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2):https://www.amu.ac.in/faculty/interdisciplinary-biotechnology-unit/asad-u-khan

3):http://en.wikipedia.org/wiki/National_Bioscience_Award_for_Career_Development

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ACADEMIC REFEREES

Dr. Sunil K Lal, Ph.D FNASc
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Prof. Rafaelle Zarrilli, MD, Ph.D
(Short term research Advisor)
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Department Microbiology and preventive Medicine
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Asad Ullah Khan, *Ph.D, FRSC (UK), FAMS, FRSC*

Appointments:

10/1997-10/2000 **Lecturer**, Biotechnology Unit, Aligarh Muslim University, Aligarh, India.

10/2000-10/2002 Postdoctoral **Research Fellow**, Department of Biochemistry, Robert Wood Johnson Medical School, UMDNJ, Piscataway, **NJ. USA.**

10/2002-10/2003 Research **Associate,** Department of Biochemistry, Robert Wood Johnson Medical School, UMDNJ, Piscataway, **NJ. USA.**

10/2003-10/2006 Sr. **Lecturer,** Biotechnology Unit, Aligarh Muslim University, Aligarh, India.

04/2005-07/2005 **Visiting Scientist,** Department of Microbiology and Preventive Medicine, University of Napoli; Federico II; **Napoli, Italy**.

2006-2012 **Associate Professor,** Biotechnology Unit, Aligarh Muslim University, Aligarh, India.

2011, May-August 2011 Short-term **Visiting Scientist,** Hospital de Bicetre, Paris**, France**,

October 16, 2012 – January 2015: **Coordinator (Head)** of Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh, India.

2012-Presnt **Professor** Biotechnology Unit, Aligarh Muslim University, Aligarh, India.

January 2018-2020 **Coordinator (Head)** of Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh, India.

Appointed as **Adjunct Professor** in University of Catolica San Antonio de Murcia (UCAM) Spain for the period of two years w.e.f June, 2018.

Appointed as **Visiting Professor** in University Malaysia Terengganu, Malaysia for the period of two years w.e.f May 15, 2019.

Academic Qualification

Ph.D. degree was awarded in **Biochemistry** from Aligarh Muslim University, Aligarh India in the year 1998
M.Sc. degree was obtained in **Biotechnology** from Aligarh Muslim University, Aligarh, India in the year 1994 with **First division.**
B.Sc. degree was obtained in **Chemistry** from Aligarh Muslim University, Aligarh India in the year 1992 with **First division.**

Field of specialization in Ph.D: Molecular Genetics and Medical Microbiology

Ph.D. Topic: Isolation and characterization of Intron mutants of the gene
coding for small subunit of ribonucleotide reductase of T4 bacteriophage.

Significant foreign assignments:

S No	Period of visit		Institute/ country visited	Purpose of visit
	From	To		
1	28-10-2000	27-10-2003	RUTGERS, NJ, USA	Post-Doc Associate
2	04/2005-	07/2005	Univ. of Napoli, Italy	Visiting Researcher
3	23/2/10	28/2/10	University of Cambridge London, UK	Invited Plenary speaker in International Conference
4	05/2011	08/2011	Hospital Bicester, Paris France	Visiting Researcher
5	22/02/11	27/02/11	University of Cambridge London, UK	Invited **Plenary speaker** in International Conference
6	3/8/14	8-8-14	Chicago Hilton, Northbrook, USA	Invited Speaker 4rth International conference on Proteomics and Bioinformatics
7	26/1/15	29-1-15	Caparica/ Lisbon, Portugal	Invited **Key-Note Speaker** International Conference on Antibiotic Resistance
8	27/3/16	30/3/16	Atlanta, USA	Invited Key-Note Speaker International Conference on proteomics
9	2/10/16	7/10/16	Ankara, Turkey	Invited as Observer in an International Conference on Science and Technology
10	1/11/2017	15/11/2017	Academia Sinica, Taieppi Taiwan	INSA Visiting scientist.
11	3/2/19	6/2/19	UK Academy of Medical Science London, UK	Panellist in AMR meeting Organized by UK Academy of Medical Sciences
12	21/5/19	23/5/19	European Commission Milan, Italy	European Commission meeting on AMR
13	23/6/19	27/6/19	Cambridge university, UK	Invited Speaker on AMR in UK-Asia Summit of Seeding STEM, UK
14	7/3/20	10/3/20	Zurich Switzerland	**Key Note Speaker,** International conference on Proteomics and Molecular Medicine.
15	10/7/23	16/7/23	Tampere, Finland	**Invited Speaker** IPA Congress 2023

Teaching assignments for Post Graduates and Doctorates

-Microbiology and genetics of bacteria
-Molecular Biology
-Agricultural Biotechnology course
-Genomics and functional genomics course
-Genomics and Proteomics and Techniques in Molecular Biology

Administrative assignments

1. ***Director IQAC AMU Aligarh (2021- onward)***
2. ***Deputy Director, IQAC, AMU Aligarh (2020-2021) (1 year)***
3. **Nodal Officer** of AMU for MoUs reviews **(2018-onward).**
4. **Member-In-Charge** (Research) AMU Dawakhana (**2016- onward**)
5. **Coordin**ator (Head) Interdisciplinary Biotechnology Unit, A.M.U., Aligarh w.e.f January, 2018-2020. (**3 years**)
6. **Coordinator** (Head) Interdisciplinary Biotechnology Unit, A.M.U., Aligarh w.e.f August 16, 2012-January, 2015 (**2 years 5 months**)
7. **Coordinator DST-PURSE** Programme in AMU (July 2015-July 2018) ***(****To Coordinate Grant of 35 Crores among 13 departments of studies****) (3 years)***
8. ***Coordinator,*** *University Sophisticated Instruments Facility* ***(USIF) (Sept., 2016- April, 2020) (3.7 years)***
9. **Local Coordinator** Global Initiative for Academic Networks (GIAN) (2016- 2017) **(2 years)**
10. **Coordinator** DBT**-BUILDERS** Programme in AMU (2015-2017) **(3 years).**
11. **Coordinator** Summer University, University Alumni affair committee, AMU (2014- 2016.) **(3 years)**
12. **Coordinator** DST**-FIST** project (2013-2017) (**5 years**)
13. **Coordinator** SAP**- DRS II phase Project** (2013-2017) (**5 years**)

Memberships of professional bodies

1. Member of Bioinformatics and computational Biology **Task Force** in **DBT, Ministry of Science** and **Technology,** Government of India (2013-2018). (To ***review the grants***)
2. Member of CCRUM **Task Force** in **Ministry of AYUSH,** Government of India (2022- onward).
3. Member of **French public scientific organizations** CNRS and INSERM to **Review Grants. (2012-onward)** (***To review the grants***).
4. Appointed as **subject expert** of Antimicrobial Resistance (AMR) Generic call 2020 to evaluate Grants by National Research Agency (ANR), France (2020-onward)
5. Appointed as member of Board of management of Cente for Food Science and Technology (2021-2023)
6. Member of Scientific Advisory Committee (SAC) ICMR National JALMA Institute for leprosy and other Microbacteial diseases, Agra.

7. Appointed as Reviewer in Swiss National Science Foundation funding agency in Switzerland for the scientific evaluation of proposals (2020-onward)
8. Acted as Editor grant proposals for the **National Science Centre, Poland**
9. Appointed as External Assessor for Promotion Evaluation of Professor at University of Malaysia Terengganu.
10. Member of Netherlands Organization for Health Research and Development (ZonMw) to reviewer the grant proposals that have been submitted to the Priority Medicines Antimicrobial Resistance Programme. (To ***review the grants***) (2014-2020)
11. Expert member / panellist of steering committee of UK Academy of Medical Sciences and Hamied Foundation UK-India AMR Programme (2018-2021). (***To review the applications of Indo-UK Professorship***).
12. **Panel Expert** "Natural Science" of National Council for Promotion of Urdu Language, MHRD, Government of India, (2019-0nward)
13. Reviewer of Projects submitted in UP-CST (2018-onward).
14. Member of **National Mission for Clean Ganga** task force (2014-2017).
15. **Chairman** of Institutional Ethical Committee, IBU, AMU, Aligarh. (2013-16)
16. **Convener** of NAAC CWI- Committee (2013-2014)
17. **Convener**, CDC committee ***to review curricula*** of AMU Aligarh (2013- onward)
18. **Convener** of Committee for International Ranking and strategic planning (2015-2021)
19. **Convener** of Committee for "writing Goals and functions of IQAC.
20. Honorary Member of Advisory Board of *Archives of Applied Sciences and Research.* **(2009-till date)**
21. Member of **Academic Council** (AC) (2012-2015) & (2018-2020).
22. Member of **Academic Council (AC) special invitee Cluster University Sirinagar**
23. Member of Board of Studies (2020-22, Interdisciplinary Brain Research Centre, AMU)
24. Member of Board of Studies (2022-24, Plant Protection, Agriculture Faculty, AMU)
25. Member of Committee for Advance Science and Research (2018-2020)
26. Member of Board of studies of Biochemistry Department, F/o Medicine (2016-2018)
27. Member of University Innovation council established by National Innovation Council (2013-onward)
28. Member of Committee for Travel support of University Teachers (2013-2015).
29. Member of Advisory committee of GBioFin, Gate to Biotechnology Industries, Organization and foundation, India (2014-onward.
30. Academic Advisor of Association of Bioinformatics Research Centre, New Delhi.
31. Member Advisory Committee of causality Assessment of Medical Device Adverse Events of IPC-MvPI, JNMC & Hospital Aligarh. (2021 onward)
32. Member of Coordination Committee of " Census Research Workstation" , A.M.U., Aligarh (2022)
33. Member of Environmental committee of AMU, Aligarh (Dec 2021-onward)
34. Member of External Audit committee in JMI, New Delhi, Nov 2021.

Area of Research: Antimicrobial agents and Chemotherapy

Antimicrobial Resistance Mechanism and genomics of resistance.

CRISPRi induced Biofilm and quorum sensing inhibition in bacteria.

Antibiotic / inhibitor Interaction with Target Molecules / enzymes and mapping the active site.

Drug Designing and Discovery of Alternative Medicine/ repurposing drugs

Nanomedicine and photodynamic therapy to control infection.

Research Description

Research Video
https://youtu.be/SuJP9QHwde8

Antibiotic resistance is a worldwide public health problem **declared by "WHO" in 2014 as priority concern**. Infections caused by resistant microorganisms often fail to respond to conventional treatment, resulting in prolonged illness, greater risk of death and higher costs. After the discovery of MCR-1 marker no drug is left to treat such infections.

- Hence, Dr Khan's lab is actively engaged in designing new inhibitors against NDM-1 and CTX-M "superbug" using virtual screening, molecular docking and simulation modeling. These enzymes (resistant markers) have been cloned and expressed for kinetics and structural studied in order to map the target site of newly identified lead molecules. A good number of inhibitor molecules have been so far screened and tested against these purified enzymes. Some of the inhibitors have already proved to be potential drug candidates against multi-drug resistant bacteria. This is truly an original contribution to the medical/biological science since not much antibiotics are left to treat infection caused by NDM-1 producing bacteria (***PLoS ONE***, 2013; ***J Biomol Structure and Dynamics***, 2014; ***European Journal of Medicinal Chemistry***, 2013; ***Sci Report, 2017, Phys Chem Chem Phys., 2019; ACS Omega, 2020***).

- ***Moreover,*** he has investigated the significance of non-active site residues involved in the structure and function of NDM-1 and CTX-15 markers using cloning and site-directed mutagenesis strategy to further understand the insight of mechanism. A complete structural functional map has been developed to design lead molecules as future therapeutics. (***Antimicrobial Agent and Chemotherapy,*** 2015, ***FEMS Micrbiol Lett, 2019; RSC Advance, 2019; IJBM, 2018***).

- A novel variant, **NDM-4** was discovered by his group as a first report from India (***J Med Microbiol.*** 2014, which was a **new drug-resistance mechanism.** This research has brought changes in the health policies of our country to adopt infection control measures to save lives of millions of poor patients. This research has raised issues in parliament after the wide coverage by National and International print and electronic media.

- He has extensively explored mechanisms of antibiotic resistance in bacteria with specific reference to beta-lactamases. New resistant markers on plasmids were characterized in his lab and also detected novel variants of NDM-1. He has first time reported NDM-4 from Indian hospital environment. Moreover, he has also shown that these resistant markers are mobile and accessible to susceptible strains of bacteria through Horizontal Gene Transfer. (***J. Med. Microbiology***, 2010; ***Journal of Chemotherapy*** , 2011; ***J Med Microbiology*****,** 2012; ***Front. Microbiol***. 2016; ***International J Antimicrobial Agents***, (2017, 2018, 2019). Recently, as **novel mechanism** has been explored by his group as role of LysM domain protein in carbapenemase resistance (***IJBM,*** 2020). He has first reported NDM-4 producing *Citrobacter freundii*, co-associated with $bla_{\text{OXA-9}}$, $bla_{\text{SHV-1}}$ and $bla_{\text{CMY-149}}$ as well as *Citrobacter braakii, Klebsiella oxytoca* and *Enterobacter cloacae* were identified in association with $bla_{\text{OXA-1}}$ and $bla_{\text{CMY-145}}$, $bla_{\text{OXA-1}}$ and $bla_{\text{OXA-9}}$ and, $bla_{\text{OXA-1}}$, $bla_{\text{OXA-9}}$ and $bla_{\text{CMY-149}}$, respectively. NDM-4 producing *Klebsiella pnemoniae* with incompatibility group IncP, was first identified by his group (***Front Microbiol*****. 2018; *Int J Antimicrob Agents* 2017, 2018).** $bla_{\text{NDM-4}}$, $bla_{\text{NDM-5}}$ and $bla_{\text{NDM-7}}$ in *E. arogenes* were first time detected in NICU of tertiary care hospital in India. ***Microb. Drug Resist*****. 2018).**

  He had described a novel ***ST3344 as new Sequence types*** in two NDM-1 producing *K. pneumoniae* isolates from neonates admitted in NICU of one of the North Indian Hospitals. Moreover, these strains were also found to carry $bla_{\text{CTX-M-15}}$, $bla_{\text{CMY-1}}$ and $bla_{\text{SHV1.}}$ ***Int J Antimicrob Agents*** **2019).**

  His research group has also discovered several virulent factors and IS/Tn genetic mobile elements involve in resistant marker transfer using whole genome sequencing through NGS. Sequence analysis also identified several new MLST, depicting occurrence of novel bacterial strains in the community and hospital settings (***Genome***

Announce. (ASM), 2017; ***Gut pathogen*** 2018; ***Int J Antimicrob Agents*** 2019; ***J Global Antmicrob Res.,*** 2020)

- His group has also elucidated mode of action of natural and synthetic molecules including, several Nano-composite preparations against infections in general and dental caries in particular which is a predominant cause of tooth decay and endocardiatis, a serious heart problem (***PloS ONE***, 2013; ***Phytomedicine***, **2012; *Journal of Antimicrobial Chemotherapy*** 2008; ***J Applied Microbiol,*** 2009' ***Molecules,*** 2009).
- He has developed a novel approach to control topical microbial infections through nanoparticles induced Photodynamic therapy. During this study infections were induced in animal models, which were than treated successfully using photodynamic therapy. (***Biofouling,*** 2016; ***Appl Microbiol Biotechnol,*** 2016; ***International J Nanomedicine***, 2012; ***J Photochem Photobiol*** B, 2017, 2018; ***Future Microbiol,*** 2018; ***Photodiag. Photodyn Ther,*** 2017, 2019, 2019[a] ; ***BBRC,*** 2019).
- A novel approach of **CRISPRi-dCAS9** system has been established to knock down biofilm and quorum sensing genes to inhibit the formation of biofilm. Hence technology may be proposed as a therapeutic approach **(*Fron Cell Inf Microbiol*, 2017, *Front Immunol,* 2017; *J Biomedical Research,* 2020)**
- A proteomic approach has also been introduced to understand associated proteins involved in facilitating drug resistance in bacteria along with the existing antibiotic resistant markers. Moreober role of biofilm in resistance has alos been explored through different pathways being identified using proteomic approaches (***Biochem. Biophys. Res. Commun***, 2016, 2016[a]; ***J Glob Antimicrob Resist.*** 2017; ***Microb Pathog. 2019; J Proteomics, 2019****; Microbial Pathogen*., *2019, 2020).*
- His novel combination-therapy against Extended-spectrum beta-lactamase and metallo beta-lactamase producing bacterial infections has been very well received (***Future Microbiol*** , 2013, 2019). Moreover, a novel mechanism of synergy was also described first time in his lab (***Frontier Microbial***, 2016, ***Front Pharmacol. 2017; IJBM, 2018; J Mol Recog., 2018; Eur. J. Med Res., 2020***).
- He has also demonstrated role of drugs on Basal Transcription Machinery with special reference to anti-cancer drugs. With this, he raised a question whether anticancer drugs interact transcriptional machinery via interfering with histone modulation (***PloS ONE***, 2012; ***Cell Biochem. Biophs.*** (2011); ***European Journal of Pharmaceutical***

***Sciences,* 2008)**

Important discoveries on AMR from Dr. Asad Lab, AMU in last few years

- First Discovery of NDM-4 in India from AU Khan's Lab as "Aligarh Superbug".
- First reported NDM-4 producing *Citrobacter freundii*, (AK-82) co-associated with $bla_{\text{OXA-9}}$, $bla_{\text{SHV-1}}$ and $bla_{\text{CMY-149}}$.
- First time identified NDM-4 producing *Citrobacter braakii* (AK-84), *Klebsiella oxytoca* (AK-100) and *Enterobacter cloacae* (AK-108) were identified in association with $bla_{\text{OXA-1}}$ and $bla_{\text{CMY-145}}$, $bla_{\text{OXA-1}}$ and $bla_{\text{OXA-9}}$ and, $bla_{\text{OXA-1}}$, $bla_{\text{OXA-9}}$ and $bla_{\text{CMY-149}}$, respectively
- We have first time identified three NDM-4 producing *Klebsiella pnemoniae* with incompatibility group IncP in AK-97, AK-101 and AK-104 strains.
- First reported New Delhi Metallo-β-lactamase-1 producing *Cedecea lepagei*.
- This is the first report of $bla_{\text{NDM-4}}$, $bla_{\text{NDM-5}}$ and $bla_{\text{NDM-7}}$ in *E. arogenes* species, isolated from the NICU of tertiary care hospital in India.
- We describe the first report novel ST3344 in two NDM-1 producing *K. pneumoniae* isolates from neonates admitted in NICU of one of the North Indian Hospitals. Moreover, these strains were also found to carry $bla_{\text{CTX-M-15}}$, $bla_{\text{CMY-1}}$ and $bla_{\text{SHV-1}}$.
- We first time identified the co-producing strains of NDM and OXA-48 exhibited high MICs value of carbapenems.
- This study explored varying replicon types (IncFIA, IncFIB, IncFIIAs, IncFIC, IncA/C, IncF, IncK, IncX, IncW and IncY), in these NDM-producing *K. pneumoniae* strains.
- Co-existence of $bla_{\text{NDM-1}}$ and $bla_{\text{VIM-1}}$ producing *Moellerella wisconsensis* in NICU of North Indian Hospital: a first report

Post-Doctoral Research experiences:

I did postdoctoral research in the area of Yeast Transcription Biology, Exploring genetic interaction between transcription initiation and mRNA 3'processing machinery. A new transcription factor, SSU72 was found to be present at the event of initiation as well as 3' processing of mRNA (***He, and Khan et al, 2003***, ***Genes and Development***) Interaction of various subunits of RNA Pol II with transcription factors was also studied.

