CURRICULUM VITAE

Irfan Khan Umrao Khan

Ph.D. (Medicinal Chemistry)

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EDUCATION

- **Ph.D. Medicinal Chemistry (2013-2019)**: Indian Institute of Chemical Technology, Hyderabad, India, under the supervision of Dr. C. Ganesh Kumar (Senior Principal scientist) and Dr. Ahmed Kamal, (Pro-vice Chancellor, J.M.H. University, Former Outstanding scientist, CSIR-IICT)
- **Qualified**: UGC NET-JRF (JUNE 2012) conducted by CSIR, New Delhi, India.
- **Master of Science (**Organic Chemistry) (**2010-2012**): Shree Shivaji College of Arts, Commerce and Science, Akola, Maharashtra, India
- **Bachelor of Science** (Microbiology, Biochemistry and Chemistry) (**2007-2010**) Shree Shivaji College of Arts, Commerce and Science, Akola, Maharashtra, India

TECHNICAL AND ANALYTICAL SKILLS

- Efficient in handling multiple step synthesis of organic molecules
- Efficient in the SAR based designing and Synthesis
- Experienced in the synthesis of nature-inspired macrocyclic scaffolds
- Experienced in writing and drafting manuscripts / scientific reports
- Effectively carried out 'dry reactions' by using. in *situ* NaOEt generation *n*-BuLi, s*ec*.BuLi, DIBAL-H, $LiAlH_4$ and.
- Successfully performed various name reactions such as Claisen condensation, Grignard reaction, aldol condensation, Michael addition, Wittig reaction, Swernoxidation,Friedel-Craftsreaction,Sonogashira,Suzuki,Heckcoupling, oxidation, reduction, protection and deprotection, Knoevenagel condensation and catalytic hydrogenation.

- Adept in interpreting analytical reports -1D, 2DNMR, Mass, LC-MS, HRMS, HPLC, FTIR, GC, Single crystal X-ray dataetc.
- Experience in In*silico* studies like Molecular Docking using Autodock and maestro softwares, Swiss ADME (pharmacokinetic prediction), PROTOX (toxicity prediction), LIPINSKI (parameter for drug likeliness).
- Hands on experience in using Brucker NMR software, NMR processing software such asMestRenova.
- Well-versed with ChemDraw, ChemSketch, ISIS Draw and Chem. Builder.
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FELLOWSHIPS, AWARDS AND HONOURS

- Senior Research Fellowship(UGC-CSIR,NewDelhi,India,2015-2018)
- Junior Research Fellowship(UGC-CSIR,NewDelhi,India,2013-2015)
- Secured All India Rank 93 in UGC-CSIR Net Examination 2012 (For entry into PhD Program).
- Best student award (Department of Chemistry, Shree Shivaji College, Akola,2011)

EXPERIENCE/ PROJECT WORK

- Microwave assisted synthesis of 1-aryl-5-tetra-o-acetyl-d-glucose-2-s-benzyl-2-isothiobiurets and their comparative study with conventional synthesis.
  Masters project (M.sc –Dissertation work)
- Affordable Cancer Therapeutics" (CSC0301). *(2013-2019)*
- Assistant professor (*6 months after degree award*): Lords Institute of Engineering and Technology, Hyderabad

PUBLICATIONS

First author / corresponding authors / equal contribution research articles

1) **I. Khan**, K.R. Garikapati, A. Setti, A. B. Shaik, V. K. K. Makani, M.Shareef, H. Rajpurohit, V. Namrathatha, M. Pal-Bhadra, A. Kamal, C. G. Kumar. Design, synthesis, *in silico* pharmacokinetics prediction and biological evaluation of 1,4- dihydroindeno [1,2- c] pyrazole chalcone as EGFR /Akt pathway inhibitors. ***Eur. J. Med. Chem.*** 163 (2019) 636-648

2) **I. Khan**, T. Ganapathi, M. A. Shareef, A. B. Shaik, S. Akbar, A. Rajanna, A. Kamal,C.G. Kumar. One pot synthesis and biological evaluation of arylpropenone aminochalcone conjugates as potential apoptosis inducers. ***Chem. Select.*** 2019, *4*, 4672–4678

