanial Activity	NTD Global Network- Industrial / Business engagement Vouchers	£ 10,000	2021-2026 / On going	P.I.
4	Synthesis and <i>in vitro</i> Study of Therapeutic Potential, and Cytotoxicity of Novel Co-crystals of Anti-leishmanial Natural Products	NTD Global Network- Equipment Fund	£ 9,887	2019-2025 / Completed	P.I.
5	Identification of New and Novel Bioactive Leads of Natural and Synthetic Origin Against <i>Leishmania major</i> and <i>Leishmanin tropica</i> <i>in Vitro</i> and <i>in Vivo</i>	NTD Global Network- Research Grant	£ 30,000	2019-2026 / On going	P.I.
6	Pre-clinical Studies for the Development of <i>Physalis minima</i> Based Topical Formulation - Treatment of Cutaneous Leishmaniasis	NTD Global Network- Industrial / Business engagement Vouchers	£ 10,000	2019-2026 / On-going	Co-P.I.
7	Structural and Biological Studies on New Anabolic Steroids Obtained by Bio-Transformations	OPCW	€ 20,000	2014-2016 / Completed	P.I.

G. Research Projects (National)

S. No	Project Title	Funding Agency	Amount (Rs.)	Duration / Status	In Capacity
1.	Development of Medicinal Plant Based Topical Formulation to Treat Cutaneous Leishmaniasis- A Neglected Tropical Disease and Cause of Major Economic Burden of Pakistan	HEC	13.5894 million	2025-2027 On going	P.I.
2.	Co-crystallization of Naturally Occurring Anti-leishmanial Drug (Amphotericin B) with bioactive Natural Compounds- An Approach	PAS	0.8 million	July 2024-Jan. 2025 Completed	P.I.

	Towards Improved Treatment of Cutaneous Leishmaniasis in Pakistan				
3.	Co-crystallization of Anti-leishmanial Drugs (Amphotericin B and Miltefosine)– An Approach Towards Improved Treatment of Prevalent Neglected Tropical Disease (Leishmaniasis) in Pakistan	HEC	8.160 million	2023-2025 Completed	P.I.
4.	Structural and functional studies on metabolites produced by fungal transformation of anti-inflammatory fluorinated steroidal drugs- An efficient approach towards anti-inflammatory drug discovery	PSF	1.4477 million	2019-2021 Completed	P.I.
5.	Structural Studies of New Inhibitors of Urease Enzyme-An Approach Towards the Treatment of Gastric Ulcer, Urolithiasis and Other Complications.	HEC	0.974439 million	2015-2018 / Completed	P.I.
6.	Structure-Activity Relationship Studies of New Anti-oxidants as Disease Preventing Agents	HEC	4.386 million	2014-2019 / Completed	P.I.
7.	Anti-obesity Effect of Medicinal Plants Extracts-A Strategy to Control the Epidemic of Metabolic Disorders	HEC	6.674753 million	2014-2016 / Completed	Co-P.I.
8.	Identification of Small Molecular Agonists against G-Protein Coupled Receptors (GPCRs): Opportunities for Cancer Prevention and Treatment	PSF	2.00 million	2017-2018 / Completed	Co-P.I.
9.	Study of Molecular Structures and Drugability Potential of New Inhibitors of β -Glucuronidase by Single-crystal X-Ray Diffraction and NMR Spectroscopic Techniques	PAS	1.994 million	Two years / Completed	Co-P.I.
10.	Studies on Reverting Insulin Resistance (IGT and IFG) by Employing Natural Products for the Prevention of the On-set of Metabolic syndrome	HEC	1.702 million	Two years / Completed	Co-P.I.
11.	Development of Nutraceuticals from the Medicinally Important Plants and Herbs of Pakistan	PAS	0.5 million	2013-2016 / Completed	P.I.

H. Workshos / Seminars / Courses / Conferences Organized or attended as a Resource Person

- Resource person in international Workshop entitled, “**Natural Product Isolation, Purification and X-ray Diffraction Techniques**”, organized by University Sumatera Utara, Medan, Indonesia, Indonesia, July 30-31, 2025.
- Organized Two-days workshop entitled, “**Uses and Applications of Atomic Force Microscopy**”, at the International Center for Chemical and Biological Sciences, June 3 – 4, 2025.
- Organized “International Workshop entitled, “**Identification of New Lead Compounds and Diagnostic Tools for Leishmaniasis: Concepts, Approaches, and Capacity Building**”, held at the University of Nairobi, Kenya, during February 22-24, 2023, jointly organized by Durham University, COMSTECH,

ICCBS, and University of Nairobi (In capacity of coordinator both from ICCBS and COMSTECH and resource person).