Role of histone modification in gene expression and transcription control was also established in vivo and in vitro both ***(Khan and Hampsey, 2002, Trend in Genetics).***

Ph.D Guided/Guiding: 27 / 8 w.e.f 2004

Student name	Ph.D Title	Year	Remark
1. Mohd Akram	Studies on the multiple drug resistant strains isolated from Urinary tract infection patients	2009	Awarded
2. Shaper N Khan	Interaction of anticancer drug with Transcription Machinery	2009	Awarded
3. Barira Islam	Isolation and characterization of S. mutans mutants Defective in cariogenic properties	2009	Awarded
4. Shazi Shakil	Characterization of aminoglycoside resistance in E. coli isolates of Nosocomial infection	2010	Awarded
5. Rosina	Screening of anticariogenic compound from medicinal plants	2011	Awarded
6. Anis Ahmad	Mechanism of Drug resistance in Candida spp	2011	Awarded
7. Saeedut Z Ali	Mechanism of ESBL production in Klebsialla spp	2012	Awarded
8. Mohad Adil	Characterization of putative anti-cariogenic compounds from medicinal plant.	2010	Awarded
9. Sadaf Hasan	Study on inhibition of *S. Mutans* biofilm and its Mechanism	2010	Awarded
10. Shakir Khan	Role of Quorum sensing compounds in Biofilm formation of Candida ssp.	2010	Awarded
11. Mohd Faheem	Multi drug resistance and outer membrane protein: molecular mechanism	2010	Awarded
12. Arbab Khan	Proteomics of S Mutants biofilm	2011	Awarded
13. Shatavari Kulshestha	Nanoparticle induced microbial biofilm inhibition Therapy against microbial biofilm inhibition	2012	Awarded
14. Dashishuddin	Screening of NDM-1 Inhibitors	2012	Awarded
15. Shariq Qayyum	Proteomic analysis of DNJ induced biofilm	2014	Awarded
16. Shadab Parvez	Genetic analysis of ESBl/MBL producers	2012	Awarded
17. Lama Misbha	Study on the mechanism of photodynamic depletion in *S, mutans*	2014	Awarded
18. Azna Zubairi	Role of CRISPRi in Lux-S/biofilm suppression	2015	Awarded
19. Lubna Marryam	Proteomic analysis of NDM-1 producing strain	2015	Awarded
20. Abid Ali	Insight of structure of metallo betalactamases	2016	Awarded
21. Nayeem Ahmad	Molecular Epidemiology of carbapenemase producing bacterial strains.	2016	Awarded
22. Haydar Abdul Majeed	Photodynamic therapy in biofilm..	2017	Awarded
23. Divya Gupta	Inhibitors designing against metalo betalactamases	2016	Awarded
24. Mohd Waqar Azam	CRISPRi in biofilm	2016	Awarded
25 Farheen Akhtar	Photodynamic therapy in infection control	2018	Awarded
25. Ayesha Z Beg	Biology of Biofilm in *P. aeruginosa*	2018	Awarded
27 Sahar Zaidi	*S. mutans* biofilm mechanism	2018	Awarded
26. Nabeela Farhat	Inhibitor designing against Broad spectrum B lactamases	2019	Working
27. Absar Talat	Metagenomics of AMR	2019	Working
28. Shamsi Khalid	Epidemiology and mechanism of AMR	2019	working
29. Sameera	Nano-composite and AMR	2021	working
30. M Saad	Vaccines against MDR strains	2022	working
31. Sradha Sharma	Structural insight of NDM-1	2022	working
32. Samiya Farooq	Metagenomics of Maternal / foetal microbiome	2023	working

Post- Doc/ Project Scientist Gui ded/Working:

1. Dr. Mohd Zakir	Screening of herbal products for characterization of		2008-2010

		anticariogenic molecules	
2.	Dr. Javed Iqbal	Molecular basis of Biofilm in Candida	2009-2011
3.	Dr. Anis Ahmed	Antimicrobial agents and chemotherapy And drug designing	2012-2013
4.	Dr. Mohd T Rehman	Mutational analysis and genetics of NDM-1	2012 -2015
5.	Dr. Sadaf Hasan	Biofilm Biology	2015-2018
6.	Dr. Divakar Sharma	Proteomics of MDR	2017- 2019
7.	Dr. Sneh Lata	Membrane Proteins of bacteria	2018-2019
8.	Dr. Lama Misba	PDT in infection	2019-2021
9.	Dr Khursheed Ali	Nano science AMR	2020-2022
10.	Dr. Yasir	Metagenomics	2021-

M.Phil /MD Guided: Sixteen

Student name	M.Phil Title	Year of award
1. Shahper N Khan	Interaction of aesthetic supplements with carrier protein	2005
2. Barira Islam	Isolation and characterization of S. mutans from Dental caries patients	2005
3. Dr. Imran Sabri	Recovery and Isolation of DNA in some selected samples of forensic significance	2006
4. Saeed-ut Zafar Ali	Study on the spread of of Nosocomial Infection in the Neonatal Intensive care Unit	2007
5. Anis Ahmad	Study on multiple drug resistance in Candida spp. Isolated from Gyanic patients	2007
6. Varun Gupta	Comparative evaluation of efficiency of inhaled ciclesonide to inhaled budesonide in persistent asthma and pharmacogenetic analysis of their response	2008
7. Minhaj Ahmad	Correlation between effect of Angiotensis receptor Telmisartan and angiotensin converting enzyme GENE polymorphisim in Patients with Diabetic Nephropathy.	2008
8. Gaurav K Mittal	To study ACE Gene Insertion/ Deletion polymorphism in Metabolic syndrome	2008
9. Misbhauddin	Comparative clinical evaluation of rosuvastatin versus a combination of atrovastatin and ezetimibe in metabolic syndrome and its pharmacogenetic analysis	2008
10. Shaista Alvi	Studies on multidrug resistance in Diabetic foot patients	2008
11. Abdullah	Pharmacognostical evaluation and studies on nasocomial infection	2009
12. Mohd TP	Molecular Characterization of Gram negative patients patients Clinical settings	2010
13. Danish H Kazmi	Isolation and Molecular Characterization of Candida spp. In Immunocompromised patients.	2011
14. Mayank Soni	A study of association of Adiposenectin gene polymorphism With Breast cancer.	2013
15. Mohd Zavir	Evaluation of host factors and identification of bacterial Species in patients	2013
16. Rafeeque P A	Isolation and molecular characterization GNB in UTI	2013

Collaborations: International/National

i. ***Prof. Patrice Nordmann and Asad U Khan,*** Service de Bactériologie-Virologie, INSERM U914: Hôpital de Bicêtre, Assistance Publique-Hôpitaux de Paris, Faculté de Médecine, Université Paris-Sud, 94275 Le Kremlin-Bicêtre, **France.**

ii. ***Prof Robert A Bonomo and Asad U Khan,***, Louis Stokes Cleveland Department of Veteran Affairs Medical Center, Case Western Reserve University, Cleveland, OH, **USA.**

iii. ***Prof Rafalle Zarrilli and Asad U Khan,,*** Department of Public Health, University of Napoli Federico II, Italy, Naples**, Italy.**

iv. ***Dr*** *Philippe Ortet* ***and Asad U Khan,***, Aix-Marseille Université, CEA, CNRS, LEMiRE, UMR 7265, BIAM, Saint-Paul-lez-Durance, **France.**

v. ***Prof Michael Hampsey and Asad U Khan,***,, Robert Wood Johnson Medical School, RUTGERS, NJ, **USA.**

vi. ***Dr Saba Ansar/ Dr Anis Ahamd and Asad U Khan,,*** Department of Radiation Oncology , Miller School of Medicine/Sylvester Comprehensive Cancer Center, University of Miami , Miami , FL 33136 , **USA.**

vii. ***Dr.*** *Prasanna Neelakantan* ***and Asad U Khan,,*** Discipline of Endodontology, Faculty of Dentistry, The University of Hong Kong, Pok Fu Lam, **Hong Kong, China**

viii. ***Dr Naidu Subarao and Asad U Khan,*** School of Computational and Integrative Sciences, **Jawaharlal Nehru University** , New Delhi , India.

ix. Dr S K Lal ***and Asad U Khan***, ICGEB, New Delhi, India

x. ***Prof Prashant Mishra and Asad U Khan,*** Biochemical Engineering and Biotechnology, **IIT Delhi,** India

xi. ***Dr*** *Pallavi Somvanshi* ***and Asad U Khan,*** Department of Biotechnology, TERI School of Advanced Studies, New Delhi 110070, India.

xii. ***Dr Manish Kumar and Asad U Khan,*** Department of Biophysics, University of Delhi, New Delhi, India.

xiii. ***Dr Beenu Joshi and Asad U Khan,*** Department of Immunology, **National JALMA Institute for Leprosy and Other Mycobacterial Diseases,** Tajganj, Agra, 282004, India.

xiv. ***Dr Praveen K Verma and Asad U Kha,*** **National Institute of Plant Genome Research,** New Delhi, India.

xv. ***Dr Ashok Sharma and Asad U Khan,*** Biotechnology Division, **CSIR-CIMAP**, Lucknow, 226015, India.

xvi. ***Dr.*** *Ramovatar Meena* ***and Asad U Khan,*** School of Environmental Sciences, Jawaharlal Nehru University, New Delhi 110067, India.

Advisor of M.Sc. dissertation: 64 Students

Teaching experience: As Professor of Microbiology (24 years) Nine years teaching experience as Lecturer and **Six** years as **Associate Professor and seven years as Professor** in Biotechnology Unit Aligarh Muslim University, Aligarh, India.

R &D Projects Handled: Sixteen (18) worth of 1545.7 Laks *(PI/ Coordinator of all Projects)

1. *Screening and purification of plant extracts used in Unani system of medicine against microbial flora of oral cavity: antimicrobial and anti-cariogenic activity. CCRUM, Government of India, worth of Rs **18** lakh **2008-2010.**
2. *Proteomics of influenza virus H5N1. DBT worth of **Rs 17.5 lakh (2007-2010)**.
3. *Genetic and Biochemical studies of Transcription Factors……Saccharomyces cerevisiae" CSIR, New Delhi worth of **Rs 13,00000.00/- (2005-2007) (Terminated successfully)**
4. *Studies on Drug resistance in infectious diseases AMU, Minor Research project of UGC, D.no 4602. bt, worth of Rs 350000.00/- **(2004) (Terminated successfully).**
5. *Molecular Biology studies on the deadly H5N1 virus (Indian isolate) and development of a sensitive fluorescence based assay for accurate detection and mapping of the H5N1 virus and its subtypes. DBT worth of **Rs 65 lakh. (2006-2009)**
6. *Screening and purification of herbal extract against dental caries., DST, worth of **Rs 10.5 Lakh (2007-2010)**.
7. *Studies on Multi-drug resistant clinical isolates of Escherichia coli and Klebsiella pneumoniae with special reference to extended-spectrum β-lactamases, AmpC and CTX enzymes to determine the possible mechanism(s) of drug resistance. **DBT,** Government of India worth of Rs. **39 lakh. 2009-2012.**
8. *Screening and characterization of antimicrobial and anti-cariogenic compounds from medicinal plants: a putative drug against dental caries **ICMR,** New Delhi Rs **27 Lakh 2010-2013.**
9. *Designing inhibitors against beta-lactamases: Putative drug candidates against drug resistant bacterial strains of infectious diseases'' DBT, New Delhi

Rs. **36.2 lakhs 2010-2013.**

10. Boost to University Interdisciplinary Life science Departments for Education and Research (**BUILDER**) programme **(Acted as Coordinator) 9.8 Crores.**
11. ***Study on the mechanism of anti-biofilm and apoptotic activity of some medicinal plant extracts on *Candida albicans* UP-CST,** 9 lakh **(2012-2015).**
12. ***Study on antibiofilm action of gold nanoparticles enhanced photodynamic therapy against S. mutans CSIR, New Delhi worth of** Rs 32 Lakh **2013-16.**
13. ***Designing inhibitors against NDM-1: putative drug candidates against MDR bacterial strains " ICMR, New Delhi, worth of Rs.** 39 Lakh **(2013-16).**
14. *Design of Inhibitors against metallo-beta-lactamases and their structural studies to map the drug binding sites" DBT, New Delhi, worth of Rs **65 Lakhs** (2014-2017).
15. ***DST-PURSE Project for 13 Departments (Coordinator) worth of Rupees 35 Crores.**
16. **Coordinator DBT Teaching Programme (2018-2020, 3 years) worth of 1.2 Crores.**
17. Synthesis Characterization and Biological evaluation of photoactive nano-therapeutics against antibiotic resistance ESKAPE infection." DST, New Delhi, 60 Lakh (2017-2020).
18. Influence of glycemic variability on vaginal microbiota in pregnancy: associations with fetomaternal outcomes. ICMR, New Delhi 15 Lakh (2018-2021)

<u>In progress: Four National of 360.00 Laks; One International:</u>

1. DBT-project entitled "Exploring antimicrobial Resistance (AMR) by OMICS approaches (Bioinformatics, Genomics, and Proteomics)-BIC (PI) DBT, New Delhi, **140 Lakh.** (2021-2026).

2. Exploring antimicrobial resistance (AMR) by omics approaches (Bioinformatics, Genomics and Proteomics) DBT-NNP project, New Delhi. 2023-2027. **160 lakh**

3. Localised magnetic-field prompted instant distribution of antimicrobial peptides (AMP) carrying magnetic nano iron (MNPs) composite across thick

dental biofilm matrices: A systematic in vitro tooth model efficacy study. ICMR, New Delhi 2022-2024 **15 lakh**.

4. A NANO PHOTOTHERANOSTIC APPROACH TO TREAT DIABETIC FOOT ULCER [BIRAC/SIIC0600 /BIG-20/22] BIG-BIRAC (18 months) **49.5 lakh**.

5. Elucidating the complex interrelated roles of non-protein coding regions, small proteins and epigenetics towards multidrug resistance in Klebsiella pneumoniae (FRGS/1/2022/SKK06/USM/02/7); FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS), Ministry of Higher Education, Malaysia. **RM 116510/- (RS 22 Lakh)**

National Fellowships and Awards:

1. **TATA Innovation Fellowship** of DBT, Ministry of Science & Technology Government of India , 2022-2023.

2. Recipient of Malviya Memorial Award of Biotech Research Society of India, 2020.

3. Recipient of Prof. Sohail Ahmad Award of Indian Academy of Biomedical Sciences, 2020.

4. Recipient of Visitor's Award 2019 of Government of India.

5. Recipient of **Om Prakash Bhasin Award** of 2019 (https://en.wikipedia.org/wiki/Om_Prakash_Bhasin_Award)

6. Elected Fellow of Royal Society of Chemistry **(FRSC)** (2018)

7. Recipient of ***Wockhardt Excellence Award*** of Jamia Hamdard 2018 (Silver plaque and 3 lakh rupees cash)

8. Recipient of INSA-International Collaborating/Bilateral Exchange programme Award-2017.

9. **Fellow of Biotech Research Society**, India (2014)

10. **Fellow of Indian Academy of Microbiological Sciences** (2014)

11. **"First Recipient" of *Outstanding Research Award*** of the Year 2014 conferred by AMU.

12. Recipient of ***National Bioscience Award for Career Development***" of Government of India, Department of Biotechnology for the year 2012.

13. **SciVal Solution of Elsevier** an International publishing company recognized Asad U Khan as top **third cited author and highest publication** during 2008-2012 in Aligarh Muslim University.

14. Thesis Advisor of 2012 Eli Lilly Outstanding Thesis Awardee

15. Recipient of **DBT-CREST Award of 2011** as visiting fellow in France

16. Recipient of **Most Active Teacher's Award 2010 in** AMU

17. Recipient of **AGD Prize** in 4rth Ditan International Conference on Infectious diseases held Beijing, China during July 15-18, 2010.

18. My Lab received **Most Active Researcher Award** of University in 2010

19. Recipient of **AMI-ALEMBIC Award of 2009** in Medical Microbiology.

20. My Lab received **Most Active Researcher Award** of University in 2009

21. Recipient of **Out Standing Merit Award of 2009** in AMU.

22. Recipient of **DST International Travel Grant** to visit **Cambridge University**, UK. in 2010

23. Recipient of **Young Scientist Award of Association of Microbiologist of India in Medical Microbiology** for the year 2006.

24. **Indian National Science Academy Visiting Fellowship for** the year 2006-07.

25. **BOYSCAST Fellowship** of the year 2004-05 was awarded by Department of Science and Technology, Government of India, New Delhi.

26. Recipient of UGC fellowship for the year 1995-98.

27. Recipient of Senior research fellowship for the year 1997-98

28. Recipient of Junior research fellowship for the year 1995-96.

29. Recipient of DBT fellowship for the year 1992-94.

30. **National test qualified** **A GATE** (Graduate Aptitude Test in Engineering was qualified in the year 1994, conducted by IIT with the percentile of 94.3

Rare honours:

1. Appointed as **Reviewer in Swiss National Science Foundation** funding agency in Switzerland for the scientific evaluation of proposals (2020-onward)
2. My interview quoted in ***Nature*** (https://www.nature.com/articles/d41586-020-02884-3)
3. Appointed as External assessor for Promotion Evaluation of Professor at University of Malaysia Terengganu (2019-onward).

4. Appointed as Member of **Steering committee** for scientific meeting on Antimicrobial Resistance going to be held in London School of Hygiene and tropical medicine, UK January 2019.

5. Appointed as **Panel Expert** "Natural Science" of National Council for Promotion of Urdu Language, MHRD, Government of India, (2019-0nward)

6. Appointed as **Adjunct Professor** in University of Catolica San Antonio de Murcia (UCAM) Spain for the period of two years w.e.f June, 2018.

7. Appointed as **Visiting Professor** in University Malaysia Terengganu, Malaysia for the period of two years w.e.f May 15, 2019.

8. Invited as Team member in **Joint Research Centre of the European Commission** for Survey on Antimicrobial Resistance (2018-onward).

9. Invited by **International Health Management Association, Inc** (IHMA, USA) for Global Antimicrobial surveillance network. (January 2019-December 2019).

10. Appointed as Reviewer to review a research proposal submitted to the executive government agency of National Science Centre, Poland (Narodowe Centrum Nauki - NCN; http://www.ncn.gov.pl).

11. Appointed as **Brand Ambassador** Bentham Science Publishers 2018-onward.

12. **Prof Asad U Khan** of Biotechnology, appointed as **expert member** of steering committee of ***UK Academy of Medical Sciences and Hamied Foundation UK-India AMR Programme*** (2018)

13. Honorary Member of Advisory Board of *Archives of Applied Sciences and Research.*

14. Member of **French public scientific organizations** CNRS and INSERM to **Review Grants.**

15. Member of **Netherlands Organisation for Health Research and Development (ZonMw)** to **reviewer the grant proposals** that have been submitted to the Priority Medicines Antimicrobial Resistance Programme

16. Member of Bioinformatics and computational Biology **Task Force** in DBT, Ministry of Science and Technology, Government of India (2013-2017)

17. Honorary Member of Society of Bioinformatics and Biological Sciences (SBBS).

18. Member of Advisory committee of GBioFin, Gate to Biotechnology Industries, Organization and foundation, India (2014-onward.

19. **Member of Organizing committee** of 5th International conference on Proteomics and Bioinformatics held in Spain, during September 1-3, 2015. (http://proteomicsconference.com/organizing-committee.php)

20. **Member of Organizing committee** 6th International Conference and Expo on Proteomics held on March 29-30, 2016 in Atlanta, USA. http://proteomicsconference.com/america/organizing-committee.php

Interviewed by TV channels and Electronic Media for NDM-4 / MCR 5.1 Discovery:

- LIVE MINT: (2014) https://www.youtube.com/watch?v=GWye03RIh0w
- French TV. (2015)
- Times of India (2014)
- Hindustan Times (2014)
- My research of NDM-4 was taken for Documentary Film on Drug resistance by: Neona Films (https://www.youtube.com/watch?v=R61xH6Yl6h0). (2015)
- Interviewed by Current Radio on 94.1 (2020) on National Science Day, Feb. 28, 2020
- Interviewed by Radiance Views weekly (12-18 April, 2020) on spread of COVID-19 and its research.
- Interviewed by E-TV on my research (http://youtu.be/Bai0ks_n1T4)
- Interviewed by News 18-India on my research (https://youtu.be/MEqwduoH7Zg) at 1.55 pm slot.
- Interviewed by Science Journalist and foreign correspondent, Mr. Benjamin Plackett, UK on antimicrobial resistance and its impact on global economics for a story in ***Nature***.(July 22, 2020)
- My article on Vaccination vs Infection and Disease published by NEWS 18 https://twitter.com/EramAgha/status/1386616392254775299?s=19
- My research covered by TV channel https://youtu.be/7vQFS6HdSX8
- https://www.hindustantimes.com/cities/others/multidrug-resistant-bacterial-gene-found-101655749245911.html
- Discovery of new gene mcr 5.1 was covered by International / National Media (2022):
- https://htiphoneenglish.page.link/download

- https://health.economictimes.indiatimes.com/news/industry/amu-researchers-find-dangerous-drug-resistant-bacterial-gene-in-hospital-waste/92339225

- https://news.careers360.com/amu-researchers-find-dangerous-drug-resistant-bacterial-gene-in-hospital-waste

- https://www.expresspharma.in/researchers-find-dangerous-drug-resistant-bacterial-gene-in-hospital-waste/

- Interviewed by Ajay Mathur Podcast Awaz Radion on My achivenents and Research https://spotifyanchor-web.app.link/e/qoM9SsGIazb

Paper Reviewing Experience of the following Journals PUBLON Links: https://publons.com/researcher/1507217/asad-u-khan/

1. Archives of Biochemistry and Biophysics
2. Experimental Cell Biology.
3. Scientific Report
4. Indian Journal of Clinical Biochemistry
4. Anal of Clinical Microbiology and Antimicrobe
5. Journal of Infections in Developing Countries
6. International Journal of Peptide Research and Therapeutics
7. International Journal of Integrative Biology
8. Advance in Gene, Molecular and Cell Therapy
9. Journal of Proteomics and Bioinformatics
10. Spectrochimica Acta
11. African Journal of Food Science
12. Bioinformation
13. Indian J Biochem Biophys.
14. Biochimica Biophysica Acta
15. Journal of Medicinal Plants Research
16. PLos One
17. Gut Pathogens
18. Cell Biochem Biophys
19. Future Microbiology
20. Molecules
21. BMC Microbiology
22. Briefing in Bioinformatics
23. Journal of Clinical Microbiology
24. Frontiers in Microbiology
25. Microbiology Spectrum

Book Reviewing Experiences:

A book proposal for Bentham Publishing group
A book proposal for Springer

Book Edited:

1. Current trends in antibiotic resistance in infectious diseases, published by ***IK International Publication House*** Pvt Ltd, New Delhi and Bangalore, edited by **Dr Asad U Khan** (2009). ISBN: 978-93-80026-70-1

2. Multi Drug resistance: A global concern, published by ***Bentham Publishing group***, editor: **Asad U Khan,** Co-editor, Raffaele Zarrilli (2011). ISBN: 978-160805-292-9.