3) **I. Khan,** K. Sirisha, M. A. Shareef, T. Ganapathi, A. B. Shaik, K. ChandraShekar, A. Kamal, C.G. Kumar. Synthesis of new bis-pyrazole linked hydrazides and their *in vitro* evaluation as antimicrobial agent: A mechanistic role in *Candida* biofilm and ergosterol biosynthesis inhibition. ***Chem. Biol. Drug. Des*** (2019) DOI: 10.1111/cbdd.13509

4) **I. Khan**, M. A. Shareef. C. G. Kumar. An overview on the synthetic and medicinalperspectivesof indenopyrazoles.***Eur.J.Med.Chem***.178(2019)1- 12 (**Reviewarticle)**

5) **I. Khan**, K.R. Garikapati, A. B. Shaik, V. K. K. Makani, A. Rahim, M. A. Shareef, V. Ganga Reddy, M. Pal-Bhadra, A. Kamal, C. G. Kumar. Design, synthesis and biological evaluation of 1, 4-dihydro indeno [1,2-c] pyrazole linked oxindole analoguesaspotentialanticanceragentstargetingtubulinandinducingp53dependent apoptosis**.** ***Eur. J. Med. Chem***. 144 (2018)104-11

Co-author research articles

1) Md. A. Shareef, H. Rajpurohit, K. Sirisha, I. B. Sayeed, **I. Khan**, M. Kadagathur, T. Ganapathi, A. Kamal, C. G. Kumar, N. Babu. Synthesis and biological evaluation of substituted (1-(4-chlorobenzyl)-1*H*-(1,2,3-triazole-4yl) methanones as antifungal agents. ***Chem. select***. 4 (2019)2258-226

2) Md. A. Shareef, K. Sirisha, **I. Khan**, I. B. Sayeed, G. Ramu, A. Kamal, C. G. Kumar,N. Babu. Design, synthesis and antifungal evaluation and *insilico* ADME prediction of 1, 4-dihydro indeno[1,2-c] pyrazole tethered carbohydrazide hybrids exhibiting anti-biofilm and ROS inducing properties, ***Med. Chem. Commun.,*** 2019,10, 806- 813**(**2019)

3) Md. A. Shareef, **I. Khan**, N. Babu, A. Kamal. A comprehensive review onthe therapeutic versatility of imidazo [2,1-b] thiazole. ***Curr. Med. Chem.***(DOI : 10.2174/0929867326666190729152440).

4) Md. A. Shareef, K. Sirisha, I. B. Sayeed, **I. Khan**, T. Ganapathi, S. Akbar, A. Kamal,C. G. Kumar, N. Babu. Synthesis and antimicrobial evaluation of new triazole fused imidazo [2,1-b] thiazole hybrid as anti-biofilm agents targeting *Staphylococcus aureus*. ***Bioorganic&MedicinalChemistryLetters***29(2019)1266214

5) A.B. Shaik, G.K. Rao, G.B. Kumar, N. Patel, V.S. Reddy, **Irfan Khan, S.R.** Routhu,C.G. Kumar, I. Veena, K.C. Shekar, M. Barkume, S. Jadhav, A. Juvekar, J. Kode, M. Pal-Bhadra, A. Kamal. Design, synthesis and biological evaluation of novel pyrazolochalcones as potential modulators of PI3K/Akt/mTOR pathway and inducers of apoptosis in breast cancer cells. ***Eur. Jou. Med.Chem*** **139** (2017) 305–324

6) A. Kamal, A.B. Shaik, B.B. Rao, **I. Khan**, G.B. Kumar, N. Jain. Design and synthesis of pyrazole/isoxazole linked arylcinnamides as tubulin polymerization inhibitors and potential antiproliferative agents. ***Organic and Biomolecular Chemistry*** 13 (2015)10162–10178.

7) Md. A. Shareef, T. Ganapathi, **I. Khan**, S. Rani, A. Rajanna, S. Akbar, C.G. Kumar, B. NagendraBabu. New Indolyl-Arylaminopropenone Conjugates: Synthesis, Cytotoxicity and Apoptotic Inducing Studies. ***Chem.Select.*** (DOI: 10.1002/slct.20190407)

CONFERENCES ATTENDED

- International conference on Advances in Chemical Biology & Biology (ICACB-2019)Hyderabad,India
- National conference on Anticancer Therapeutics, 2016,Hyderabad

REFRENCE CONTACT

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