- Organized “**International Symposium on Excellence in Science (ISES)**”, on **September 22, 2022** to commemorate the 80th birthday of one of the most distinguished scientist of the world, **Prof. Dr. Atta-ur-Rahman, FRS** (Patron-in-Chief ICCBS, and Ex-Coordinator General COMSTECH) at the ICCBS, Karachi, Pakistan (In capacity of coordinator).
- Organized online course entitled, “**Single Crystal X-Ray Diffraction Techniques- Basic Principles**”, by Prof. Dr. Maria Cristina Nonato. at the International Center for Chemical and Biological Sciences, Feb. 3 – 26, 2021. (In capacity of coordinator / course Facilitator)
- Organized online certificate course entitled, “**Basic Plant Tissue Culture Techniques**”, Jointly Organized by the International Center for Chemical and Biological Sciences, COMSTECH, Secretariat, Islamabad, and Pakistan Biotechnology Information Center (PABIC) (Karachi Chapter), August 25, 2021. (In capacity of coordinator / course. Facilitator)
- Organized online certificate course entitled, “**Micropropagation of Quality Banana Plants for Commercial Purpose**”, Jointly Organized by the International Center for Chemical and Biological Sciences, COMSTECH, Secretariat, Islamabad, and Pakistan Biotechnology Information Center (PABIC) (Karachi Chapter), November 25, 2021. (In capacity of coordinator / course. Facilitator)
- Organizer of online course entitled, “**Symmetry operations for crystallographers**”, by Prof. Dr. Richard C. Garratt, jointly hold by the International Center for Chemical and Biological Sciences, and COMSTECH, Oct. 13 – Dec. 16, 2020.
- Organizer and resource person of the International Workshop entitled, “**New Anti-leishmanial Leads from Natural Sources: Concepts and Approaches**”, Organized by the Dr. Panjwani Center for Molecular Medicine and Drug Research (International Center for Chemical and Biological Sciences, University of Karachi, Karachi, Pakistan) in collaboration with NTD, A Global Network for Neglected Tropical Diseases, November 8 - 9, 2019.
- Organizer of **A half-day seminar entitled, “Slow Pace of Agricultural Biotechnology Adaptability: An Analysis and Way Forward**”, Jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and University of Agriculture, Faisalabad, Pakistan, October 10, 2019.
- Organizer of the “**Launching ceremony of ISAAA Brief 56**”, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, Pakistan, December 20, 2018.
- Organizer and resource person of the of the **3rd International Workshop on X-Ray Crystallography in Structural Biology**, jointly organized by the Dr. Panjwani Center for Molecular medicine and Drug Research, International Center for Chemical and Biological Sciences (ICCBS), Karachi, International Union of Crystallography, and X-ray Diffraction Users Group of Pakistan (XRD-PAK) under the auspices of National Committee of Crystallography, ICCBS, Karachi, Pakistan, October 8-10, 2018.
- Organizer of the **A half-day seminar entitled, “Significance of Popular Science Writing**”, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, June 20, 2018.
- Organizer of the **three-day international event entitled, “Advances in Biotechnology and Regulatory Affairs” and the launching ceremony of ISAAA Brief 52**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, Pakistan Agriculture Research Council (PARC), and Forman Christian College (A Chartered University), Lahore, Pakistan, September 25-27, 2017.