Patents Published:

i. **Asad U Khan and Rosina Khan** "A process of isolation of a novel compound "5,8 D1-propyl 1-octahydronaphthalen 1-(2H) one trachyspermum from **Ajowan caraway** seeds effective against Dental caries" **Indian patent Application No.** 24/DEL/2011 **Published** on 23/8/2013. (in granting process).
ii. **Asad U Khan and Mohd Waqar Azam** "Indian patent "CRISPRi edited bacterial strain to improve quality of probiotics" Indian patent Application no. 202011055745 **Published** on 29/01/21.
iii. **Asad U Khan and Farheen Akhtar** "TBO conjugated Chi-AUNPS Mediated photodynamic therapy against diabetic foot ulcer caused by multi drug resistant bacteria" Indian patent application no. 202011046527, **Granted, May 31, 2022 (398290)**

Member of Editorial board:

1. *Associate Editor;* ***Frontier in Antibiotics*** *(2022-onward)*
2. *Associate Editor;* ***Frontier in Microbiology*** *(2022-onward)*

3. *Section Editor* ***Current Indian Science*** *(2022-onward)*
4. Academic Editor; ***PLoS ONE****. (2012-onward)*
5. *Associate Editor;* ***BMC Microbiology (2017-onward).***
6. Associate Editor; ***Microbiological Research*** (Elsevier) (2014-2016)
7. Section Editor; ***Infection Diseases and Translational Medicine*** (2015-onward)
8. Section Associate Editor; ***Bioinformation*** *(2005-onward)*
9. *Panel Editor:* ***Trend in Proteomics and Bioinformatics*** *(2016-onward)*
10. *Member:* ***Asian Pacific Journal of Tropical Medicine*** (Elsevier) (2007-2010)
11. *Member:* ***Genomics Proteomics and Bioinformatics*** (Elsevier) (2009-2013)

Curricular Activities:

Outreach activity to serve science promotion:

1. Organized Science and Communication workshop in collaboration with Welcome trust India alliance on March 26, 2015 to trained 50 Ph.d and Post doc students.
2. Organized an Information session on Indo German collaboration (DAAD) programme for teachers, Ph.D students, and Masters' students on March 17, 2017.
3. Organized Science and Communication workshop in collaboration with Wellcome trust India alliance on April 13 , 2015 to trained 50 Ph.d and Post doc students.
4. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students (50 students were tested and interviewed) for placement in USA/Europe/UK in the year 2012.

5. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students (50 students were tested and interviewed) for placement in USA/Europe/UK in the year 2013
6. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (50 students were tested and interviewed) in the year 2014
7. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students (50 students were tested and interviewed) for placement in USA/Europe/UK in the year 2014
8. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (50 students were tested and interviewed) in the year 2015
9. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (50 students were tested and interviewed) in the year 2016
10. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (50 students were tested and interviewed) in the year 2017.
11. Organized USA based Sir Syed Emerging Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (70 students were tested and interviewed) in the year 2018.
12. Organized USA based Sir Syed Global Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (75 students were tested and interviewed) in the year 2019
13. Organized USA based Sir Syed Global Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (group of students was interviewed) in the year 2020.
14. Organized USA based Sir Syed Global Scholarship Award for Graduate and post graduate students for placement in USA/Europe/UK (group of students was interviewed) in the year 2021.

Experience of Event Organisations: National and International conferences/workshop/ seminars:

1. Organizing secretary of Workshop on “In silico analysis of bio-macromolecules “during March 16-17, 2010
2. Organizing secretary of Workshop on Current Advances in Bioinformatics during March 7-9, 2011
3. Convener of Workshop on Bioinformatics in Drug Discovery during March 21-22, 2012.
4. Convener of National Symposium on “Trends in Bio-molecular Interactions” and 20th Bioinformatics workshop on “Current Advances in Bioinformatics” scheduled to be held at this Unit during March 13-14, 2013
5. Organizing Chairman and Convener of National Symposium cum Bioinformatics Workshop. on “New Facet of Biotechnology from Genes to Proteins” scheduled to be held at this Unit during January 15-17, 2014
6. Organizing Chairman and Convener of National Symposium cum Bioinformatics Workshop on Macromolecular interactions during March 25-26, 2015
7. Organizing Chairman and Convener of National Symposium cum Bioinformatics Workshop on Macromolecular structure, function, interaction and prediction during March 29-30, 2016
8. Organizing secretary of National Symposium cum Bioinformatics Workshop on “Current Trends in Proteomics and Bioinformatics” during March 16-17, ,2017.
9. Organizing secretary of National Symposium cum Bioinformatics Workshop on Trends in Genomics: Congruence with Contemporary Biotechnological Tools during March 20-21, 2018
10. Organizing Chairman and Convener of an **International conference** on “Future Modalities in Diagnostics Therapeutics and theranostics” held in IBU, AMU Aligarh during December 29-31, 2018.
11. Organizing Chairman and Convener of an **International conference** on “Genomics and Proteomics pertaining Biological sciences.” held in IBU, AMU Aligarh during November 5-7, 2019.
12. Organizing Chairman of National Symposium cum workshop on “ Exploring Biology Through Macromolecules” held in IBU, AMU Aligarh during February 26-27, 2020.
13. Organizing Chairman and convener of International Webinar on “ Post COVID Antimicrobial resistance : a global challenge” on August 11, 2020 in IBU. Aligarh.

14. Organize Web Series of lectures on October1, 2020 on "Emerging and remerging viral zoonosis"
15. Organize International Web talk series as **coordinator** of centenary celebration in faculty of life sciences " Advances in Biological sciences" Six talk of different department were organized during 5-10 November, 2020.
16. Organized International Webinar on " Antimicrobial Awareness week" on November 23, 2020. Two International talked by eminent scientist from Switzerland and Italy were Organized.
17. Organized National Webinar on " Academics to Start-ups" on July 14, 2021 in IQAC in collaboration with FDIEC.
18. Organized International Webinar on Current status and Future Challenges of Antimicrobial Resistance" during February 6-8, 2023 in Biotechnology Unit AMU Aligarh.

Citations: 14700 H-Index: 59 i10 Index: 243

These citations are in Journals like; ***Cell, Nature Biotechnology, EMBO J, JBC and MCB, NAR*** and many more.

Selected Publications: Average Impact Factor: 9.2

***/# corresponding author**

1. Beg AZ, Rashid F, Talat A, Haseen MA, Raza N, Akhtar K, Dueholm MKD, **Khan AU.**Functional Amyloids in Pseudomonas aeruginosa Are Essential for the Proteome Modulation That Leads to Pathoadaptation in Pulmonary Niches. Microbiol Spectr. 2022 Dec 10(5):e0045022doi: 10.1128/spectrum.03071-22. **(IF: 9)**
2. **Talat A**, Blake KS, Dantas G, **Khan AU.**Metagenomic Insight into Microbiome and Antibiotic Resistance Genes of High Clinical Concern in Urban and Rural Hospital Wastewater of Northern India Origin: a Major Reservoir of Antimicrobial Resistance. Microbiol Spectr. 2023 Feb 14;11(2):e0410222. doi: 10.1128/spectrum.04102-22 **(IF: 9)**

3. Ali K, Zaidi S, Khan AA, **Khan AU.**Orally fed EGCG coronate food released TiO_2 and enhanced penetrability into body organs via gut. Biomater Adv. 2023 Jan;144:213205. doi: 10.1016/j.bioadv.2022.213205. (**IF: 8.5)**

4. Farhat N, Gupta D, Ali A, Kumar Y, Akhtar F, Kulanthaivel S, Mishra P, Khan F, **Khan AU.**Broad-Spectrum Inhibitors against Class A, B, and C Type β-Lactamases to Block the Hydrolysis against Antibiotics: Kinetics and Structural Characterization. Microbiol Spectr. 2022 Oct 26;10(5):e0045022. doi: 10.1128/spectrum.00450-22 **(IF: 9)**

5. Azam MW, **Khan AU.**CRISPRi-mediated suppression of *E. coli* Nissle 1917 virulence factors: A strategy for creating an engineered probiotic using *csgD* gene suppression. Front Nutr. 2022 Aug 1;9:938989. doi: 10.3389/fnut.2022.938989. **(IF: 6.5)**

6. Akhtar F, Khan AU*, Qazi B, Gru S, Mishra P, Ahmad K and Ali A "A nano phototheranostic approach of toluidine blue conjugated gold silver core shells mediated photodynamic therapy to treat diabetic foot ulcer" ***Scientific Report*** 2021, 11(1):24464, **(If: 5)**

7. Akhtar F, **Khan AU*,** Misba L, Akhtar, K and Ali A "Antimicrobial and antibiofilm photodynamic therapy against vancomycin resistant Staphylococcus aureus (VRSA) induced infection in vitro and in vivo "***European Journal of Pharmaceutics and Biopharmaceutics***, 2021, 160: 65-76. **(IF: 5.5)**

8. Farhat N, Ali A, Bonomo, RA and **Khan AU**[#] " Efflux pump as an intervention to control infection cause by drug resistance bacteria " ***Drug Dis Today*** 2020, S1359-6446(20) 30385-8 **(IF: 8.3).**

9. Ali A, Kumar R, Khan A, **Khan AU**[#]. " Interaction of LysM BON family protein domain with carbapenems: A putative mechanism of carbapenem resistance. ***Int J Biol Macromol.*** 2020 May 25:S0141-8130(20)33329-8. doi: 10.1016/j.ijbiomac.2020.05.172. (IF**: 8**)

10. Parvez S, Misba L, Ahmad QT, **Khan AU**[#] "Emergence of Extremely Drug-Resistant and Uropathogenic New Delhi Metallo-<beta>-Lactamse-6 (blaNDM-6) producing Citrobacter werkmanii" ***International Journal of Antimicrobial Agents*** (2019) 53(5):703-704. **(IF: 15.4).**

11. Ahmad N, Ali, SM and **Khan AU**[#]**,** "Molecular characterization of novel sequence type of carbapenem-resistant NDM-1 producing Klebsiella pneumoniae in NICU of Indian Hospital" ***International Journal of Antimicrobial Agents*** (2019) S0924-8579(18)30367-4. (**IF: 15.4).**

12. Azam MW, **Khan AU**[#] "Updates on the pathogenicity status of Pseudomonas aeruginosa. *Drug Discov. Today*. 2019; 24(1):350-359.(**IF: 8.3)**

13. Sharma D, Garg A, Kumar M and **Khan AU**[#] "Down regulation of flagellar, fimbriae & pili proteins in carbapenem resistant Klebsiella pneumoniae (NDM-4) clinical isolates: A novel linkage to drug resistance " ***Front Microbiol*** (2019). 10: 2865. doi: 10.3389/fmicb.2019.02865.(**IF: 6).**

14. Ali, A; Gupta, D; **Khan, AU**[#] " Role of non-active site residues in maintaining New Delhi metallo-β-lactamase-1(NDM-1)function: an approach of site directed mutagenesis and docking" ***FEMS Micr. Lett*** 2019 doi: 10.1093/femsle/fnz003 (IF**: 2.8)**

15. Parvez S and **Khan AU**[#] "Hospital Sewage Water - A Reservoir for Variants of New Delhi Metallo-<beta>-Lactamase (blaNDM) and ESBL-Producing Enterobacteriaceae. ***International Journal of Antimicrobial Agents*** 2018, 51(1):82-88. (IF**: 15.3).**
16. Maryam L and **Khan AU**[#] "Combination of aztreonam and cefotaxime against CTX-M-15 type β-lactamases: a mechanism based effective therapeutic approach " ***International Journal of Biological Macromolecules*** 116:1186-1195. doi: 10.1016/j.ijbiomac.2018.05.153. (IF: **8**)
17. Ali, A and **Khan AU**[#] "Non-Active site mutation (Q123A) in New Delhi metalo-β lactamase (NDM-1) enhanced its enzyme activity" ***Int J Biological Macromolecule*** 2018 112:1272-1277 (IF**: 8)**
18. Ahmad N, Ali, SM and **Khan AU**[#] " First reported New Delhi metallo-lactamase-1 producing Cedecea lepagei" ***International Journal of Antimicob. Agents*** (2017) 49 :112–123 (IF: **15.3**).
19. Zuberi A Ahmad N and **Khan AU**[#] " CRISPRi induced suppression of fimbriae gene (fimH) of a Uropathogenic Escherichia coli: a novel therapeutic approach against the battle between microbial biofilms and host immunity" ***Front. Immunology*** 2017, 13;8:1552. doi: 10.3389/fimmu.2017.01552 (IF**: 8.7).**
20. Khan S, Khan SN, Meena R, Dar AM, Pal R and **Khan AU**[#] "Photoinactivation of multidrug resistant bacteria by monomeric methylene blue conjugated gold nanoparticles" ***Journal of Photochemistry & Photobiology, B: Biology*** 2017, 174:150-161. (IF**: 6.8)**
21. Zuberi, A, Misba, L and **Khan AU**[#]**,** "CRISPR interference (CRISPRi) inhibition of luxS gene expression in E. coli: an approach to inhibit biofilm. ***Front. Cell. Infect. Microbiol.*** 2017; 7:214. https://doi.org/10.3389/fcimb.2017.00214. (IF**: 6).**
22. Danishuddin and **Khan AU**[#] "Descriptors and their selection methods in QSAR analysis: Paradigm for Drug Design" ***Drug Dis. Today*** (2016) 21(8):1291-302 (IF: **8.3**).
23. **Khan AU**[#] and Rehman MT "Role of non-active site residue Trp-93 in the function and stability of New Delhi Metallo-β-Lactamase-1 (NDM-1)" ***Antimicrobial Agent Chemotherapy*** 2015 Nov 2;60(1):356-60. **(IF: 5.1).**
24. Ahmad, A., Ahmad, A., Varshney, H., Rauf, A., Rehan, M., Subbarao, N., **Khan A.U.,** "Designing and Synthesis of Novel Antimicrobial Heterocyclic Analogs of Fatty Acids" ***European Journal of Medicinal Chemistry*** (2013) 70C:887-900. (**IF: 6.5**).
25. Islam B,Shaper N. Khan, Irfanul Haque, M. Alam, M. Mushfiq and Asad U. Khan[#] "Novel anti-adherence activity of Mulberry Leaves: Inhibition of Streptococcus mutans Biofilm by 1-Deoxynojirimycin isolated from Morus alba" ***Journal of Antimicrobial Chemotherapy*** (2008) 62: 751-757 (IP: **5.8).**
26. Shakil S, Khan Rosina, Zarrilli, R and Khan AU[*], "Aminoglycosides Versus Bacteria-A description of the action, resistance mechanism and nosocomial battleground" ***Journal of Biomedical Science.*** (2008) 15, 5-14 (**IF: 12.02).**
27. A. Di Popolo, A.U. Khan, Z. Daoud, M. Bagattini, C. Afif, M. Triassi, N.I. Hakimé, R. Zarrilli "Epidemiology and mechanism of resistance of an outbreak of

multidrug-resistant Acinetobacter baumannii at in a Lebanese hospital International Journal of Antimicrobial Agents , 2007 : 29 Supplement 2 , S269 (**IF: 15.3)**

28. Xiaoyuan He, **Asad U Khan,** Hailing Cheng, , Donald Papas , Michael Hampsey, and Clair Moore " Functional Interaction between the Transcription and mRNA 3'-end Processing Machineries mediated by Ssu72 and Sub1" ***Genes & Development*** (2003) 17: 1030-1042. (IF: **11.3)**
29. **Khan, A.U*.** and Hampsey M, "Connecting the DOTs: Covalent histone modifications and the formation of silent chromatin" ***TRENDS in Genetics*** (2002) 18: 387-389. (**IF: 11.2)**

Research Publication: Total 261: Average IF: >5

1. Khalid S, Migliaccio A, Zarrilli R and **Khan AU** "Efficacy of Novel Combinations of Antibiotics against Multidrug-Resistant- New Delhi metallo-beta-lactamase-Producing Strains of *Enterobacterales" A**ntibiotics 2023*** (in press) (IF: 4.8)

2. Waqar MA Zarrilli R and Khan AU "Updates on the Virulence Factors Produced by Multidrug-Resistant Enterobacterales and Strategies to Control Their Infections" ***Microorganisms*** 2023 (in press) (IF: 4.5)

3. Farooq S and Khan AU "Current update on New Delhi Metallo-β-lactamase (NDM) variants: new challenges in the journey of evolution" ***Current Protein & Peptide Science*** 2023 (in press)

4. Zaidi S, Ali K, Chawla YM, Khan AU "mltG gene deletion mitigated virulence potential of Streptococcus mutans: An in-vitro, ex-situ and in-vivo study" ***Applied Microbiology Biotechnology-Express*** 2023, 13(1):19 (IF: 4.2)

5. Zaidi S, Ali K, **Khan AU** "It's all relative: analyzing microbiome compositions, pathogenesis and microbiota derived biofilms: Challenges and opportunities for disease intervention" ***Arch Microbiol*** : 2023, 205(7):257.

6. Talat A, Miranda C, Poeta P, Khan AU. Farm to Table: colistin resistance hitchhiking through food. ***Arch Microbiol*** 2023; 205: 167. doi: 10.1007/s00203-023-03476-1

7. Ali K, Zaidi S, Khan A, **Khan AU** "Orally fed EGCG coronate food released TiO2 and enhanced penetrability into body organs via gut "***Biomaterials Advances*** 2023; 144; 213205 (**IF: 8.5)**

8. Talat A, **Khan AU.** "Artificial intelligence as a smart approach to develop antimicrobial drug molecules: a paradigm to combat drug-resistant infections. ***Drug Discov Today.*** 2023 Jan 13:103491. doi: 10.1016/j.drudis.2023.103491.(IF: 8.3)

9. Beg AZ, Rashid F, Talat A, Haseen MA, Raza N, Akhtar, K, Dueholm MKD, Khan AU* "Functional amyloids in Pseudomonas aeruginosa are essential for modulating proteome leading to pathoadaptation in pulmonary niches" ***Microbiology Spectrum (ASM),*** 2022 (In press) **(IF: 9)**

10. Farhat N, Gupta D, Ali A, Kumar Y, Akhtar F, KulanthaivelS, Sharma P, Khan F, **Khan AU*,** "Broad spectrum Inhibitors against class A, B, C type β-lactamases to block the hydrolysis against antibiotics: Kinetics and structural characterization "***Microbiology Spectrum*** (ASM), 2022; 10(5):e004502. doi: 10.1128/spectrum.00450-22. **(IF: 9)**

11. Bashir Y and Khan AU "The interplay between the gut-brain axic and the microbiome: A perspective on psychiatrics and neurodegenerative discorder" ***Front Neurosci,*** 2022; (IF: 6) https://doi.org/10.3389/fnins.2022.1030694

12. Farhat N and **Khan AU*,** "Possible therapeutic approaches to combat a global antibiotic resistance challenge" ***Future Microbiology*** (2022) in press, DOI no. 10.2217/fmb-2022-0052. (IF: 3.6)

13. Azam MW and **Khan AU** "CRISPRi mediated suppression of E. coli Nissle 1917 virulence factors: a strategy for safe probiotic using csgD gene suppression" ***Frontiers in Nutrition,*** 2022; 9:938989. (IF: 6.5)

14. Zaidi S, Aswal M, Rashid F, Kumar M, Khan AU "Protein expression profiling, In-silico classification and pathway analysis of cariogenic bacteria Streptococcus mutans under bacitracin stress conditions" ***Journal of Medical Microbiology*** (2022) 71(8). doi: 10.1099/jmm.0.001572

15. Farhat N, Ali A, Waheed M, Gupta D, Khan AU, "Chemically synthesised flavone and coumarin based isoxazole derivatives as broad-spectrum inhibitors of Serine β-lactamases and Metallo-β-lactamases: a computational, biophysical and biochemical study" ***Journal of Biomolecular Structure & Dynamics*** (2022) 18:1-11. doi: 10.1080/07391102.2022.2099977 (IF: 4.1)

16. Khan IS, Faiyaz Z and Khan AU "Use of crispr in infection control" ***Curr Protein Peptide Science*** (2022) (in press) doi: 10.2174/1389203723666220627152112.

17. Talat A, Usmani [A], Khan AU "Detection of E. coli IncX1 plasmid mediated mcr-5.1 gene in an Indian hospital sewage water using shotgun metagenomic sequencing A First Report" ***Microbial Drug Res.*** (2022), 28(7):759-764. (IF: 3.4)

18. Zaidi S, Bhardwaj T, Somvanshi P, Khan AU "Proteomic characterization and target identification against Streptococcus mutans under bacitracin stress conditions using LC-MS and subtractive proteomics" ***Protein J*** 2022 41(1):166-178. (IF 2.3).

19. Talat A, Bashir Y and Khan AU "Repurposing of antibiotics: Sense or non-sense" ***Frontiers in Pharmacol*** 20022, 13:833005. (IF: 6)

20. Zuberi A, Azam MW and Khan AU "CRISPR Interference (CRISPRi) mediated suppression of ompR gene in E. coli: An alternative approach to inhibit biofilm " ***Curr. Microbiology*** 2022 79(3):78 (IF: 2.6).

21. Qamar M, sultanat, shafiullah, Khan AU, Ali A, Farhat N "One pot facile synthesis of flavanoidal oxadiazinanones: In vitro antibacterial activity, Docking and MD simulation using DNA gyrase" ***J Mol Structure*** (IF: 3.8) 1251, 5 March 2022, 131944

22. Rafat D, Singh S, Nawab T, Khan F, Khan AU, Khalid S "Association of vaginal dysbiosis and gestational diabetes mellitus with adverse perinatal outcomes Clinical Article" International Journal of Gynecology & Obstetrics, 2022, 158(1):70-78. (IF: 4.4)

23. ZIA A, Hakim S, **KHAN AU,** BEY A, ; Ateeq H, Parveen S, Khalid A, ; Yusufi ANK. "Bone markers and bone mineral density associates with Periodontitis in females with Poly-Cystic Ovarian Syndrome" ***Journal of Bone and Mineral Metabolism*** 2022; 40(3):487-497. (IF: 2.9)

24. Akhtar F, Khan AU*, Qazi B, Gru S, Mishra P, Ahmad K and Ali A " A nano phototheranostic approach of toluidine blue conjugated gold silver core shells mediated photodynamic therapy to treat diabetic foot ulcer" ***Scientific Report*** 2021, 11(1):24464, (If: 5)

25. Akhtar F and **Khan AU** "Antimicrobial photodynamic therapy (aPDT) against vancomycin resistant Staphylococcus aureus (VRSA) biofilm disruption: a putative role of phagocytosis in infection control" ***Photodiagnosis and Photodynamic Therapy*** 2022; 36:102552. doi: 10.1016/j.pdpdt.2021.102552 (IF: 3.6)

26. Farhat N and Khan AU "Repurposing Drug molecule against SARS-Cov-2 (COVID-19) through Molecular Docking and dynamics: a quick approach to pick FDA approved drugs" ***Journal of Mol Modelling.*** 2021; 27(11):312 (IF: 2.5)

27. Beg AZ Farhat N and **Khan AU** "Designing multi-epitope vaccine candidates against functional amyloids in Pseudomonas aeruginosa through immunoinformatic and structural bioinformatics approach" ***Infection, Genetics and Evolution*** 2021, 93:104982. (IF: 4.4)

28. Khan, S., Rafat, D., Khan, A.U., Rahman, S.Z., Farhat, N. Application of saliva in covid-19 diagnosis: Challenges and opportunities. Bangladesh Journal of Medical Science, 2021, 20(4), pp. 697–699

29. Akhtar F, Khan AU*, Misba L, Akhtar, K and Ali A "Antimicrobial and antibiofilm photodynamic therapy against vancomycin resistant Staphylococcus aureus (VRSA) induced infection in vitro and in vivo " European Journal of Pharmaceutics and Biopharmaceutics, 2021, 160: 65-76. (IF: 5.5)

30. Talat A, Khan AU "Vaccines against antimicrobial resistance: a promising escape route for multidrug resistance." Pharm Pat Anal. 2021 Mar;10(2):83-98.

31. Farhat N, Ali A, Bonomo, RA and Khan AU[#] " Efflux pump as an intervention to control infection cause by drug resistance bacteria " ***Drug Dis Today*** 2020, S1359-6446(20) 30385-8 (IF: 8.3).

32. Khan, S, Khan SN, Akhtar F, Misba L, Meena R and Khan AU[#] "Inhibition of multi-drug resistant Klebsiella pneumoniae: nanoparticles induced photoinactivation in presence of efflux pump inhibitor" ***European Journal of Pharmaceutics and Biopharmaceutics*** 2020, 157: 165-174. (IF: 5.5)

33. Farhat N and Khan AU[#] "Evolving trends of New Delhi Metallo-betalactamse (NDM) variants: a threat to antimicrobial resistance " ***Infection, Genetics and Evolution*** 2020, 86: 104588 (IF: 4.4)

34. Beg AZ, Khan AU[#] "Motifs and interface amino acid-mediated regulation of amyloid biogenesis in microbes to humans: potential targets for intervention." ***Biophys Rev***. 2020 Sep 15. doi: 10.1007/s12551-020-00759-5 (IF: 4)

35. Parvez S, Khan AU[#], Kaur, G, Barakat, M, Ortet P, Mayilraj S, " An insight into the genome of extensively drug-resistant and uropathogenic Citrobacter werkmanii " ***Journal of Global Antimicrobial Resistance*** 2020, S2213-7165(20)30156-9 (IF: 4.3)

36. Talat A and Khan AU[#] "Patents in chemotherapy: Nanoparticles as drug-delivery vehicles" ***Pharmaceutical Patent Analyst*** 2020, 9(4):117-119.

37. Gupta D, Singh A, Somvanshi P, Singh, A, and Khan AU[#], "Structure-based screening of non β-lactam inhibitors against class D β-lactamases: an approach of docking and molecular dynamics" ***ACS Omega*** 2020; 5(16):9356-9365. (IF:4.1)

38. Azam MW, Kumar A, Khan AU[#] "ACD: Antimicrobial chemotherapeutics database" Plos One 2020, 15(6):e0235193 (If:4)

39. Azam MW, Zuberi A, Khan AU[#] " bolA gene involved in curli amyloids and fimbriae production in E. coli: Exploring pathways to inhibit biofilm and amyloid formation" ***Journal of Biological Research-Thessaloniki*** 2020, 27: 10. (IF: 2.9)

40. Maryam L, Ali A, Khalid S, Khan AU[#] "A mechanistic approach to prove the efficacy of combination therapy against New Delhi metallo-β-lactamases producing bacterial strain: a molecular and biochemical approach. ***Eur J Med Res.*** 2020 Jun 3;25(1):19. (IF: 4.9)

41. Zaidi S, Singh SL, Khan AU[#] "Exploring antibiofilm potential of bacitracin against streptococcus mutans" ***Microbial Pathogenesis*** 2020, 5:104279. (If: 3.8)

42. Talat A, Khalid S, Majeed HAR, Khan AU[#] Whole-genome sequence analysis of multidrug-resistant Staphylococcus epidermidis ST35 strain isolated from human ear infection of an Iraqi patient. ***J Glob Antimicrob Resist***. 2020 Apr 3;21:318-320. (IF 4.3)

43. Ali A, Kumar R, Khan A, Khan AU[#]. " Interaction of LysM BON family protein domain with carbapenems: A putative mechanism of carbapenem resistance. ***Int J Biol Macromol.*** 2020 May 25:S0141-8130(20)33329-8. doi: 10.1016/j.ijbiomac.2020.05.172. (IF: 8)

44. Khalid S, Ahmad N, Ali SM and Khan AU[#] " Outbreak of efficiently transferred carbapenem-resistant NDM-producing Gram-negative bacilli isolated from NICU of an Indian Hospital" ***Microbial Drug Resistance*** (2020) 26(3):284-289 (IF: 3.7)

45. Ahmad N, Ali SM and Khan AU[#] "Co-existence of blaNDM-1 and blaVIM-1 producing Moellerella wisconsensis in NICU of North Indian Hospital: a first report". ***JIDC*** 2020, 14(2):228-231. (IF: 2.5)

46. Ali, A, Kumar , R, Iquebal , MA, Jaiswal , S, Kumar D, and Khan AU[#], "Role of conserved residues in catalytic activity of NDM-1: an approach of site directed mutagenesis and molecular dynamics" ***Physical Chemistry Chemical Physics***, 2019, 21, 17821 (IF: 3.9).

47. Sharma D, Garg A, Kumar M and Khan AU[#] "Down regulation of flagellar, fimbriae & pili proteins in carbapenem resistant Klebsiella pneumoniae (NDM-4) clinical isolates: A novel linkage to drug resistance " ***Front Microbiol*** (2019). 10: 2865. doi: 10.3389/fmicb.2019.02865.(IF: 6).

48. Abdulrahman H, Misba L, Ahmad S, Khan AU[#]." Curcumin induced photodynamic therapy mediated suppression of quorum sensing pathway of Pseudomonas aeruginosa: An approach to inhibit biofilm in vitro." ***Photodiagnosis Photodyn Ther.*** 2019 Dec 31:101645. doi: 10.1016/j.pdpdt.2019. (IF: 3.6)

49. Rehman A, Ullah R, Gupta D, Khan MAH, Rehman L, Beg MA, Khan AU, Abidi SMA." Generation of oxidative stress and induction of apoptotic like events in curcumin and thymoquinone treated adult Fasciola gigantica worms." ***Exp Parasitol.*** 2020 209: 107810. doi: 10.1016/j.exppara.2019. (IF: 2)

50. Shahper N Khan, SN, Khan, S, Misba L, Sharief, M, Hashmi, A Khan A U[#] "Synergistic fungicidal activity with low doses of eugenol and amphotericin B against Candida albicans" BBRC (2019) 20;518(3):459-464 (IF: 3.6)

51. Ahmad M and Khan AU[#], " Global Economic impact of Antibiotic resistance: A review" ***J Global Antimicrobial Resistance,*** 2019 , 19: 313-316 (IF: 4.3)

52. Sharma D, Misba L and Khan AU[#] "Antibiotics versus Biofilm: an emerging battleground in microbial communities" ***Antimicrobial Resistance & Infection Control*** , 2019 8:76. doi: 10.1186/s13756-019-0533-3 (IF: 5.1).

53. Misba L, Majeed H Khan AU[#] "Photodynamic efficacy of toluidine blue O against mono species and dual species bacterial biofilm ***Photodiagnosis and Photodynamic Therapy,*** 2019 , 26: 383-388. (IF: 3.6

54. Sharma D, Garg A, Kumar M, Khan AU[#]. "Proteome profiling of carbapenem-resistant K. pneumoniae clinical isolate (NDM-4): Exploring the mechanism of resistance and potential drug targets. ***J Proteomics.*** 2019; 200:102-110. (IF: 3.8).

55. Sharma, D., Lata, M., Faheem, M., Khan, AU., Joshi, B., Venkatesan, K., Shukla, S., and Bisht, D. Role of M. tuberculosis protein Rv2005c in the aminoglycosides resistance. ***Microbial Pathogenesis,*** 2019, S0882-4010(19)30561-3. (IF: 3.8)

56. Maryam, L, Khalid, S, Ali, A and Khan, AU[#] "Synergistic effect of doripenem in combination with cefoxitin and tetracycline in inhibiting NDM-1 producing bacteria" ***Future Microbiology*** 2019, 14: https://doi.org/10.2217/fmb-2019-0032 (IF: 3.5)

57. Parvez S, Misba L, Ahmad QT, Khan AU[#] "Emergence of Extremely Drug-Resistant and Uropathogenic New Delhi Metallo-<beta>-Lactamse-6 (blaNDM-6) producing Citrobacter werkmanii" ***International Journal of Antimicrobial Agents*** (2019) 53(5):703-704. (IF: 15.4).

58. Ahmad N, Ali, SM and Khan AU[#], "Molecular characterization of novel sequence type of carbapenem-resistant NDM-1 producing Klebsiella pneumoniae in NICU of Indian Hospital" ***International Journal of Antimicrobial Agents*** (2019) S0924-8579(18)30367-4. (IF: 15.4).

59. Maryam, L, Khalid Shamsi, Ali A, Khan AU[#] "Significant role of Asn-247 and Arg-64 residues in close proximity of active site in maintaining catalytic function of CTX-M-15 type β-lactamase" ***RSC Advance***, 2019; 9, 5325 (IF: 4)

60. Ali, A; Gupta, D; Khan, AU[#] " Role of non-active site residues in maintaining New Delhi metallo-β-lactamase-1(NDM-1)function: an approach of site directed mutagenesis and docking" ***FEMS Micr. Lett*** 2019 doi: 10.1093/femsle/fnz003 (IF: 2.8)

61. Azam MW, Khan AU[#] "Updates on the pathogenicity status of Pseudomonas aeruginosa. ***Drug Discov. Today***. 2019; 24(1):350-359.(IF: 8.3)

62. Beg A Z and Khan AU[#], "Exploring bacterial resistome and resistance dessemination: an approach of whole genome sequencing" ***Fut. Med. Chem.*** 2019 Feb 25. doi: 10.4155/fmc-2018-0201 (IF: 4.7)

63. Rehman A Ullah R, Gupta D, Khan MAH, Rehman L, Beg MA Khan AU, Abidi, SMA "Generation of oxidative stress and induction of apoptotic like events in curcumin and thymoquinone treated adult Fasciola gigantica worms" Experimental Parasitology (2020) 209:107810. (IF: 2.1)

64. Qayyum S, Sharma D, Bisht D, Khan AU[#]." Identification of factors involved in Enterococcus faecalis biofilm under quercetin stress. ***Microb Pathog.*** 2018 Nov 10;126:205-211. (IF 3.8)

65. Sharma, D and Khan AU[#] "Role of cell division protein divIVA in Enterococcus faecalis pathogenesis, biofilm and drug resistance: A future perspective by in silico approaches" ***Microbial Pathogenesis*** 2018, 125:361-365 (IF: 3.8).

66. Khan S, Ali A, Khan AU[#], " Structural and functional insight of New Delhi Metallo β-lactamase-1 (NDM-1) variants" ***Future Medicinal Chemistry*** 2018 Jan;10(2):221-229. (IF: 4.7)

67. Maryam L, Sharma, A, Azam, MW, Khan, SN and Khan AU[#] "Understanding the mode of binding mechanism of doripenem to human serum albumin: spectroscopic and molecular docking approaches" ***Journal of Molecular Recognition,*** 2018 31(7):e2710. doi: 10.1002/jmr.2710, (IF: 2.8).

68. Beg, AZ and Khan AU[#] "Genome analyses of blaNDM4 carrying ST 315 Escherichia coli isolate from sewage water of one of the Indian hospitals" ***Gut Pathogens*** , 2018, 924;10:17. doi: 10.1186/s13099-018-0247-8 (IF: 5.3).

69. Kulshrestha, S and Khan AU[#] "Nanomedicine for anticancer and antimicrobial treatment: An overview" ***IET Nanobiotechnology*** 2018, 12(8):1009-1017. (IF: 2)

70. Sharma D, Bisht, D, Khan, AU[#] "Potential alternative strategy against drug resistant tuberculosis: A proteomics prospect" ***Proteomes*** 2018, 6(2). pii: E26. doi: 10.3390/proteomes6020026 (IF: 4)

71. Maryam L and Khan AU[#] "Combination of aztreonam and cefotaxime against CTX-M-15 type β-lactamases: a mechanism based effective therapeutic approach " ***International Journal of Biological Macromolecules*** 116:1186-1195. doi: 10.1016/j.ijbiomac.2018.05.153. (IF: 8)

72. Ahmad N, Ali, M and Khan AU[#]. "Detection of New Delhi Metallo-β-Lactamase Variants NDM-4, NDM-5 and NDM-7 in Enterobacter aerogenes Isolated from Neonatal Intensive Care Unit of North India Hospital: A First Report" for Microbial Drug Resistance." ***Microbial Drug Resistance*** 2018, 24; 161-165 (IF: 3.5).

73. Ali A, Gupta D, Srivastava G, Sharma A, Khan AU[#] "Molecular and computational approaches to understand resistance of New Delhi Metallo β- lactamase variants (NDM-1, NDM-4, NDM-5, NDM-6, NDM-7)-producing strains against carbapenems. ***J Biomol Struct Dyn.*** 2018 May 11:1-40. doi: 10.1080/07391102.2018.1475261(IF: 4.1)

74. Misba L, Zaidi S, and Khan AU[#] "Efficacy of photodynamic therapy against Streptococcus mutans biofilm: Role of singlet oxygen" ***Journal of Photochemistry & Photobiology, B:*** Biology 2018, 183: 16-21 (IF: 6.8).

75. Ahmad N, Khalid S, Ali, MA, and Khan AU[#] "Occurrence of blaNDM variants among Enterobacteriaceae from a Neonatal Intensive Care Unit in a northern India hospital" ***Front. Microbiol.*** (2018) 9: 407. (IF: 6)

76. Ali, A and Khan AU[#] "Non-Active site mutation (Q123A) in New Delhi metalo-β lactamase (NDM-1) enhanced its enzyme activity" ***Int J Biological Macromolecule*** 2018 112:1272-1277 (IF: 8)

77. Zuberi A Ahmad N and Khan AU[#] " CRISPRi induced suppression of fimbriae gene (fimH) of a Uropathogenic Escherichia coli: a novel therapeutic approach against the battle between microbial biofilms and host immunity" ***Front. Immunology*** 2017, 13;8:1552. doi: 10.3389/fimmu.2017.01552 (IF: 8.7).

78. Khan AU[#] , Beg AZ and Verma PK " Draft Genome Sequence of the First New Delhi Metallo--Lactamase-4- Producing Escherichia coli Strain (AK1), Isolated from Sewage Water of a North Indian Hospital" ***Genome Announcements*** (ASM) 5(50). pii: e01366-17.

79. Parveen H, Alatawi RAS, El Sayed NH, Hasan S, Mukhtar S, Khan AU "Novel Pyrazoline-based Organometallic Compounds Containing Ferrocenyl and Quinoline units: Synthesis, Characterization and Microbial susceptibilities" ***Applied Organometallic Chemistry.,*** 2018; 32(4) e4257. (IF: 4)

80. Parveen H, Alatawi RAS, El Sayed NH, Hasan S, Mukhtar S, Khan AU,, "Synthesis, Characterization and Biological Evaluation of Some Novel Nitrogen and Sulphur containing Organometallic Heterocycles" ***Arabian Journal of Chemistry*** (2017) 10, 1098–1106 (If: 6.2)

81. Misba L and Khan AU[#] " Enhanced photodynamic therapy using light fractionation against S. mutans biofilm: Type I and Type II mechanism" ***Future Microbiology*** 13:437-454 (IF: 3.5).

82. Khan AU[#], Ali, A, Danishuddin, Srivastava, G and Sharma A " Potential inhibitors designed against NDM-1 type metallo-□-lactamases : an attempt to enhance efficacies of antibiotics against multi-drug-resistant bacteria" ***Scientific Report*** (NPG) (2017)7(1):9207. (IF: 4.3)

83. Parvez S and Khan AU[#] "Hospital Sewage Water - A Reservoir for Variants of New Delhi Metallo-<beta>-Lactamase (blaNDM) and ESBL-Producing Enterobacteriaceae. ***International Journal of Antimicrobial Agents 2018***, 51(1):82-88. (IF: 15.3).

84. Abidi SSA, Azim Y, Khan SN, Khan AU. Sulfaguanidine cocrystals: Synthesis, structural characterization and their antibacterial and hemolytic analysis. ***J Pharm Biomed Anal.*** 2017 Nov 11; 149:351-357. (IF: 3.5).

85. Khan,SN, Khan, S, Iqbal J, Khan, R and Khan AU[#] "Enhanced killing and antibiofilm activity of encapsulated cinnamaldehyde (CNMA) against Candida albicans" ***Front. Microbiol*** 8:1641. (IF: 6).

86. Danishudin, Kumar, A, Mobeen F, Khan AU[#] "Development of Ligand and Structure based classification models to design novel inhibitors against antibiotic hydrolysing enzymes: Integration of web server" ***J Biomol. Struc. Dynamics*** (IF: 4.1) 29:1-48. doi: 10.1080/07391102.2017.1373034.

87. Neelakantan, P, Romero, M, Vera, J, Daood, U, Khan, AU, Yan, A, Cheung, GSP, "Biofilms in Endodontics—Current status and Future Directions" ***International Journal of Mol. Science*** 2017 18(8). pii: E1748. (IF: 6.2).

88. Khan S, Khan SN, Meena R, Dar AM, Pal R and Khan AU# "Photoinactivation of multidrug resistant bacteria by monomeric methylene blue conjugated gold nanoparticles" ***Journal of Photochemistry & Photobiology, B: Biology*** 2017, 174:150-161. (IF: 6.8)

89. Salahuddin, P Kumar A and Khan AU# "Structure, function of serine and metallo-Î²-lactamases and their inhibitors " ***Current*** *Protein & Peptide Science* 2017, . doi: 10.2174/0929866524666170724160623. (IF: 3.2)

90. Zaidi S, Misba L and Khan AU# " Nano-therapeutics: A revolution in infection control in post antibiotic era" ***Nanomedicine: Nanotechnology, Biology, and Medicine*** 2017 S1549-9634(17)30123-5. (IF: 6.4).

91. Qayyum S, Oves M and Khan AU# "Obliteration of bacterial growth and biofilm through ROS generation by facilely synthesized green silver nanoparticles" ***Plos One*** 2017, 12(8):e0181363. (IF: 4.1)

92. Gupta, D, Singh, A and Khan AU# "Nanoparticles as efflux pump and biofilm inhibitor to rejuvenate bactericidal effect of conventional antibiotics" ***Nanoscale Research Letters*** 2017, 12(1):454. (IF: 4.7)

93. Zuberi, A, Misba, L and Khan AU#, "CRISPR interference (CRISPRi) inhibition of luxS gene expression in E. coli: an approach to inhibit biofilm. ***Front. Cell. Infect. Microbiol.*** 2017; 7:214. https://doi.org/10.3389/fcimb.2017.00214. (IF: 6).