- Organizer of the **A one-day seminar entitled, Science and Society - Science Communication and Public Engagement**, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, October 19, 2016.
- Organizer of the **two-day international event entitled, Capacity Building Sessions with the Biosafety Regulators**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, Pakistan Agriculture Research Council (PARC), Forman Christian College (A Chartered University), Lahore, and the United States Department of Agriculture, Foreign Agricultural Service US Embassy, Islamabad, Pakistan, August 11-12, 2016.
- Organizer of the **“Launching ceremony of ISAAA Brief 51”**, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, Pakistan, June 20, 2016.
- Organize **A one day seminar entitled, “The Capacity Enhancement in Biosafety Evaluation of GM Crops” followed by the launching ceremony of ISAAA Brief 49**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, National Institute of Biotechnology (NIBGE), Faisalabad, Pakistan, May 11, 2015.
- Organizer of the **A one-day workshop entitled, “Modern Agriculture Biotechnologies”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Monsanto Pakistan Private Limited, Pakistan, March 26, 2015.
- Organizer of the **A one-day seminar entitled, “The Capacity Enhancement in Biosafety Evaluation of GM Crops” followed by the launching ceremony of ISAAA Brief 49**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, Pakistan Agriculture Research Council, Islamabad, and Crop Life Pakistan, at PARC Islamabad, Pakistan, January 30, 2015.
- Organize one-day consultative workshop entitled, **“The Reformulation of Biosafety Guidelines”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Forman Christian College (A Chartered University) Lahore, Pakistan, June 25, 2014.
- Organize **press conference / Launch of ISAAA Brief 46** and one-day seminar entitled, **“Application of Modern Biotechnology to sensitize the media on the importance of biotechnology”**, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Forman Christian College (A Chartered University) Lahore, Pakistan, August 19th, 2014.
- Organize one-day seminar entitled, **“Modern Biotechnology Applications for Progressive Growers/Farmers of Khairpur, Sindh”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Agriculture Extension Department (Cotton Development Program), Khairpur, Government of Sindh, Sindh, Pakistan, June 25, 2014.
- Organize one-day consultative workshop entitled, **“The Reformulation of Biosafety Guidelines”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Forman Christian College (A Chartered University) Lahore, Pakistan, June 25, 2014.
- Organizer and resource person of the **IUCr-UNESCO Open lab in Pakistan**, jointly organized by International Center for chemical and Biological sciences, University of Karachi, International Union of Crystallography and UNESCO, ICCBS, Karachi, Pakistan, April 28-May 09, 2014.

- Organize (in capacity of the main contact person along with the Director) a **major international event entitled, “UNESCO-IYCr South Asia Regional Summit Meeting on Vistas in Structural Chemistry”**, jointly organized by the ICCBS in collaboration with the Pakistan Academy of Sciences, Chinese Academy of Sciences, Indian National Science Academy and COMSATS, under the auspices of UNESCO and International Union of Crystallography (IUCr), at the ICCBS, Karachi, Pakistan, April 28-30 April, 2014. **(This Regional Summit was one of three global activities planned to commemorate the International Year of Crystallography (2014), announced by the United Nations).**
- Organizer and resource person of the **The two-day international workshop entitled, “National Dialogue on Biotechnology & Bio-Safety for Food & Feed Security in Pakistan and Capacity Building Workshop for Representatives of Institutional Bio-Safety Committee (IBC) Members & Media Practitioners”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and COMSTECH Secretariate Islamabad, Pakistan, January 17-18, 2014.
- Resource person of the **Two days workshop related to Single-Crystal X-ray Diffraction Technique**, Organized by the Atta-ur-Rahman Institute for Natural Product Discovery (RiND), University Technology Mara (UiTM), Malaysia, at Atta-ur-Rahman Institute for Natural Product Discovery (RiND), University Technology Mara (UiTM), Puncak Alam Campus, 42300 Bandar Puncak Alam, Selangor D. E. Malaysia. December 19-20, 2013.
- Organize **one-day seminar entitled, “Agri-biotech Applications-A solution to Mounting Food Insecurity Issues and Food Price Increase in Pakistan”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Pakistan Academy of Sciences, Islamabad, Pakistan, July 8, 2013.
- Organize **one-day seminar entitled, “BT Cotton in Sindh”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Sindh Horticulture Research Institute MirpurKhas, Sindh, Pakistan, June 26, 2013.
- Organize **“Stake Holders Meeting”** with the Progressive Farmers of Sindh, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Pakistan Central Cotton Research Institute, National High-way, Sakrand, Oct. 12, 2012.
- Organize **“Stake Holders Meeting”** with the Progressive Farmers of Bahawalpure, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Agriculture Research station Bahawalpur, Pakistan, Sept. 13, 2012.
- Organize **press conference / Launch of ISAAA Brief 43** and one-day seminar entitled, **“Application of Modern Biotechnology to sensitize the media on the importance of biotechnology”**, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Pakistan Academy of Sciences, Islamabad, Pakistan, May 28, 2012.
- Organize one-day seminar entitled, **“Transgenic Crops: New Era of Agriculture Biotechnology Opportunities and Challenges for a Developing Country”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Nuclear Institute of Agriculture (NIA), Tandojam, Sindh, Pakistan, May 17, 2012.
- Organizer and resource person of the **International Workshop entitled, Applications of Modern Biotechnology in Muslim Countries- Specific Issues and Challenges**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and COMSTECH Secretariate Islamabad, Pakistan, February 27-29, 2012.