94. Maryam L and Khan AU#, " Synergistic effect of doripenem and cefotaxime to inhibit CTX-M-15 type β-lactamases : biophysical and microbiological views " ***Front. Pharmacology*** 8:449. doi: 10.3389/fphar.2017.00449. (IF: 6)

95. Ali, A, , Danishuddin, Maryam, L, Srivastava, G, Sharma, A and Khan, AU# "Designing of inhibitors against CTX-M-15 type b-lactamase : Potential drug candidate against b-lactamases producing multi-drug-resistant bacteria" ***J Biomol. Struc. Dynamics*** (2017) 8:1-16. doi: 10.1080/07391102.2017.1335434. (IF: 4.1)

96. Khan AU#, Maryam, L and Zarrilli R "Structure, Genetics and Worldwide Spread of New Delhi Metallo-beta-lactamase (NDM): a threat to public health" BMC Micobiol. (2017) 17(1):101. doi: 10.1186/s12866-017-1012-8. (IF: 4.4) (Featured Review article with Invited BLOG"Our "human" destiny in the post-antibiotic era (http://blogs.biomedcentral.com/bmcseriesblog/2017/04/28/human-destiny-post-antibiotic-era/

97. Khan AU, "Post-antibiotic era is a worldwide challenge for health care: what to do ?" ***Clin. Invest.*** (Lond.) (2017) 7(2), 041-041 (IF: 6.4).

98. Maryam L and Khan AU# "Structural insight into mode of binding of Meropenem to CTX-M-15 type b-lactamase" ***International J Biological. Macromol*** (2017) 96: 78–86 (IF: 8).

99. Raghav A, Ahmad, J, Alam, K, Khan AU# "New insights into non-enzymatic glycation of human serum albumin biopolymer: A study to unveil its impaired structure and function. ***International J Biological. Macromol*** (2017) 101:84-99.(IF: 8)

100. Misba. L Zaidi S and Khan AU# "A comparison of antibacterial and antibiofilm efficacy of phenothiazinium dyes between Gram positive and Gram negative bacterial biofilm" ***Photodiagnosis and Photodynamic Therapy*** (2017), S1572-1000(16) 30242-3. (IF: 3.6)

101. Rizwan U, Khan SN, Khan AU, Abdi, SM "Anthelmintic potential of thymoquinone and curcumin on Fasciola gigantica" ***PLos One*** (2017) 12(2):e0171267.(IF: 4.1)

102. Kulshrestha, S, Qayyum, S and Khan AU#, " Antibiofilm efficacy of green synthesized graphene oxide-silver nanocomposite using Lagerstroemia speciosa floral extract: A comparative study on inhibition of Gram-positive and Gram-negative biofilms" ***Microbial Pathogenesis*** 103 (2017) 167e177 (IF: 3.8)

103. Ahmad N, Ali, SM and Khan AU# " First reported New Delhi metallo-lactamase-1 producing Cedecea lepagei" ***International Journal of Antimicob.*** Agents (2017) 49 :112–123 (IF: 15.3).

104. Khan A, Sharma, D, Faheem M, Bhist D, and Khan AU#, "Proteomic Analysis of carbapenem resistant Klebsiella pneumoniae strain in response to Meropenem stress" ***Journal of Global Antimicrob Resistance*** (2017) 8:172-178. (IF: 4.3).

105. Khan S, Khan AU, Hasan S. Genotoxic assessment of chlorhexidine mouthwash on exfoliated buccal epithelial cells in chronic gingivitis patients. ***J Indian Soc Periodontol*** 2016; 20:584-91.

106. Khan AU "A long journey of antibiotic resistance: is MCR-1 last stop?" ***Lancet Inf Dis.*** (2016) Comments onhttp://dx.doi.org/10.1016/S1473-3099(15)00424-7 "http://www.thelancet.com/journals/laninf/article/PIIS1473-3099%2815%2900424-7/abstract.(IF:45)

107. Maryam, L and Khan AU#, "A mechanism of synergistic effect of streptomycin and cefotaxime on CTX-M-15 type β-lactamase producing strain of E. cloacae: a first report" ***Front Microbiol*** (2016) 7:2007. doi: 10.3389/fmicb.2016.02007; (IF: 6)

108. Ahmad, A , Ahmad, A, Sudhakar, R, Varshney, H, Subbarao, N , Ansari, S, Rauf, A and Khan AU#, "Designing, synthesis and antimicrobial action of oxazoline and thiazoline derivatives of fatty acid esters" ***J Biomol Struc Dynamics*** (2016) 28:1-20. (IF: 4.1).

109. Sharma, D, Lata, M, Faheem, M, Khan, AU, Joshi, B, Venkatesan, K, Shukla, S, Bhist, D "M. tuberculosis ferritin (Rv3841): Potential involvement in Amikacin (AK) & Kanamycin (KM) resistance" ***Biochem. Biophys. Res. Commun*** (2016) 16;478(2):908-12. (If: 3.5)

110. Danishuddin and Khan AU[#] "Descriptors and their selection methods in QSAR analysis: Paradigm for Drug ***Design" Drug Dis. Today*** (2016) 21(8):1291-302 (IF: 8.3).

111. Qayyum S and Khan AU[#] "Nanoparticles vs biofilm; A battle against another paradigm of antibiotic resistance" ***MedChemComm- RSC*** 7, 1479 - 1498 (2016) (IF: 3.4)

112. Qayyum ,S, Sharma, D, Bisht, D and Khan AU[#] " , Protein translation machinery holds a key for transition of planktonic cells to biofilm state in Enterococcus faecalis: A proteomic approach" ***Biochem. Biophys. Res. Commun*** (2016) 474(4):652-9 (IF: 3.5)

113. Khan SN and Khan AU[#]. "Breaking the spell: Combating Multidrug resistant 'Superbugs'" ***Front Microbiol*** (2016) 7:174. (IF:6)

114. Kulshrestha S, Khan S, Hasan S, Khan EH, Misba, L, Khan, AU[#]. "Calcium fluoride nanoparticles induced suppression of Streptococcus mutans biofilm: An in-vitro and in-vivo approach" ***Applied Microbiology Biotechnology*** (2016) 100(4):1901-14 (IF: 3.9).

115. Misba L, Kulshrestha S, and Khan, AU[#]. "Antibiofilm action of toluidine blue O-Silver nanoparticle conjugate on Streptococcus mutans: A mechanism of type I photodynamic therapy" ***Biofouling*** 2016 32(3):313-28. (IF: 3.4)

116. Qayyum S and Khan AU[#] "Biofabrication of broad range antibacterial and antibiofilm silver nanoparticles and evaluation of plant extract contribution in nanoparticle action" ***IET Nanobiotechnology*** 10(5):349-357 2016; (If: 2)

117. Khan AU[#] and Rehman MT "Role of non-active site residue Trp-93 in the function and stability of New Delhi Metallo-β-Lactamase-1 (NDM-1)" ***Antimicrobial Agent Chemotherapy*** 2015 Nov 2;60(1):356-60. (IF: 5.1).

118. Zafar, H, Ahmad, I, Khan, AU and Khan, TA "Synthesis, characterization and antimicrobial studies of Schiff base complexes" ***Journal of Molecular Structure*** (2015) 1097. DOI:10.1016/j.molstruc.2015.04.034 (IF3.8)

119. Hasan,S, Danishuddin, M and Khan, AU[#] " Inhibitory efficacy of Zingiber officinale towards Streptococcus mutans virulence and caries development: In vitro and in vivo studies ***BMC Microbiology*** 2015, 15:1 DOI: 10.1186/s12866-014-0320-5 (IF: 3.6).

120. Rehman, MT, Ahmed S, Khan AU[#]. " Interaction of Meropenem with 'N' and 'B' Isoforms of Human Serum Albumin: a Spectroscopic and Molecular Docking Study" ***J Biomol Struc Dynamics*** , 2015, 57(4):325-9. (IF: 4.1)

121. Baig, MH, Balaramnavar, VM, Wadhwa,G, Khan, AU[#], "Homology Modeling and Virtual screening of inhibitors against TEM and SHV types resistant

mutants: A multi-layer filtering approach" ***Biotech. Applied Biochem***. (2015) 62(5):669-80 (IF: 2.7)

122. Sharma,D, Lata,M, Faheem,M, Khan,AU, Joshi,B, Venkatesan,K, Shukla, S and Bisht, D "Cloning, Expression and Correlation of Rv0148 to Amikacin & Kanamycin Resistance" ***Current Proteomics,*** 2015 12(2): 96-100.

123. Shamsuzzaman, Khan A. A. Abdul Baqi, Mohd Asif, Abad Ali,Hena Khanam, AshrafMashrai, Anis Ahmad and Asad U Khan "design, synthesis and docking studies of novel spiroazetidinone substituted steroidal derivatives possessing potent diversified pharmacological properties" ***Eur. Chem. Bull.,*** 2015, 4(3), 154-164 (IF: 2.58).

124. Rehman, MT and Khan AU# "Understanding the Interaction between Human Serum Albumin and Anti-Bacterial/ Anticancer compounds" ***Current Pharmaceutical Design*** (2015) 21 (14):1785-99, (IF: 3.3)

125. Rehman MT, Faheem M and Khan AU#. "An insight into the biophysical characterization of different states of cefotaxime hydrolysing β-lactamase 15 (CTX-M-15). ***J Biomol Structure and Dynamics*** 2015;33(3):625-38. (If: 4.1).

126. Danishuddin, M and Khan, AU# "Structure based virtual screening to discover putative drug candidates: Necessary considerations and successful case studies" ***Methods*** (2015) 71 C (2015) 135–145 (IF: 4.6)

127. Khan AU, "World wide spread of NDM-1: Are migratory birds' culprit" ***J Infect. Dev. Count*** (2015) 9(1); 120-121 (IF: 1.3)

128. Danishuddin M and Khan AU "Virtual Screening Strategies: A State of Art to Combat with Multiple Drug Resistance Strains" ***MOJ Proteomics & Bioinformatics*** (2015) 2(2): 00042. DOI: 10.15406/mojpb.2015.02.00042.

129. Kulshrestha S, Khan S, Meena R, Singh BR, Khan, AU#. "Graphene/Zinc Oxide nanocomposite film protects dental implant surface against cariogenic Streptococcus mutans" ***Biofouling*** (2014) 30(10):1281-94. (IF: 3.7)

130. Baig, MH, Sudhakar DR, Kalaiarasan P, Subbarao N, Wadhawa, G, Lohani M , Khan MK and Khan AU#, "Insight into the effect of inhibitor resistant S130G mutant on physico-chemical properties of SHV type beta-lactamase: A Molecular Dynamics study" ***PLOS One*** (2014) 9(12):e112456. (IF: 4.1)

131. Khan AU# and Parvez S "Detection of bla_{NDM-4} in Escherichia coli from Hospital sewage in India" ***J Medical Microbiology*** (2014) 63(Pt 10):1404-6. (IF 2.5)

132. Khan A, Fahim M and , Danishuddin, A and Khan AU#.," Evaluation of inhibitory action of novel non β-lactam inhibitor against Klebsiella pneumoniae carbapenemase (KPC-2) " ***PLoS ONE*** (2014) 29;9(9):e108246. (4.1)

133. Rehman, MT, Shamsi, H and Khan AU# " An insight into the binding mechanism of imipenem to human serum albumin by spectroscopic and computational approaches" ***Mol. Pharmaceutics*** (2014) 11(6):1785-97. (IF: 5.3)

134. Hasan S, Singh K, Danisuddin, M, Verma PK, Khan, A U# "Inhibition of major virulence pathways of Streptococcus mutans by Quercitrin and Deoxynojirimycin: a synergistic approach of infection control" ***PLoS ONE*** (2014) 12;9(3):e91736. (IF: 4).

135. Ali S Z, Ali SM and Khan AU#, " Prevalence of IncI1-Iγ and IncFIA-FIB type plasmids in ESBLs producing K. pneumoniae strains isolated from NICU of north Indian hospital" ***Microbiology*** (2014) 160: 1153-1161 (IF: 2.9).

136. Adil, M, Singh, K, Verma, PK and Khan AU# " Eugenol induced suppression of biofilm forming genes in Streptococcus mutans: an approach to inhibit biofilm. ***Journal of Global Antimicrobial Resistance*** (2014) 2 (4); 286–292 (IF: 4.3)

137. Danishuddin, M, Khan, A, Faheem, F, Kalaiarasan, P, Baig, MH, Subbara,N, and Khan AU# "Structure based screening of inhibitors against KPC-2: Designing potential drug candidates against multi-drug resistant bacteria" ***J Biomol Structure and Dynamics*** (2014) 32(5):741-50 (If: 4.1).

138. Salahuddin P and Khan AU, "Studies on structure-based sequence alignment and phylogenies of beta-lactamases" ***Bioinformation*** (2014) 10:308-13.

139. Asad U Khan " An insilico approach to battle with ndm-1 superbug: from wet to dry " ***J Proteomics and Bioinformatic*** (2014) 7: 2. (If 10.4)

140. Khan, AU " Beta-lactomics: A New Term coined in "OMICS" ***J Propeomics and Bioinformatics*** (2014) 7: 2 (IF: 10.4)

141. Khan, TA Zafar, H, Khan, SN & Khan, AU "Metal - ion directed synthesis of 18membered tetrathia macrocyclic complexes of Co(II), Ni(II), Cu(II) and Zn(II), their physico-chemical studies and DNA binding study of copper complex" Synthesis and Reactivity in Inorganic, Metal-Organic, and ***Nano-Metal Chemistry***, (2014) DOI: 10.1080/15533174.2013.862687

142. Khan AU "Is this a way out to control multidrug resistance "published comment on ***Nature*** 50 102–106(2013) http://www.nature.com/nature/report/index.html?comment=60043&doi=10.1038/nature12300

143. Ahmad, A., Ahmad, A., Varshney, H., Rauf, A., Rehan, M., Subbarao, N., Khan A.U., "Designing and Synthesis of Novel Antimicrobial Heterocyclic Analogs of Fatty Acids" ***European Journal of Medicinal Chemistry*** (2013) 70C:887-900. (IF: 6.5).

144. Md Tabish Rehman, Mohd. Faheem and Asad U Khan "Insignificant β-lactamase Activity of Human Serum Albumin: No Panic to Non-Microbial based Drug Resistance" ***Lett in Applied Microbiol.*** (2013) 57 :325-9. (IF: 2.8)

145. Mohd Danishuddin, Mohd Hassan Baig, Lalima Kaushal and Asad U Khan "BLAD: A comprehensive database of widely circulated beta-lactamases" ***Bioinformatics (Oxford)*** (2013) 29 :2515-6. (IF: 6.9)

146. Hasan, S, Ali S Z, and Khan, A U "Novel combinations of antibiotics to inhibit ESBL and MBL producers in vitro: A Synergistic Approach" ***Future Microbiol*** (2013) 8:939-44. (IF: 4.0)

147. Fahim M, Rehman MT, Danishuddin, M and Khan AU. "Biochemical characterization of CTX-M-15 from Enterobacter cloacae and designing a novel non-beta-lactam-beta-lactamase inhibitor" ***PloS ONE*** (2013) 8(12):e56926. (IF: 4.4).

148. Varshney, H., Ahmad, A., Ahmad, A., Khan, AU., Farshori, NN., Rauf, A. " Synthesis and evaluation of in vitro antimicrobial activity of novel 2,3-disubstituted-4-thiazolidinones from fatty acid hydrazides" ***Med Chem Res*** (2013) 22:3204–3212. (IF: 2.3).

149. Shamsuzzaman, Mashrai, A., Ahmad, A., Dar, AM., Khanam, H., Danishuddin, M., Khan, AU. "Synthesis, evaluation and docking studies on steroidal pyrazolones as anticancer and antimicrobial agents" ***Med Chem Res*** (2013)DOI 10.1007/s00044-013-0636-y (IF: 2.3).

150. Resayes , SI, Shakir, M, Shahid N, Azam, M , Khan, AU " Synthesis, spectroscopic characterization and in vitroantimicrobial studies of Schiff base ligand, H2Lderived from glyoxalic acid and 1,8-diaminonaphthaleneand its Co(II), Ni(II), Cu(II) and Zn(II) complexes" ***Arabian Journal of Chem*** (2013) (IF:6.2)

151. Parveen M., Ali A., Alam M, Khan AU., Ahmad A. "Synthesis, characterization, biological evaluation and in silico screening of oxadiazinanones" ***Med Chem Res*** 22: 3085-3095 2013 (IF: 2.3)

152. Khan AU[#]. "Nanodrugs: optimism for emerging trend of multi-drug resistance" ***International Journal of Nanomedicine*** (2012) 7:4323-4. (IF: 6.7)

153. Khan, SN, Danishuddin, M, Varshney, B, Lal, SK and Khan, AU[#] "Inhibition of N-terminal lysines acetylation and transcription factor assembly by epirubicin induced deranged cell homeostasis" ***PloS ONE*** (2012) 7(12): e51850. doi:10.1371/journal.pone.0051850 (IF: 4.4).

154. Khan, S, Alam F, Azam A, and Khan AU[#]. "Gold nanoparticles enhance methylene blue induced photodynamic therapy: A novel therapeutic approach to inhibit Candida albicans biofilm" ***International Journal of Nanomedicine*** (2012) 7: 3245-57 (IF: 6.7).

155. Hasan, S., Danishuddin, M., Adil, M., Singh, K., Verma, P.K, Khan, A.U[#]. " Efficacy of E. officinalis on the cariogenic properties of Streptococcus mutans: a novel and alternative approach to suppress quorum-sensing mechanism" ***PloS ONE*** (2012) 7(7):e40319. (IF: 4.4).

156. Khan AU[#], " Medicine at nanoscale: a new horizon" International Journal of Nanomedicine (2012) 7: 2997-98. (IF: 6.7)

157. Khan R, Adil M, Danishuddin M, Verma P and Khan A U[#]. " In vitro and in vivo inhibition of Streptococcus mutans biofilm by Trachyspermum ammi seeds: an approach of alternative medicine" ***Phytomedicine*** (2012) 19(8-9):747-55. (IF: 6.6)

158. Khan AU[#], Nordmann, P "Spread of carbapenemase NDM-1 producers: the situation in India and what may be proposed" ***Scand. J Infec Diseases*** (2012) 44(7):531-5. (IF: 2).

159. Danishuddin M, kaushal L, Beig M H and Khan A U[#]."AMDD: Anti-Microbial Drug Database" ***Genomics Proteomics and Bioinformatics*** (2012) 10(6):360-3. (IF: 6.4)

160. Khan AU[#] and Nordmann, P. " NDM-1 producing E cloacae and K pneumonia from diabetic foot ulcer in India" ***J Med Microbiology*** (2012) 61(Pt 3):454-6. (IF: 2.5)

161. Haque, S F , Ali, SZ, Mohammed TP1, Khan, A.U. "Prevalence of plasmid mediated blaTEM-1 and blaCTX-M-15 type Extended spectrum beta-lactamases (ESBL) in patients with sepsis" ***Asian Pacific Journal of Tropical Medicine*** (2012) 5: 412-420.

162. Asim Rizvi, Rosina Khan, Asad U Khan, Zeba Ghani , Saba Ghani , M. Khalid Saifullahb, M. Saleemuddina and S.M. A. Abidi "Preliminary observations on in vitro and in vivo antimicrofilarial effects of Bishop's weed (Trachispermum ammi)" ***J Parasitic Diseases*** 2012 Apr;36(1):125-8.

163. Tabassum S, Parveen M, Ali A, Alam M, Ahmad A, Khan, A U, Khan, RA " Synthesis of Aryl-1,2,4,5-tetrazinane-3-thiones, in-vitro DNA Binding Studies, Nuclease Activity and its Antimicrobial activity" ***Journal Molecular Structure*** (2012) 1020: 33-40 (IF: 3.8)

164. Danishuddin M and Khan AU. "Molecular modeling and docking analysis of Beta-lactamases with known inhibitors: a comparative study" ***In Silico Biology*** (2012) 11(5):273-80.

165. Khan, A and Khan AU. " Biomarker discovery and drug development: a proteomic Approach" ***Journal of Proteomics and Bioinformatics*** (2012) 5: 3-4 (IF: 10.2)

166. Khan AU and Ali SZ "Quick screening and easy detection method of NDM-gene in clinical isolates: A need of the time" Asian Pas. J Trop Med. (2012) 5(10):839-40.

167. Khan SN, Yennamalli, R., Subbarao,S and Khan, A.U[#]., "Mitoxantrone induced impediment of histone acetylation and structural flexibility of the protein" ***Cell Biochem. Biophs.*** (2011) 60(3):209-18 (IF: 2.9)

168. Baig, M H, Shakil, S and Khan A U[#] "Homology Modeling and docking study of recent SHV type β-lactamses with traditional and novel inhibitors: An In silico approach to combat problem of Multiple Drug resistance in various infections" Med. Chem Res. (2011) ***Medicinal Chemistry Research*** 21 (9), 2229-2237 (IF: 2.3).

169. Khan R, Khanam, Z, and Khan A.U[#]., "Isolation and characterization of n-octacosanoic acid from Viburnum foetens: a novel antibiofilm agent against Streptococcus mutans" ***Med Chem Res.*** (2012) 21, 1411-1417 (IF: 1.1) (IF: 2.3)

170. Akram, M, Shakil, Khan, A.U[#]., Prevalence of Integrons, bla CTX-M and bla TEM Resistance Markers among ESBL-Producing Uropathogenic Escherichia coli Iso-lates: First Report of Genomic bla CTX-M from India. ***Journal of Chemotherapy*** (2011) 23 : 131-134. (IF: 1.2)

171. Nida N. Farshori, Anis Ahmad, Asad U. Khan, Abdul Rauf "A facile, one-pot synthesis, characterization and antimicrobial activity of ohydroxy anilide derivatives and 1-substituted-1,3-dicyclohexylurea analogs of long chain carboxylic acids" Europen J Med Chem (2011) 46(4):1433-8. (IF: 6.5)

172. Farshori, NN., Banday, M.R., Ahmad, A., Khan, A.U., and Rauf, A., "7-Hydroxy-coumarin derivatives: Synthesis, characterization and preliminary antimicrobial activities." ***Medicinal Chemistry Research*** (2011) 20:535–541 (IF:2.3)

173. Siddiqui, Z.N, Musthafa, M.T.N, Ahmad, A., Khan,. A.U. " Thermal solvent-free synthesis of novel pyrazolyl chalcones and pyrazolines as potential antimicrobial agents" ***Biorganic & Medicinal Chemistry Letters.*** (2011). 21(10):2860-5. (IF: 2.9)

174. Zeba N. Siddiqui, Shagufta Praveen, Mohammed Musthafa. T.N, Anis Ahmad, Asad U Khan. Thermal solvent-free synthesis of chromonyl chalcones, pyrazolines andtheir in vitro antibacterial, antifungal activities. Manuscript ID: GENZ-2010-0386. ***Journal of Enzyme Inhibition And Medicinal Chemistry*** 2012. 27(1):84-91. (IF: 4.3

175. Zeba N. Siddiqui, Mohammed Musthafa T. N, Anis Ahmad, Asad U. Khan "Synthesis of Coumarin Derivatives from 3-Bromo-4-hydroxycoumarin as Potent Antimicrobial Agents" ***Archiv der Pharmazie - Chemistry in Life Science*** (2011) 344(6):394-401. IF: (4.6)

176. Zeba N. Siddiqui, Mohammed Musthafa T. N, Anis Ahmad, Asad U. Khan. Thermal solvent-free synthesis of antimicrobial agents. ***Saudi chemical society.*** 2011 21(10):2860-5. (4.7)

177. Parveen s, and Khan A.U., BFluenza: A Proteomic Database on Bird Flu" ***Bioinformation*** (2011) 7: 147-151 (IF: 1.2)

178. Shakir M., Azam M., Naseem S. & Khan, A.U., "Template Synthesis and Physicochemical Studies of 14-Membered Functionalized Pendant Arm Schiff-Base Macrocyclic Complexes of Co(II), Ni(II), Cu(II), and Zn(II): DNA Binding Studies

on a Cu(II) Complex" Synthesis and Reactivity in Inorganic, Metal-Organic, and ***Nano-Metal Chemistry*** (2011) 41:1056–1062,

179. Khan AU, Islam, B, Khan SN and Akram M. "A proteomic approach for exploring biofilm in Streptococcus mutans" ***Bioinformation*** (2011) 5(10):440-5. (IF: 1.4)

180. Khan, A.U., Baig H. and Wadhawa, G. "Molecular docking analysis of new generation cephalosporins interactions with recently known SHV-variants" ***Bioinformation*** (2011) (IF:1.4) 5(8):331-5

181. Shakir, M, Abbasi, A., Khan, A U., and Khan S N., "Synthesis and spectroscopic studies on the Schiff base ligand derived from condensation of 2-furaldehyde and 3,3'-diaminobenzidene, H L and its complexes with Co(II), Ni(II), Cu(II) and Zn(II);comparative DNA binding studies of H L and its Cu(II) and Zn(II) complexes. ***Spectro Chemica Acta*** (2011) 78(1):29-35. (IF:1.5)n

182. Shakir M, Shahid N, Sami N, Azam M, Khan AU. "Synthesis, spectroscopic characterization and comparative DNA binding studies of Schiff base complexes derived from l-leucine and glyoxal". Spectrochim Acta A Mol Biomol Spectrosc. 2011 82(1):31-6. (IF: 4.8)

183. Shakir M, Abbasi A, Azam M, Khan AU. "Synthesis, spectroscopic studies and crystal structure of the Schiff base ligand L derived from condensation of 2-thiophenecarboxaldehyde and 3,3'-diaminobenzidine …Comparative DNA binding studies of L and its Co(II), Ni(II) and Cu(II) complexes" ***Spectrochim Acta A Mol Biomol Spectrosc***. (2011) in 79(5):1866-75. (IF : 4.8)

184. Khan, R., Zakir, M, Khanam, Z., Shakil, S and Khan, A.U[#]. "Novel compound from Trachyspermum ammi (Ajowan caraway) seeds with anti-biofilm and anti-adherence activities against Streptococcus mutans: a potential chemotherapeutic agent against dental caries" ***Journal of Applied Microbiol*** 2010 109(6): 2151-9. (IF: 4)

185. Salahuddin, P and Khan A.U[#]., "Structural and functional analysis of NS1 and NS2 proteins of H1N1 subtype" ***Genomics Proteomics and Bioinformatics*** (2010) 8(3):190-9 (IF: 6.8)

186. Khan SN, Lal SK, Kumar P, Khan AU[#]." "Effect of mitoxantrone on proliferation dynamics and cell cycle progression" ***Bioscience Report,*** (2010) 30(6):375-81. (IF: 3.8).

187. Shakil S and Khan AU[#], "Infected foot ulcers in male and female diabetic patients: a clinico-bioinformative study" ***Annals of Clinical Microbiology and Antimicrobials*** (2010) 9 (1):2 (IF: 4)

188. Khan, S.N. and Khan, A.U[#]., "Role of histone acetylation in cell physiology and diseases: an update" ***Clinica Chimica Acta*** (2010) 411(19-20):1401-11 (IF: 6.3)

189. Shakil, S, Akram, M., Ali, S.M. and Khan, A.U[#]." Acquisition of extended-spectrum β-lactamase producing Escherichia coli strains in male and female infants admitted to a neonatal intensive care unit: molecular epidemiology and analysis of risk factors" ***Journal of Medical Microbiology*** (2010) 59(Pt 8):948-54. (IF: 2.5)

190. Khan S. N, Danishuddin M. and Khan, A.U[#], Inhibition of transcription factor assembly and structural stability on mitoxantrone binding with DNA" ***Bioscience Report*** (2010) 30: 331-340. (IF: 3.8)

191. Farshori, NN., Banday, M.R., Ahmad, A., Khan, A.U., and Rauf, A., "Synthesis, Characterization and In-vitro Antimicrobial Activities of 5-alkenyl/hydroxyalkenyl-2-phenylamine-1, 3, 4 -oxadiazoles andthiadiazoles" ***Bioorganic & Medicinal Chemistry Letters*** (2010), 20:1933-8 (IF: 2.9)

192. Danishuddin, M., Khan, S.N and Khan, A.U[#]., "Molecular interaction between mitochondrial membrane proteins and C-terminal domain of PB1-F2: An insilico approach" ***Journal of Mol. Modeling*** (2010) 16(3):535-41. (IF: 2.3).

193. Banday, M.R., Ahmad, A., Khan, A.U. and Rauf, A. "Synthesis and characterization of novel fatty acid analogs of cholesterol: in vitro antimicrobial activity" ***Eur J Med Chem.*** 2010 45:1459-64 (I F: 6.5)

194. Shamsuzzaman, Khan MS, Alam M, Tabassum Z, Ahmad A, Khan AU[#]. "Synthesis, antibacterial and antifungal activities of 6,5 fused steroidal oxazoles in cholestane series." ***Eur J Med Chem.*** 2010, 45:1094-7 (I F: 6.5)

195. Shakil, S, Ali S.Z., Akram, M., Ali, S.M and Khan A.U. "Risk factors for extended-spectrum β-lactamase producing Escherichia coli and Klebsiella pneumoniae acquisition in a neonatal intensive care unit. ***J Tropical Pediatrics*** (2010) 56(2):90-6. (IF: 1.7)

196. Khan, R., Zakir, M., Afaq, S.H., Latif, A., and Khan, A.U., "Efficacy of Solvent Extracts of Prosopis spicigera, Zingiber officinale and Trachyspermum ammi against Multidrug Resistant Bacterial and Fungal Strains for Antimicrobial Activity". ***J Infect. Dev. Count.*** (2010) 3;4(5):292-300.

197. Shakil, S, Alvi, S., Beg, M., Khan, A.U., "Analysis of diabetic foot ulcers in a tertiary care hospital— a clinico-microbiological perspective" ***Hainan Med. Journal*** (2010) 6: 165-170. (if 2)

198. Khan, A. U " Swine Flu pandemic: a global concern" ***Asian Pacific Journal of Tropical Medicine*** (Elsevier (2010) 3: 1-2. (IF: 3)

199. Khan, A.U., Shakil, S. and Lal S.K., "Efficacy of anti-neuraminidase (NA) inhibitors against H1N1 strains of different geographical region: an insilico approach" ***Ind. J Microbiology (Springer)*** (2010) 49:370–376. (IF: 2.4)

200. Khan AU, "Publication Versus Research: promotion of science or self" ***Current Science*** (2010) 99: 995.

201. Shakil S and Khan A U "Interaction of CTX-M-15 enzyme with cefotaxime: 1 a molecular modelling and docking study" ***Bioinformation*** 2010, 4: 468-472 (IF: 1.5)

202. Salahuddin, P and Khan, A.U., "Structure-function studies on different structural domains of Nucleoprotein of H1N1 subtype" ***Bioinformation*** 2010 5 : 28-30. (IF: 1.5)

203. Shakil, S. and Khan, A.U., "Interaction of 2009 CTX-M variants with drugs and inhibitors: a molecular modeling and docking study" ***Journal of Proteomics and Bioinformatics"*** (2010) 3 (4) 130-134. (IF: 10.2)

204. Shakil S and Khan AU, "Detection of CTX-M-15 producing and carbapenem-resistant Acinetobacter baumannii strains in urine: a clinico-bioinformative report" ***J Chemotherapy*** (2010) (IF: 1.4) 22(5):324-7 (IF: 1.2)

205. Ahmad A and Khan A U[#] "Prevalence of Candida species and potential risk factors for vulvovaginal candidiasis in Aligarh, India" ***Eur. J. Obst. & Gyn. And Rep. Biology*** (2009) 144(1):68-71 (IF: 2.8)

206. Danishuddin, M. and Khan, A.U. [#] "Phylogenetic analysis of Neuraminidase gene of H5N1 strains prevalent in chickens during 2006 bird flu outbreak in two regions of Maharashtra (India) ***Genomics Proteomics and Bioinformatics*** (2009) 7, 57-61. (IF: 6.8)

207. Khan, T.A, Naseem, S., Khan, S.N., Khan, A.U[#]. and Shakir, M. "Synthesis and Spectral Characterization of 14- and 16- membered tetraazamacrocyclic Schiff-base ligands and their transition metal complexes and a comparative study of interaction of Calf-thymus DNA with copper (II) complexes" ***Spectrochimica Acta*** (2009) 73, 622-9. (IF: 4.8)

208. Islam, B., Khan, S. N., Naeem, A., Sharma, V. K. and Khan, A.U[#] "Novel Effect of Plant Lectins on the Inhibition of Streptococcus mutans Biofilm Formation on Saliva-coated Surface" ***Journal of Applied Microbiology*** (2009) 106(5):1682-9. (IF: 4)

209. Khan, R., Islam, B., Akram, A., Shakil, S., Ahmad, A., Ali, S.M., Siddiqui, M. and Khan, A.U[#]. "Antimicrobial Activity of Five Herbal Extracts Against Multi-Drug Resistant Strains of Bacteria and Fungi of Clinical Origin" ***Molecules*** (2009) 14, 586-597. (IF: 4.4)

210. Farha Firdaus, Kaneez Fatma, Mohammad Azam, Shahper N. Khan, Asad U. Khan, Mohammad Shakir. "Template synthesis, physico-chemical characterization of 14-membered tetraimine macrocyclic complexes, $[MLX_2]$ [M = Co(II), Ni(II), Cu(II) and Zn(II)]. DNA binding study on $[CoLCl_2]$ complex . ***Spectrochimica Acta*** (2009) 72(3):591-6 (IF: 4.8)

211. Shakir, M., Azam, M., Parveen, S., Khan, A.U., Firdaus, F" Synthesis and spectroscopic studies on complexes of N,N'-bis-(2-pyridinecarboxaldimine)-1,8-

diaminonaphthalene (L); DNA binding studies on Cu(II) complex*" **Spectrochimica Acta*** (2009) 31;71(5):1851-6 (IF: 4.8)

212. Khan A U., "The Influenza A mystery: Insight from Bioinformatics resources and analysis" ***Bioinformation*** (2009) 4(1) 52.

213. Danishuddin, M., Khan, S.N and Khan, A.U "Phylogenetic analysis of surface proteins of novel H1N1 virus isolated from 2009 pandemic" ***Bioinformation*** (2009) 4(3) 94-97. (IF: 1.5)

214. Salahuddin P. and Khan A. U., "Identification of mutations at the antigenic sites: A new glycosylation site in hemagglutinin protein of H5N1 strain" ***Bioinformation*** (2009) 4(1) 30-35. (IF: 1.5)

215. Shakil, S., Danishuddin, M., Khan, A.U. "Doripenem versus Bacteria- An emerging battleground." ***J Chemotherapy*** (2009) 21(5):482-92 (IF: 1.5).

216. Firdaus, F., Fatma, K., Khan, A.U. and Shakir, M. "Template synthesis and physico-chemical studies of 16 and 18-membered binuclear octaazamacrocyclic complexes: a comparative spectroscopic approach on DNA with Cu(II) complexes" ***Journal of the Serbian Chemical Society*** (2009) 74: 938-952. (IF: 1.2)

217. Barira Islam, Shahper N. Khan, Irfanul Haque, M. Alam, M. Mushfiq and Asad U. Khan[#] "Novel anti-adherence activity of Mulberry Leaves: Inhibition of Streptococcus mutans Biofilm by 1-Deoxynojirimycin isolated from Morus alba" ***Journal of Antimicrobial Chemotherapy*** (2008) 62: 751-757 (IP: 5.8).

218. Raffaele Zarrilli, Domenico Vitale, Anna Di Popolo, Maria Bagattini, Ziad Daoud, Asad U. Khan, and Maria Triassi "A plasmid-borne blaOXA-58 gene confers imipenem resistance to Acinetobacter baumannii isolates from a Lebanese hospital" ***Antimicrobial Agents and Chemotherapy*** (2008) 52: 4115-4120 (I F: 5.1)

219. Shahper N Khan, Barira Islam, Ragothaman Yennamalli, Abdullah Sultan, Naidu Subbarao and Asad U Khan[#] "Interaction of mitoxantrone with human serum albumin: Spectroscopic and molecular modeling studies" ***European Journal of Pharmaceutical Sciences*** (2008) 35(5):371-382 (IF: 5.1).

220. Shahper.N.Khan, Barira Islam, Ragothaman Yennamalli, Qamar Zia, N. Subbarao and Asad.U.Khan[#] "Effect of adriamycin on structural state of hemoglobin : Spectroscopic and Molecular docking studies" ***Journal of Pharm. And Biomedical Analysis*** (2008) 48(4):1096-104. (IF: 4.3).

221. Shaper N Khan, Barira Islam, M Rajeshwari , Hammad Usmani and Khan AU[#] " Characterizing the interaction of anesthetic supplement thiopental with human serum albumin" ***Acta Biochimica Polonica*** (2008) 55(2):399-409 (IP: 1.5).

222. Farha Firdaus, Kaniz Fatima, Hohd Azam, Shahper N Khan and Asad U Khan "Template synthesis and physico-chemical studies on 14 membered hexaazino crocyclic complexes of Co (II, Ni(II), Co (II and Zn (II): A comparative approach in

binding studies of DNA with Cu (II) and Ni (II) complex" ***Trans. Met. Chem*** (2008) 33, 467-473. (IP: 1.6)

223. Anwar, T and Khan, A U*. "Identification of a point mutation causing splitting of antigenic domain in M1 protein of H5N1 strain from 2006 outbreak in India" ***Journal of proteomics and*** Bioinformatics (2008) 1 (6): 302-306. IF: 10.

224. Khan, A.U., "Multidrug resistance and Bacterial infection" Asian Pacific Journal of Tropical Medicine (2008) 1(4): 76-82. (IF: 3)

225. Danishuddin and Khan A U*, "Comparative in silico analysis of PB2 protein of H9N2 and H5N1 avian flu virus" ***Bioinformation*** (2008) 3(1), 41-4. (IF: 1.5)

226. Shahper N. Khan and Asad U. Khan* "Computational simulation of mitoxantrone binding with human serum albumin" ***Journal of proteomics and Bioinformatics*** (2008) 2: 017-020. IF: 10.2

227. Salahuddin, P and Khan AU*, "Proteolytic Enzymes Database" ***Journal of proteomics and Bioinformatics*** (2008) 1: 109-111.(IF: 10.2)

228. Khan A. U*, Saeedut Zafar Ali and Mohammed S Zaman Plasmid mediated multiple antibiotic resistance in Escherichia coli isolated from community acquired infection of urinary tract in Aligarh Hospital. ***Asian Pacific Journal of Tropical Medicine*** (2008) 1(2):12-15. (IF: 3)

229. Khan A U* and Khan S N "Ribozymes: an anti-viral agent" ***Asian Pacific Journal of Tropical Medicine*** (2008) 1(2): 76-82. (IF: 3)

230. Khan N S and Khan A U* "In silico approach to map the binding site of doxorubicin on hemoglobin" ***Bioinformation*** (2008) 2(9), 401-404. (IF: 1.6)

231. Khan AU*, Ayesha Sultan, Anju Tyagi, Mohd Akram, Mohd Shahid, Shazia Zahoor, Sukhminderjit Kaur, Chetana V Vaishnavi, "Amplification of mec A gene in some of the multidrug resistant strains of Staphylococcus aureus isolated from hospital workers in India". ***J Infection Dev Countries*** (2008) 1(3):289-29

232. Shazi Shakil Mohammed Akram and Asad U Khan* "Tigecycline- A critical update" ***J Chemotherapy*** (2008) 20(4):411-9 (IP: 1.4)

233. Shakil S, Khan Rosina, Zarrilli, R and Khan AU*, "Aminoglycosides Versus Bacteria-A description of the action, resistance mechanism and nosocomial battleground" ***Journal of Biomedical Science.*** (2008) 15, 5-14 (IF: 12.02).

234. A. Di Popolo, A.U. Khan, Z. Daoud, M. Bagattini, C. Afif, M. Triassi, N.I. Hakimé, R. Zarrilli "Epidemiology and mechanism of resistance of an outbreak of multidrug-resistant Acinetobacter baumannii at in a Lebanese hospital ***International Journal of Antimicrobial Agents*** , 2007 : 29 Supplement 2 , S269 (IF: 15.3)

235. Mohammad Shakir, M Azam, Yaser Azim, Shama Parveen and Khan AU, " Synthesis and Physico-chemical studies on compound of 1,2-diamino phenyl-N,N'-

bis (2-pyridine carboxaldimine) (L): a spectroscopic approach on binding studies of DNA with copper complex " ***Polyhedron,*** (2007) 26, 5513-5518. (IF: 2.9)

236. M. Shahid , A. Malik , M. Akram , L. M. Agrawal , A.U. Khan and M. Agrawal "Prevalent Phenotypes and Antibiotics Resistance in Escherichia coli and Klebsiella pneumoniae in an Indian Tertiary Care Hospital: Plasmid-Mediated Cefoxitin resistance" ***International Journal of Infectious diseases*** (2007) 12(3):256-64. (IF: 12)

237. Akram , M Shahid M and Khan AU[#], "Etiology and antibiotic resistance patterns of community acquired urinary tract infections in the JN Mdical hospital, Aligarh India" ***Anals of Clinical Microb and Antimicrob.*** (2007) 6 : 4. (impact 4)

238. Barira islam, Shahper N Khan and Khan AU[*] , " Dental caries : from infection to prevention" ***Med Sci. Monit*** (2007) 13 (11): 196-203. (IF : 1.7)

239. Anwar T and Khan A U[*] "Identification of A New casein Kinase II Phosphorylation Domain in Non-structured protein 1 of H5N1 Strain of Influenza virus" ***Bioinformation,*** (2007) 2(1): 57-61. (IF: 1.9)

240. Khan SN, Islam B., and Khan AU[*]., "Probing midazolam interaction with human serum albumin and its effect on structural state of protein" ***International Journal of Integrative Biology*** (2007) 1 (2) 102-112.