- Organize **one-day seminar entitled, “Biotech Crops”**, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, at Central Cotton Research Institute, National Highway, Sakrand on December 13, 2011.
- Organize **press conference / Launch of ISAAA Brief 42** and one-day seminar entitled, **“Application of Modern Biotechnology to sensitize the media on the importance of biotechnology”**, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Pakistan Academy of Sciences, Islamabad, Pakistan, May 21, 2011.
- Organizer of the **one-day seminar entitled, “Benefits of biotechnology to boost agriculture produce”**, jointly organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, and Pakistan Journalist Association, Lahore, Pakistan, Nov. 4, 2010.
- Organizer of the **one-day seminar entitled, “Tribute to the father of green revolution noble peace laureate Prof. Dr. Norman Borlaug”** and press conference at the **Launch of ISAAA brief 41**, organized by Pakistan Biotechnology Information Center, Located at LEJ National Science Information Center, ICCBS, University of Karachi, Pakistan, June 10, 2010.
- Resource person of the **National workshop on crystallography**, single crystal X-Ray determination held at G. C. University Lahore, Pakistan, in August 2008.

I. M. Phil. / Ph. D. STUDENTS

S. #.	Student	Degree (Status)	Title of the Thesis
1.	Dr. Huma Bano	Ph. D. (Degree awarded in 2017)	Structural and Conformational Studies on Enzyme Inhibitors by Using Single-Crystal X-Ray Diffraction Techniques
2.	Mr. Rajesh Kumar	Ph. D. (Degree awarded in 2024)	Synthesis, Characterization and Detailed Interaction Studies of Metal Complexes, Based on Single-Crystal X-Ray Diffraction Techniques, and Hirshfeld Surface Analysis
3.	Ms. Rabia Fatima	Ph. D. (Degree awarded in 2025)	Synthesis of metal complexes and co-crystals of anti-parasitic compounds and drugs and study of their structural and biological properties
4.	Mr. Umair Ahmed Khan	Ph. D. Thesis writing	Bio-Catalytical and Chemical Synthesis of Halogenated Compounds and Study of their Biological Activities and Molecular Architecture
5.	Ms. Urooj	Ph. D. Thesis writing	Synthesis of New Anti-leishmanial Leads via Co-crystallization of Anti-parasitic Drugs and Evaluation of their Anti- parasitic Potential
6.	Mr. Yahya Sifan Ahsan Ahsan Wahan	M. Phil. Thesis writing	The Study of Effect of Co-crystallization on Solubility and anti-Leishmanial Activity of Amphotericin B
7.	Mr. Ejaz Hussain	M. Phil. (Degree awarded in 2016)	Study of three-dimensional structures of natural and synthetic heterocyclic compounds by using single-crystal X-ray diffraction technique
8.	Ms. Syeda Saima Fatima	M. Phil. (Degree awarded in 2017)	Structural and Functional Studies on Crystals of Biologically Active Natural and Synthetic Compounds
9.	Ms. Sadaf Siddiqui	M. Phil. (Degree awarded in 2017)	Study of crystal structure and intra- and inter-molecular interactions in natural and synthetic compounds using single-crystal X-ray diffraction techniques
10.	Ms. Urooj Gul	M. Phil. (Degree awarded in 2017)	Synthesis of low dimensional carbon nanoparticles from natural and synthetic sources and their analytical applications

11.	Mr. Rajesh Kumar	M. Phil. (Degree awarded in 2018)	Structural Determination on Biologically Active Heterocyclic Compounds by Using Single-Crystal X-ray Diffraction Technique, and Study of Inter- and Intra-Molecular Interactions by Using Hirshfeld Surface Analysis
12.	Ms. Ammara Shahid	M. Phil. (Degree awarded in 2018)	Study of molecular and physical properties of heterocyclic compounds using high resolution X-rays diffraction and NMR spectroscopy
13.	Mr. Sana Ullah	M. Phil. (Degree awarded in 2019)	Study of three dimensional structures and inter- and intra-molecular interactions of steroidal compounds by using single crystal X-ray diffraction techniques, and Hirshfeld surface analysis
14.	Ms. Sidra Akhter	M. Phil. (Degree awarded in 2019)	Synthesis of bioactive heterocyclic compounds and their metal complexes, and elucidation of their structures by single-crystal X-ray diffraction and other spectroscopic techniques
15.	Ms. Urooj	M. Phil. (Degree awarded in 2019)	Conformational and configurational analysis of biologically active compounds and their co-crystals by using Single-Crystal X-Ray Diffraction Techniques
16.	Ms. Rabia Fatima	M. Phil. (Degree awarded in 2019)	Studies of three-dimensional structural features of bioactive small organic molecules by using single-crystal X-ray diffraction techniques, and study of role of inter- and intra- molecular interactions toward crystal stability by using Hirshfeld surface analysis
17.	Ms. Nida Tabbassum	M. Phil. (Degree awarded in 2020)	Study of structural and physical properties of heterocyclic compounds by using single-crystal X-ray diffraction techniques
18.	Ms. Memoona Bibi	M. Phil. degree awarded in 2022	Structural Studies on Bioactive Natural Products by Using single-crystal X-ray diffraction techniques Under Various Crystallization and Temperature Techniques
19.	Mr. Israr Ali	M. Phil. degree awarded in 2022	Study of structures and intra- and inter- molecular interactions of anti-inflammatory compounds by using single-crystal X-ray diffraction techniques
20.	Mr. Muhammad Shahbaz	M. Phil. (Degree awarded in 2022)	Structural, Functional and Co-Crystallization Studies on Anti-Oxidant Natural and Synthetic Compounds
21.	Ms. Nabeela Kauser	M. Phil. (Degree awarded in 2024)	Qualitative And Quantitative Analysis of Contribution Of Inter and Intra Molecular Interaction Towards The Stability of Crystal structure Of Heterocyclic And Aromatic Molecules By Using X-ray Diffraction Data
22.	Mr. Ghulam Murtaza	M. Phil. (Degree awarded in 2024)	Study of three dimensional structures and structure-activity relationship of bioactive heterocyclic compounds and their co-crystals by using single-crystal X-ray diffraction techniques
23.	Ms. Urooj	Ph. D. Work going on	Synthesis of New Anti-leishmanial Leads via Co-crystallization of Anti-parasitic Drugs and Evaluation of their Anti- parasitic Potential