241. Anwar, T, Lal S.K. and Khan, A.U[*]., "Matrix Protein 1: A Comparative In Silico Study On Different Strains Of Influenza A H5N1 Virus ***Bioinformation*** (2006) 1(7) 253-256. (IF: 1.4)

242. Khan AU[*], "Bird Flu: A recent threat to human health" ***Bioinformation*** (2006) 1(4): 132. (IF: 1.6)

243. Khan AU* and Zaman MS "Multiple drug resistance pattern in Urinary tract infection patients in Aligarh" ***Biomedical Research*** (2006) 17: 179-181. (IF: 3.2)

244. Khan AU, "Ribozyme : A clinical tool" ***Clinica Chemica Acta*** (invited review) (2006) 367:20-27. (IF: 6.3).

245. Mohammad Shakir, Shama Parveen, Poonam Chingsubam, Katsuyuki Aoki, Shahper N Khan and Asad U Khan, " Cation supported self- assembly of coordination polymers, $[(H_2en)(ntpMCl_2)]_n$ (M = Zn^{II}, Cd^{II}, Hg^{II}) involving tripodal acid, ntp. X-ray crystal structure and DNA binding studies on Zinc Helicate. " ***Polyhedron*** (2006) 25: 2929-2934. (IF 3)

246. Anwar T, Lal, SK, and Khan AU*, "In Silico Analysis of Genes Nucleoprotein, Neuramindase And Heamaglutinin: A Comparative Study On Different Strains Of Influenza A (Bird Flu) Virus Sub-type H5N" ***In Silico Biology*** (2006) 6: 161-168. (IF:3.4)

247. Anwar T and Khan AU* "MAP MUTATION: a program for analyzing mutations in protein sequences ***Bioinformation*** (2006) 1(3), 92-93. (IF: 1.6)

248. Anwar T and Khan AU*, "SSRscanner: a program for reporting distribution and exact location of simple sequence repeats" ***Bioinformation*** (2006) 1(3), 89-91. (IF: 1.6)

249. Anwar T and Khan AU* "Mapping and analysis of Simple Sequence Repeats in the Arabidopsis thaliana Genome." ***Bioinformation***, (2005) 1, 64-68. (If: 1.2)

250. Khan A U* and Krishnamurthy, S "Histone modifications as key regulators of transcription" ***Frontiers in Bioscience***, (2005) 10: 866-872. (IF = 3.7).

251. Khan AU*, Musharraf, A " Plasmid mediated multiple antibiotic resistance in P. mirabilis isolated from the UTI patients" ***Medical Science Monitor,*** (2004) 10: Cr 598-602. (IF= 1.7).

252. Khan, AU*, and Lal SK " Ribozyme : A modern tool in medicine" ***J Biomedical Sciences*** (2003) 10: 457-467. (IF: 12.0)

253. Xiaoyuan He, Asad U Khan, Hailing Cheng, , Donald Papas , Michael Hampsey, and Clair Moore " Functional Interaction between the Transcription and mRNA 3'-end Processing Machineries mediated by Ssu72 and Sub1" ***Genes & Development*** (2003) 17: 1030-1042. (IF: 18.8)

254. Khan, A.U*. and Hampsey M, "Connecting the DOTs: Covalent histone modifications and the formation of silent chromatin" ***TRENDS in Genetics*** (2002) 18: 387-389. (IF: 12.2)

255. A. Malik, A.U. Khan and S. K. Lal. "Chemoprotection profiles of SodiumThiosulfate on Methyl Methane Sulfonate induced mutagenesis of bacteriophage"T4. ***Med. Sci. Monit.*** (2002) 8: BR212-220. (IF: 2.6)

256. Khan AU*, Ajamaluddin , M and Ahmad M " A Unique group of self-splicing introns in bacteriophage T4" ***Indian J. of Biochem Biophys.*** (2001) 38, 289-293. (IF: 1.9)

257. Khan, A. U* and Lal, S.K " The white halo plaque phenotype of bacteriophage T4: its uses and applications in screening and mapping of splicing-defective mutants" ***J. Biochem. Mol. Biol. and Biophys.*** (2001) 5: 237-242. . (IF: 0.9)

258. Khan, A.U*. Ahmad, M. Lal, S.K "Restoration of mRNA splicing by a second- site intragenic suppressor in the T4 ribonucleotide reductase (small subunit) self-splicing intron" ***Biochem. Biophys. Res Commun*** (USA) (2000), 268: 359-364. (IF: 3.5)

259. Ajamaluddin, M., Khan, M.A., and Khan, A. U*. "Prevalence of multiple antibiotic resistance and r-plasmid in Escherichia coli isolates of hospital sewage of Aligarh city in india" ***Indian Journal of Clinical Biochemistry*** (2000) 15: 29-32.

260. Khan, A.U*. and Lal, S.K. " Ribozyme : Structure and potential applications in the field of modern medicin" ***Med. Sci. Res.*** (UK), (1999), 28: 507-512.

261. Khan, A.U., Lal, S.K. and Ahmad, M. "Isolation and mapping of EMS-induced splicing defective intron mutations within the intron of the nrdB gene of bacteriophage T4" ***Biochem. Biophys. Res Commun.(USA),*** (1998), 242: 10-15. (IF: 3.4)

262. Khan, A. U*., Lal, S. K. and Ahmad, M. "Isolation and Characterization of splicing defective mutations within the intron for the gene encoding the small subunit of T4 ribonucleotide reductase" ***FASEB J.*** (1997) 11(9): A-958.

Book chapters:

1. Barira Islam and **Asad U Khan "**Lectins: To Combat Infections" InTech - Open Access Publisher, USA. Protein Purification", ISBN 978-953-307-831-1.(2012)

2. Rosina Khan and **Asad U Khan "**Medicinal Plants: A Hope of Future" ***RPMP Vol. 43—****Phytotherapeutics II*

3. Shazi Shakil, Hafiz Muhammad Ali, Raffaele Zarrilli and **Asad Ullah Khan** " Extended spectrum beta lactamases: A critical update" , Multi drug resistance: A global concern. Bentham Publishing group. Edited by Asad U Khan and Rafaelle Zarrilli (2011).

4. Raffaele Zarrilli, Maria Triassi and **Asad U Khan** "Multidrug-Resistant *Acinetobacter baumannii*: An Emerging Threat in Health Care Facilities" Multi drug resistance: A global concern. Bentham Publishing group. Edited by Asad U Khan and Rafaelle Zarrilli (2011).

5. **Asad U Khan,** Rafaelle Zarrilli and Mohammad Akram " Emerging trends of multi drug resistance in bacteria: a journey from community acquired to nosocomial infection" Antibiotic Resistance from Emerging threat to reality": Narosa Publishing House, New Delhi, India pp. Edited by Dr Rubina Laurence 26-36. (2009).

6. Shazi Shakil and **Asad U Khan**., " An Over view of the Carbapenems with a focus on Doripenem- The latest member of the carbapenem class" . Current trends in antibiotic resistance in infectious diseases: published by IK International Publication House Pvt Ltd, New Delhi and Bangalore, edited by Dr Asad U Khan pp. 179-192. (2009)

7. Misba, L. and Khan, A.U., Photodynamic Therapy Against Bacterial Biofilm: Role of Reactive Oxygen Species. In *Oxidative Stress in Microbial Diseases* (pp. 477-488). Springer, Singapore.(2019)

8. Tamanna Anwar, Pawan Kumar and Asad U. Khan* "MODERN TOOLS AND TECHNIQUES IN COMPUTER-AIDED DRUG DESIGN" *Molecular Docking for Computer*-Aided Drug Design: Fundamentals, Techniques, Resources and Applications ISBN: 9780128223123 Elsevier (2021)

9. Divya Gupta and Asad U Khan " " Molecular Docking for Computer-Aided Drug Design: Fundamentals, Techniques, Resources and Applications ISBN: 9780128223123 **Elsevier** (2021)

10. Khan F, Chaudhry B, Khan AU, "Class D Type Beta-Lactamases" Edited book title; Beta-Lactam resistance in Gram Negative Bacteria" pp 124-138. eBook ISBN 978-981-16-9097-6, Print ISBN 978-981-16-9096-9 **Springer**; (2022)

11. Farhat N, Khan AU "Beta-Lactamse inhibitor combinations targeting antibiotic resistance in Gram -negative bacteria" Edited book title; Beta-Lactam resistance in Gram Negative Bacteria" pp 269-286. eBook ISBN 978-981-16-9097-6, Print ISBN 978-981-16-9096-9 **Springer;** (2022)

12. Bashir Y , Farhat N and Khan AU "Drug Repurposing in COVID-19 and Cancer: How Far Have We Come?" Ranbir Sobti et al. (Eds): Drug Repurposing for Emerging Infectious Diseases and Cancer, 978-981-19-5398-9, 524238_1_En, **Springer-Nature)** in press (2022)

13. Khan R , Adil M and Khan AU "**Molecular Basis of Cariogenic Biofilm and Infections**
" (Eds) Understanding of Microbial Biofilms Fundamentals to applications (Edited by Surjeet Das & Neelam Amir Kungwani) ISBN 978-0-323-99977-9 Academic Press imprint of Elsevier

Sequence submitted to Gen Bank:

Di Popolo,A., **Khan,A.U**., Daoud,Z., Bagattini,M., Afif,C. and Zarrilli,R. "Molecular epidemiology of carbapenem-resistant *Acinetobacter baumannii* in a Lebanon hospital" Acinetobacter baumannii strain Acb-1 outer membrane protein ,CarO precursor (carO) gene, complete cds, **ACCESSION DQ642020**, VERSION DQ642020 **June 16, 2006.**

Gene sequences submitted from the lab

KJ184353, KJ184354, JN860195, JN860194, GQ174506, GQ174507, GQ145221, GQ1TRA45220, GQ145219, GQ145218, GQ145217, GQ145216, FJ997866, FJ997867, FJ997864, KX231873, KX231874, KX231875, KX231876, KX231877, KX231878, KX231879, KX231880, KX231881, KX231882, KX231883, KX231884, KX231885, KX231886, KX231887, KX231888, KX231889, KX231890, KX231891, KX231892, KX231893, KX231894, KX231895, KX231896, KX231897, KX231898, KX231899, KX231900, KX231901, KX231902, KX231903, KX231904, KX231905, KX231906, KX231907, KX231908, KX231909, KX231910, KX231911, KX231912, KX231913, KX231914, KX231915, KX231916, KX231917, KX231918, KX231919, KX231920, KX231921, KX231922, KX231923, KX231924, KX231925, KX231926, KX231927, KX231928, KX231929, KX231930, KX999119, KX999120, KX999121, KX999122, KX999123, KX999124, KX999125, KX999126, KX999127, KX999128, KX999129, KX999130, KX999131, KX999132, KX999133, KX999134, KX999135, KX999136, KX999137, KX999138, KX999139, KX999140, KX999141, KX999142, KX999143, MG866174, MG866173, MG866172, MG866171, MH064498, MH064497, MH064496, MH064495, MH064494, MH064493, MH064492, MH064491, MH064490, MH064489, MH064488, MH064487, MH064486, MH064485, MH064484, MF360100, MF360099,

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1) This Whole Genome Shotgun project has been deposited at DDBJ/ENA/GenBank under the accession MRVL00000000.1; Citrobacter werkmanii strain AK8 (AK8, NDM-6 Strain)

2) Whole Genome sequencing and analysis of pan-resistant uropathogen - NDM-6 producing Citrobacter freundii strain AK-8", accession number NDXY00000000.

3) Escherichia coli strain AK1, whole genome shotgun sequencing; NDM-4 producing E coli in sewage water. ACCESSION NSBV00000000, VERSION NSBV00000000.1 DBLINK BioProject: PRJNA397500 BioSample: SAMN07459800

4) Staphylococcus epidermidis AK-612 with NDM-1 ; Whole Genome Shotgun project has been deposited at DDBJ/ENA/GenBank under the accession SKCE00000000. The version described in this paper
is version SKCE03000000

Metagenomics Bio project 1:

Accession	Sample Name	SPUID	Organism	Tax ID	BioProject
SAMN17014568	AUK WATER SAMPLE -1	AUK WATER SAMPLE -1	aquatic metagenome	1169740	PRJNA682952
SAMN17014569	AUK WATER SAMPLE-2	AUK WATER SAMPLE-2	aquatic metagenome	1169740	PRJNA682952
SAMN17014570	AUK WATER SAMPLE-3	AUK WATER SAMPLE-3	aquatic metagenome	1169740	PRJNA682952
SAMN17014571	AUK WATER SAMPLE-4	AUK WATER SAMPLE-4	aquatic metagenome	1169740	PRJNA682952

Metagenomics Bio project 2:

Temporary Submission ID: SUB11806702
SAMN29985284,
SAMN29985285,
SAMN29985286,
SAMN29985287,
SAMN29985288,
SAMN29985289,
SAMN29985290

WGS: Submission ID:

SUBID	BioProject	BioSample	Accession	Organism
SUB11632629	PRJNA905193	SAMN31867189	JAPNKF000000000	Klebsiella pneumoniae AUK-613
SUB11632629	PRJNA905193	SAMN31867190	JAPNKG000000000	Klebsiella pneumoniae AUK-614
SUB11632629	PRJNA905193	SAMN31867191	JAPNKH000000000	Klebsiella pneumoniae AUK-615
SUB11632629	PRJNA905193	SAMN31867192	JAPNKI000000000	Klebsiella pneumoniae AUK-616
SUB11632629	PRJNA905193	SAMN31867194	JAPNKJ000000000	Klebsiella pneumoniae AUK-618
SUB11632629	PRJNA905193	SAMN31867195	JAPNKK000000000	Klebsiella pneumoniae AUK-619
SUB11632629	PRJNA905193	SAMN31867196	JAPNKL000000000	Klebsiella pneumoniae AUK-620
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SUB11632629	PRJNA905193	SAMN31867201	JAPNKP000000000	Pseudomonas aeruginosa AUK-625
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SUB11632629	PRJNA905193	SAMN31867205	JAPNKS000000000	Klebsiella pneumoniae AUK-629
SUB11632629	PRJNA905193	SAMN31867206	JAPNKT000000000	Klebsiella pneumoniae AUK-630

SUBID BioProject BioSample Accession Organism

SUB13054828 PRJNA953822 SAMN34125085 JARUXW000000000 Escherichia coli AK-633

Please cite the accession number JARUXW000000000 like this:

This Whole Genome Shotgun project has been deposited at DDBJ/ENA/GenBank
under the accession JARUXW000000000. The version described
in this paper is version JARUXW010000000.

"Data are available via ProteomeXchange with identifier PXD037851."

Project Name: IP/MS of FapD of Pseudomonas aeruginosa

Project accession: PXD037851

ProteomeXchange title: Pseudomonas aeruginosa, fap genetic variants, surface associated proteomics
ProteomeXchange accession: PXD033853
PubMed ID: Not applicable
Publication DOI: 10.1128/SPECTRUM.03071-22
Project Webpage: http://www.ebi.ac.uk/pride/archive/projects/PXD033853
FTP Download: ftp://ftp.pride.ebi.ac.uk/pride/data/archive/2022/11/PXD033853

Invited Talks: (72)

1. **Chaired a Session** "Multidrug resistant organisms: a clinical challenge" in UP-UK MICRON-2-23 18th Annual Conference Indian Association of Medical Microbiologist UK and UK Chapter on February 4, 2023 in Microbiology Department AMU Aligarh.

2. **Invited Speaker "** AMR a global crises: Post Covid Scenario" in National Seminar on Classical Unani Research Methodology and adaptation of Modern Research Techniques organized by Faculty of Unani Medicine, AMU Aligarh on February 25, 2023.

3. **Plenary Speaker** (Invited) in 63rd Annual International conference of Association of Microbiologist of India (AMI) on "Antimicrobial Resistance a Global Crises: Post-Covid Impact" during February 2, 2023 in Maharishi Dayandand University, Rothak, Haryana.

4. **Key Note** Speaker (Invited) "National seminar on Biophysics "Biophysika-2023" "Unravel the mystery of antimicrobial resistance: a global menace" held on January 18, 2023 in Jamia Milia Islamia, New Delhi.

5. **Invited Talk** "Environmental Impact on emergence of Antimicrobial Resistance: a Global concern" organized by Tejpur University as extension lecture on Oct. 21, 2022.

6. **Invited Talk** "Antimicrobial Resistance: a Global concern" organized by Delhi university on Nov 24, 2022

7. **Plenary talk** invited "Antimicrobial resistance a global concern: what to do" in an National seminar organised by Department of Ilmul Advia Unani Medicine faculty on Integrative approach for research in Unani Medicine" on March 2, 2022 in A K T College Aligarh.

8. Invited as Resource Person for the online CALEM training programme organized by UGC Human Resource Development Centre, AMU on 19/01/21.

9. Invited talk on " CRISPRi Vs Biofilom: a future battle ground of infection" in an International Web conference on " Trends in Nano-technology" held on Jan 15, 2021.

10. Invited talk on "CRISPRi Vs Biofilom: a battle ground of infection" in an International Conference on Biotechnology for Resource Efficiency, Energy, Environment, Chemicals and Health (BREEECH 2021) at CSIR-Indian Institute of Petroleum, Dehradun, India (Dec 4, 2021)

11. Invited speaker in Antimicrobial resistance post COVID-19 status" At the "3rd International Conference on Clinical Microbiology, Virology and Infectious Diseases" held during August 13,2021 in Webinar.

12. Invited Panel Expert on "Antimicrobial Resistance" in HISICON 2021 to be held on 29th- 31st (Conference) July 2021 on Virtual Platform organised by Microbiology Deptt JNMC Aligarh.

13. Invited as **Key Note Speaker** in National Webinar on "Recent advances in Biotechnology and microbial Infection" held on 26/5/ 2021 organized by USTM.

14. Invited **Key Note Speaker at** THE 3RD SEMINAR ON BIOLOGICAL SECURITY AND SUSTAINABILITY (BIOSES 2021) Jan 26 2021, Faculty of Science and Marine Environment, Universiti Malaysia Terengganu.

15. Invited **Key Note Speaker** " Role of Conserved Residues in catalysis of NDM-1 : an approach of site directed mutagenesis" in an International Conference on Biomacromolecules and Cellular Interface organized by Biotechnology Department, B R Ambedkar National Institute of Technology during 9-10, January 2021.

16. Invited **Key Note Speaker** " Antimicrobial Resistance worldwide crises: what to do ?. webinar organized by Institute for Research in Molecular Medicine, University Sain Malaysia organized during Jan 18, 21.

17. **Key Note** Address " A proteomic approach to unveil protein translational machinery holding a key for transition from planktonic cell to biofilm state in E faecalis" held in **Zurich, Switzerland,** during March 7-9, 2020.

18. **Key Note address "** Designing potentials inhibitors against NDM-1 type metallo-?-lactamases: to overcome Antimicrobial Effect " in International Conference on Molecular Microbiology and 2nd World Conference on Vaccine and Immunology scheduled on December 07, 2020. **UK.**

19. **Invited by Amity University as** Panellist for e-Colloquium on "Emerging Trends in Health and Disease Research" ETHDR-2020 on October, 2020.

20. **Invited Lecture on " Possible therapeutic approaches in infection control"** Even organised by UGC-MHRD on September 17, 2020.

21. Invited by UK Academy of Medical Sciences for Panel discussion as **panellist on Global issues on AMR** in **London UK**, during February 3-6, 2019.

22. **Invited talk** on AMR a global issue: What to do." In Interdisciplinary Science Conference on Big Data and computation Biology at Centre for Interdisciplinary Research in Basic Sciences Jamia Millia Islamia New Delhi. October 21-22 2019.
23. Invited talk on "Antimicrobial resistance and its solutions" in world AMR awareness day organized by Pharmacy faculty Integral University Lucknow on November 25, 2019.

24. Invited as panel expert on Antimicrobial Resistance Database forum organized by European commission Italy during May 23-27, 2019.

25. Invited by SeedingSTEM UK. In Asia-UK summit to deliver a talk on "AMR situation in India and the ways to prevent" organized in Cambridge University during June 23-27, 2019.

26. Invited as Plenary talk on" Global emergence of AMR: epidemiology to Mechanism" in National Conference on Trends in Biochemical and Biomedical sciences held in AMU Biochemistry Department during March 2-3, 2019.

27. **Key Note speech** (**Chief Guest)** on "Omics to System Biology: Away to address health challengers" in Inaugural session of National Workshop organized by Biotechnology Deptt, G. P. Pant University, Pant Nagar during Oct 23, 2018.

28. **Invited Talk on "**Structural insight of NDM-1 type Carbapenemase: Insight of functional state of protein to understand carbapemen resistance mechanism" in International conference on contemporary Antimicrobial Resistance held in **IIT Kharagpur** during 15-17 December 2018.

29. Invited Talk on " Structural Insight of NDM-1 " in SBC organized by JNU, New Delhi during November 16-19, 2017.

30. **Invited talk** on " Antibiotic resistance and its solution" **Academia Sinica, Taiwan,** November 13, 2017.

31. Invited as **Chief Panellist** in the session " How India Could be leading contributor in the field of Bioinformatics and technology" during a conference" Breaking barriers in filled of bioinformatics" organised by **IIT Delhi** during July 31-Aug 1, 2017.

32. **Plenary Speaker** " Mystery of Antibiotic resistance: a search of new culprit" NCOBE-2017, Held in JMI, New Delhi during April 10-11, 2017.

33. Invited Speaker " Understanding Structure of betalactamases: antibiotic resistance" in ICCB-2016 being held at VIT Vellore during Dec 8-10, 2016.

34. **Invited talk (Plenary speaker**) " In silico drug design: computational biology approach" in an **International Conference** on Biofilm Biology to Drug development organized by SASTRA University, Thanjavur, Tamil Nadu during September 2-3, 2016.

35. **Invited talk (Plenary speaker**) "**Understanding mystery of NDM-1 : structural and functional state of protein** organized by INVETIS University, Barelly UP, during September 23-24, 2016.

36. **Invited talk** " betalactomics: a word coined for world" in an National conference held in **BHU,** Varanasi during March 9-15, 2016.

37. Invited Talk " **International Conference** on Nanomedicine and Infection control" in NanoBio Interface 2016 organized by **JNU, New** Delhi during March 18-20, 2016.