I. Training of Foreign Students, and Scientists

The following foreign scientists and students have successfully completed a part of their trainings on natural products or anti-leishmanial studies:

S. #	Name	Institute/University	Country	Duration	Area of research
1.	Mr. Jibrel Abdulkadir Emam	Addis Ababa University, Addis Ababa ,	Ethiopia	21 Dec. 2019 to 03-10-2020	Natural products
2.	Mr. Douanla Djimeli Pascal	The University of Yaounde	Cameron	7 Oct. 2020 to 21 April 2021	Natural Products

					Chemistry
3	Ms. Nadine-Phalone Tinguep Tchaptanda	Department of Organic Chemistry, Faculty of Sciences University of Yaoundé 1 P.O. Box 812 Yaounde	Cameron	9 March 2021 to 27 August 2021	Natural Products Chemistry
4	Mr. Sadiq Ismail A. Shina	The Federal University Dutse	Nigeria	18 October 2021 to 18 March 2022	Natural Products Chemistry
5	Mr. Tauno-Boma Odinga	Department of Biochemistry, Faculty of Science Rivers State University	Nigeria	March, 2022- August, 2022	Natural Products Chemistry
6	Ms. Njateng Guy Sedar Singor	Department of Biochemistry, Université de Dschang	Cameroon	2 May 2022 to 22 October 2022	Natural Products Chemistry
7	Mr. Douanla Djimeli Pascal	The University of Yaounde	Cameron	December 2022 to date	Natural Products Chemistry
8	Ms. Amona Hammad Abdallah Atia	Medicinal and Aromatic Plants and Traditional Medicine Institute (MAPTRI), National Center for Research, Khartoum	Sudan	January 2023 to September 2023	Natural Products Chemistry and Anti- leishmanial cellular assays (promastigotes and amastigotes)
9	Ms. Amona Ali Abdelrahim Alshafi	Medicinal and Aromatic Plants and Traditional Medicine Institute (MAPTRI), National Center for Research, Khartoum	Sudan	January 2023 to September 2023 followed by enrolment at the ICCBS in M. Phil.	Anti- leishmanial cellular assay (amastigotes)
10	Ms. Fouzia Ali Adam	Addis Ababa University	Ethiopia	February 21, 2023 to April 21, 2023	Natural Products Chemistry and Anti- leishmanial cellular assays (promastigotes and amastigotes)
11	Mr. Ahmed Abdelhafiz Alshikh Abdalla	Omdurman Islamic University	Sudan	January 2023 to September 2023	Phytochemistry

12	Ms. Firda Rahmadiani (BS. Student)	Department of Biology, University of Northern Sumatra, Medan	Indonesia	November 2022 to May 2023	Tissue culture
13	Mr. Alvian Khadafi	Department of Biology, University of Northern Sumatra, Medan	Indonesia	November 2022 to April 2023	Tissue culture
14	Dr. Salawu Kayode Muritala	Department of Pharmacognosy and Drug Development, Faculty of Pharmaceutical Sciences, University of Ilorin, Ilorin	Nigeria	18-11- 2025 to 18-04-2026 (on going)	Phytochemistry