38. **Invited talk "** Structural design of resistant markers and raison d'être of antibiotic resistance : infection combat zone" in **an International Conference** on Emerging Trends in Biomedical Sciences held in Biochemistry, AMU Aligarh during March 6-8, 2016.

39. **Invited Key Note Speaker "** Worldwide NDM-1 spread: searching an approach to control" International Conference on Antibiotic Resistance in Caparica, **Pourtgal** during January 26 – 28, 2015.

40. **Invited Speaker:** Global Spread of ESBL/MBL: what to do?, International conference on Emerging Discoveries in Microbiology organized by AMI in JNU, New Delhi during Dec. 7-10, 2015.

41. Invited Guest Speaker "Inhibitors against resistant markers: a molecular and computational biology approach" in the National conference on Bioinformatics Panorama in Agr and Health during October 5-6, 2015 in Allahabad.

42. **Invited talk** on "Drug Designing and approach of computational Biology" in extension lecture conducted by Zoology Department, AMU Aligarh on June 10, 2015.

43. **Invited speaker :** Worldwide NDM-1 spread: searching an approach to control: Recent trends in biosciences organized by Bioscience subject association in Jamia Milia Islamia during March 10, 2015.

44. **Invited Talk on "** Inhibitors designing against betalactamases: A molecular and computational biology approach" in 4rth International conference on Proteomics and Bioinformatics held at Chicago Hilton, **Northbrook, USA** during August 4-6, 2014.

45. **Invited talk on : Walk through Genes to Genome: a mystery of life"** a popular science promotion lecture in Workshop on Orientation and sensitization workshop on science writing/ journalism during Nov 24-25 , 2014.

46. **Invited Talk on "**superbug" From Computer to Test tube: Bioinformatics in medicine" in Medical University of South Carolina, **Charleston**, **USA** on August 4, 2014.

47. **Invited Talk** on "Developing Drugs (antibiotics) : How and Why ?" in an National Workshop on Advanced in Bioprocessing Engg and Technology under TEQIP –II during October 13, 2014.

48. **Invited talk** on "A fight with "superbug" From Computer to Test tube: Bioinformatics in medicine " in National Conference Science of OMICS for Agr. Productivity: future perspectives held during March 4-6, 2014. In G B Pant University. Pant Nagar.

49. Invited for talk on "Inhibitors against resistant markers: A molecular and computational biology approach" in 3rd International Conference on Proteomics and Bioinformatics held during July, 15-17, 2013.

50. **Delivers invited Lecture** on "PCR and genomics in the modern age" in UGC conducted Lecture series in Academic Staff college , Aligarh during October, 2013.

51. Delivered **invited talk"** In silico approach in drug designing in national Workshop on Bioinformatics held during February 16-18, 2012 in BHU, India.

52. Delivered **invited talk"** Inhibitors against Resistant markers: a computational approach "national Workshop on Bioinformatics held during February 16-18, 2012 in BHU, India

53. Delivered **invited talk"** Extended-Spectrum β-Lactamase Producing *Escherichia coli* Strains Isolated From Male and Female Neonates: Mode of Transmission of CTX-M Gene and a Clinico-Bioinformative Study in WSEAS International Conference held at Cambridge, UK during February 23-25. 2011.

54. Delivered **invited talk** "A global threat of emerging trends of multidrug resistance: NDM-1 superbug" in an International Conference of Association of Microbiologist of India, Chandigarh, India during November 2-4, 2011.

55. Delivered **invited talk" Metallo β-lactamases with special reference to NDM-1 in India** in 11th β-Lactamase Meeting Leonessa, Italy10th – 14th June 2011

56. Delivered Extension lectures on "Genome analysis and PCR applications" in Jamia Millia Islamia during March 13, 2011.

57. **Delivered lecture on "PCR and its use in Modern Biology"** UGC sponsored programme conducted by in Plant Biotechnology Section, Botany Department, AMU Aligarh in January 2011.

58. **Delivered series of Lectures** in Academic Staff college on " Use of PCR in Agriculture Sciences" during March 2011.

59. Delivered **invited talk** on In silico approaches in Drug designing" in WSEAS International Conference held at Cambridge, UK during February 23-25. 2010.

60. Delivered **invited talk** on "Drug Designing and its active site " in national conference held during November 4, 2009 at Allahabad Deemed University.

61. Delivered **invited talk** on "Insilico approach in designing Drug" in Bioinformatic workshop held during October 27-30, 2009 at Himachal Pradesh University, Summer Hill , Shimla.

62. **Delivered Series of Extension** lectures **in Banaras Hindu University, on PCR, Genomics and Transcription biology. During** March 2009**.**

63. Delivered **invited talk** on "Multi drug resistance" in national conference held during March 2009 at Allahabad Deemed University.

64. Delivered **invited talk** on "In silico approach in drug designing" in national conference held during March 2009 at Allahabad Deemed University.

65. Delivered invited lecture in International workshop on Molecular evaluation and Epidemiology of Avian Influenza virus at ICGEB, New Delhi during October 2008.

66. Delivered Invited talk on " A journey of MDR from Nosocomial to community acquired infection" at AIIMS during Satellite meeting of Society for free radical research India during February 11-12, 2008

67. **Delivered invited talk** on *"*emerging trends of multi-drug resistance in bacteria: a journey from community acquired to nosocomial infection" EMSI at Aligarh, during **January 1-3, 2008**

68. Delivered i**nvited talk on**" Molecular methods in Gastrointestinal infection" in the Ist National Symposium on Diagnosis and Treatment of gastrointestinal infections held at PGIEMR, Chandigarh during **13-14 January, 2007.**

69. Delivered Series of Extension lectures in Banaras Hindu University, on PCR, Genomics and Transcription biology. During March 2007.

70. Delivered Series of Extension lectures in Banaras Hindu University, on Genomics and Library construction and PCR. During February 2006.

71. Delivered **invited lecture on** "Structural and functional studies of secondary structure domains of group I intron of nrdB gene of Bacteriophage T4" in the National

Symposium on Radiation and Molecular Biophysics held at **BARC,** Trombay, Mumbai during January, **21-24, 1998.**

72. **Delivered invited lecture on** "A novel technique of halo phenotype to characterize the intron in the genome of bacteriophage T4" in the National Symposium on Characterization and Management of viruses held at **NBRI,** Lucknow during October 10-12, 1998.

***Chaired** sessions as Chairman and Co-chairman in several National conferences and Symposia.

Popular Lectures for Science promotion:

1. Invited talk on: Walk through Genes to Genome: a mystery of life" a popular science promotion lecture in Workshop on Orientation and sensitization workshop on science writing/ journalism during Nov 24-25 , 2014.
2. Invited Lecture: Science for the betterment of Mankind: Role of Biotechnology in The BLOSSOMS SCHOOL, Aligarh for Class 8-9.
3. Invited Lecture on "Plagiarism and paraphrasing" in orientation programme in JN Medical College, AMU Aligarh on June 2, 2015.
4. Invited lecture on "Innovation in Science: for Medical faculty members newly appointed, N Medical College, AMU Aligarh on August 31, 2015.
5. Invited Talk on "Application of Computers in Research" Invited Talk on "Application of Computers in Research" : Refresher course for the teachers of Academic Staff college on October 1, 2015.
6. Invited Talk on " Research excellence" in CCRUM research centre, AMU on July 19, 2016.
7. Invited talk on " Disaster management" in UGC MHRD-Centre, Aligarh during April 1, 2019
8. Invited talk on : AMR awareness in community" Science day of ABK Union School of AMU Oct 2019.
9. Invited talk on " Role of Environment on Health" in Engineering faculty organised by UGC MHRD-Centre, Aligarh on September 16, 2020.
10. Invited talk on " Amr and its impact on environment" organized by UGC MHRD-Centre of MAUU, Hyderabad on 19 Sep. 2020.
11. Invited talk " Biology : Above and beyond medicine" organized by Sharjah DPS , July, 4, 2021.
12. Invited inspirational Talk on " Journey in the world of Science" Organized by Biofootprint channel , Dec 2021.
13. Invited Talk on "Journey in the world of Science" organized by AMU Biochemical society. Jan, 2022
14. Invited talk " Viruses and emergence of its variants" organized by DPS Sharjah on August, 05, 2022.

Presentation in National and Inter National Conference / Symposia: (79)

1. Beg AZ and Khan AU "Exploring characteristics and interactome of a putative cysteine protease involved in Pseudomonas aeruginosa biofilm " 32nd ECCMID,

the European Congress of Clinical Microbiology and Infectious Diseases, Lisbon, Portugal & online from 23 – 26 April 2022.

2. Beg AZ and Khan AU "Evaluating the role of functional amyloids of Pseudomonas aeruginosa through surface-associated proteomics and targeting it by multiepitope vaccine candidates". IABSCON – 2022 Xth INTERNATIONAL CONFERENCE OF INDIAN ACADEMY OF BIOMEDICAL SCIENCES (IABS) IN ASSOCIATION WITH NATIONAL ACADEMY OF MEDICAL SCIENCES NAMS (INDIA), NEW DELHI (May 7th - 8th, 2022)

3. Beg Az and Khan AU "Structural bioinformatics and immunoinformatic approach to designing multiepitope vaccine candidates against functional amyloids of Pseudomonas aeruginosa." 90TH ANNUAL MEETING OF SBC(I), METABOLISM TO DRUG DISCOVERY : WHERE CHEMISTRY MEETS BIOLOGY held in New Delhi during Nov 2021.

4. Sahar Zaidi, Sneh Lata Singh, and Asad U. Khan "Exploring antibiofilm potential of bacitracin against streptococcus mutans" Metabolism to drug discovery: where chemistry and biology unite, 90th annual meeting of the society of biological chemists of India (SBCI, 2021) organised by Amity Institute of Biotechnology & Amity Institute of Integrative Sciences and Health New Delhi, 16th to 19th December 2021

5. Sahar Zaidi, Sneh Lata Singh, and Asad U. Khan "Exploring antibiofilm potential of bacitracin against *streptococcus mutans"* International Conference on "Genomics and Proteomics pertaining to Biological Sciences, organized by IBU, AMU Aligarh during November 5-7, 2019

6. Abid Ali, Rakesh Kumar, Mir Asif Iquebal, Sarika Jaiswal and Dinesh Kumar and Asad U Khan. (2019) Presented poster titled" The Role of N193, S217,G219 and T262 conserved residues in activity for NDM-1: A computation and molecular approach." In Interdisciplinary Science Conference on Big Data and computation Biology at Centere for Interdisciplinary Research in Basic Sciences Jamia Millia Isalamia New Delhi. October 21-22 2019.
7. Abid Ali, Divya Gupta and Asad U Khan (2019) Presented poster titled "The Role of K125, D192 and D212 near active site residues in activity for NDM-1: An approach of site directed mutagenesis and docking" in ICIBU international conference, AMU, Aligarh, November 5-7, 2019.

8. Zuberi A and Khan AU "Role of OmpR/EnvZ a two-component system in regulation of fimH: exploring the pathway to inhibit bacterial adherence and biofilm formation in International conference on genomics and proteomics pertaining to biological sciences during 29-21 Dec 2019.
9. Zuberi A and Khan AU CRISPR Interference (CRISPRi) : an approach to inhibit microbial biofilm by targeting luxS and fimH gene of Uropathogenic E.coli." International Conference on Future Diagnostic, Therapeutic and Theranostics Modalities,2018 titled

10. Lubna Maryam Khan AU "Oral presentation topic: Significant role of Asn-247 and Arg-64 residues in close proximity of the active site in maintaining catalytic function of CTX-M-15 type β-lactamase "Genomics and Proteomics pertaining to Biological Sciences"During 5-7 November, 2019 at Interdisciplinary Biotechnology Unit, Aligarh Muslim University, India

11. Lubna Maryam Khan AU "Doripenem induced increased efficacy of cefotaxime against CTX-M-15 producing bacterial strain: microbiological and biophysical view" Future Diagnostic, Therapeutic and Theranostics Modalities during 29-31 December, 2018 At Interdisciplinary Biotechnology Unit, Aligarh Muslim University, India

12. Abid Ali, Danishuddin, Gaurava Srivastava, Ashok Sharma , Asad U Khan. (2018) Presented poster titled "Potential inhibitors designed against NDM-1 type metallo-β-lactamases : an attempt to enhance efficacies of antibiotics against multi-drug-resistant bacteria" in ICIBU international conference, AMU, Aligarh, December 29-31, 2018.
13. Lubna Maryam[1] and Asad U. Khan[1]*A mechanism based effective therapeutic approach of aztreonam and cefotaxime combination against CTX-M-15 type β-lactamases 5th International conference on biotechnology engineering (ICBioE 2018), Organised by: International Islamic University Malaysia (IIUM), Kuala Lumpur, Malaysia during September 19th-20th, 2018.
14. Divakar Sharma has presented a oral presentation entitled "Potential role of M. tuberculosis Rv2005c protein in virulence and aminoglycosides resistance: A perspective view" in the National Symposium cum Bioinformatic Workshop on "Trends in Genomics: Congruence with Contemporary Biotechnological Tools" held at Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh, India from 20-21 March, 2018. (Second Prize)
15. Divakar Sharma has Presented a poster presentation entitled "Proteome profiling of carbapenem-resistant K. Pneumoniae clinical isolates (NDM-4): Exploring the mechanism of resistance and potential drug targets" in the 59th Annual Conference of Association of Microbiologists of India and "International Symposium on Host Pathogen Interactions" held at University of Hyderabad, Hyderabad, India from 09-12, December, 2018.

16. Divakar Sharma has presented a oral presentation entitled "Role of cell division protein divIVA in Enterococcus faecalis pathogenesis biofilm and drug resistance: A future perspective by in silico approaches" in the "International conference future diagnostic, therapeutic and theranostics modalities" held at Interdisciplinary Biotechnology Unit, AMU, Aligarh, from 29th-31st December 2018.

17. Nayeem Ahmad has presented a poster presentation entitled "Dissemination of a novel sequence (ST3344) of carbapenem-resistant NDM-1 producing Klebsiella pneumoniae in NICU of north Indian Hospital" in the "International Symposium for Infectious Diseases" held at Regional center for Biotechnology Faridabad and Jamia hamdard University Delhi from 12th-14th November 2018.

18. Nayeem Ahmad has presented a poster presentation entitled "Molecular characterization of novel sequence type of carbapenem-resistant NDM-1 producing Klebsiella pneumoniae in NICU of Indian Hospital" in the "International conference future diagnostic, therapeutic and theranostics modalities" held at Interdisciplinary Biotechnology Unit, AMU, Aligarh, from 29th-31st December 2018.

19. Lubna Maryam presented a oral presentation entitled "A mechanism of synergistic effect of streptomycin and cefotaxime on CTX-M-15 type β-lactamase producing strain of E. cloacae, a first report" in the 1st Post Doctoral Research Conclave (PDRC2018) held at Jamia Hamdard, Delhi, on 12th April, 2018.

20. Lubna Maryam presented a poster presentation entitled "Doripenem induced increased efficacy of cefotaxime against CTX-M-15 producing bacterial strain: microbiological and biophysical views" in the National Symposium cum Bioinformatics Workshop on "Trends in Genomics: Congruence with the Contemporary Biotechnological Tools" held at Interdisciplinary Biotechnology Unit, AMU, Aligarh, from 20th-21st March, 2018.

21. Lubna Maryam presented a poster presentation entitled "Doripenem induced increased efficacy of cefotaxime against CTX-M-15 producing bacterial strain: microbiological and biophysical views" in the National Life Sciences Fest "Biospark" held at Faculty of Life Sciences, AMU, Aligarh from 21st-22nd February, 2018.

22. Lubna Maryam presented a poster presentation entitled "Doripenem induced increased efficacy of cefotaxime against CTX-M-15 producing bacterial strain: microbiological and biophysical views" in the "International Symposium for Infectious Diseases" held at Regional center for Biotechnology Faridabad and Jamia hamdard University Delhi from 12th-14th November 2018. (First prize)

23. Azna Zuberi has presented a poster presentation entitled "CRISPRi: An Approach to Control Biofilm Mediated Infections" in the National symposium cum bioinformatics workshop titled "Trends in Genomics: Congruence with Contemporary Biotechnological Tools" held at Interdisciplinary biotechnology unit (IBU), Aligarh Muslim University, Aligarh, 2018. (First Prize)

24. Azna Zuberi has presented oral presentation entitled "CRISPRi induced suppression of fimbriae: an approach to inhibit bacterial adhesion and biofilm formation in urinary tract infection" in the National Life Sciences Fest "Biospark" held at Aligarh Muslim University, Aligarh, 2018. (First prize)

25. Azna Zuberi has presented a poster presentation entitled "CRISPRi induced suppression of fimbriae gene (fimH) of a Uropathogenic Escherichia coli: an approach to inhibit microbial biofilm" in the 59th Annual Conference of Association of Microbiologist of India & International Symposium on Host Pathogen Interactions held at 9 to 12th December, 2018, university of Hyderabad.

26. Abid Ali has presented a poster presentation entitled "Potential inhibitors designed against NDM-1 type metallo-beta-lactamases: an attempt to enhance efficacies of

antibiotics against multi-drug-resistant bacteria" in the "International conference future diagnostic, therapeutic and theranostics modalities" held at Interdisciplinary Biotechnology Unit, AMU, Aligarh, from 29th-31st December 2018.

27. Divakar Sharma, Manju Lata, Mohammad Faheem, Asad Ullah Khan, Beenu Joshi[1], Krishnamurthy Venkatesan, Sangeeta Shukla and Deepa Bisht "Cloning, expression and correlation of Rv2005c of M.tuberculosis to amikacin & kanamycin resistance" 58th Annual Conference of AMI-2017, and International symposium on microbes for sustainable development : Scope and Applications in Babasaheb Bhimrao Ambedkar (A Central) University, Vidya Vihar, Raebareli Road, Lucknow-226025, U.P., India

28. Awarded first prize in the Oral paper category for the paper "Shadab Parvez, Praveen K Verma, Asad U Khan. Genetic features of an uropathogen: New Delhi Metallo-β-Lactamase-6 (NDM-6) producing Citrobacter freundii" in a 6th Biennial Conference of Gastrointestinal Infection Society of India (GISI), organized by AIIMS Bhopal on 26 – 28 October, 2017.

29. Lubna Maryam and Asad U. Khan "Doripenem induced increased efficacy of cefotaxime against CTX-M-15 producing bacterial strain: microbiological and biophysical views" National Conference on "Protein Structure and Dynamics in Health and Agriculture". Organised by: Jamia Millia Islamia, New Delhi. November 3-4, 2017 (Obtained First Prize).

30. Shariq Qayyum, Dr. Diwakar, Dr. Deepa, Dr. Asad U Khan Quercetin treated inhibition of Enterococcus faecalis biofilm; exploring novel putative targets using proteomic approach (YOUNG SCIENTIST AWARD) NCOB, JAMIA-Oral Presentation" 2017.

31. Qayyum, Dr. Diwakar, Dr. Deepa, Dr. Asad U Khan Protein translation machinery holds a key for transition of planktonic cells to biofilm state in Enterococcus faecalis: A proteomic approach AWAJI, JAPAN-, 2017.

32. Participated in International Conference on Nanotechnology (ALIGARH NANO-V) and STEM-ER (Science, Technology, Engineering and Mathematics-Education and Research) during March 12-15, 2016. Organized in partnership with The Ohio State University (OSU) in Ohio, USA and CEERI Pilani and, the Aligarh Muslim University (AMU).

33. Rehman MT, Ahmed S and Khan AU. Characterizing the meropenem and human serum albumin interaction by spectroscopic and computational approaches. In "National Symposium on Biophysics & Golden Jubilee Meeting of Indian Biophysical Society" organised by Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia (Central University), New Delhi-110025, India.

34. Shariq and Dr. Asad U Khan "Bio-fabrication of wide spectrum antibiofilm and antibacterial green nanoparticles" AWAJI, Japan 2015.

35. Shariq Qayyum, Dr. Diwakar, Dr. Deepa, Dr. Asad U Khan "Proteomic analysis of enterococcal biofilm under quercetin stress " AMI-2015, New Delhi .

36. Shariq Qayyum, Dr. Diwakar, Dr. Deepa, Dr. Asad U Khan * Proteomic analysis of enterococcal biofilm under quercetin stress " PSI-2015, Vellore,

37. Md Tabish Rehman, Mohd. Faheem and Asad U Khan "Structural Insight into CTX-M-15 b-lactamase Folding Pathway: Characterization of Intermediate States by Biophysical Approaches" The Second International Symposium on Protein Folding and Dynamics during November 5-7, 2014 in NCBS Bangalore

38. Ali SZ, Parvez S, Mateen S, Khan AU. Identification and characterization of extended spectrum β-lactamase producers in Gram negative bacteria in vegetables. National Symposium Cum Workshop on New Facet of Biotechnology From Genes to Proteins [January 15-17, 2014] organized by Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh.

39. Ali SZ and Khan AU "On the topic entitled: "A study of antibiotic resistance status of Klebsiella pneumoniae induced neonatal septicemia in a tertiary care hospital at Aligarh" in the National Symposium Cum Workshop on New Facet of Biotechnology From Genes to Proteins [January 15-17, 2014] organized by Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh-202002,UP,India.

40. Rehman MT, Faheem M, Danishuddin M and **Khan AU. Characterization of non-β-lactam based β-lactamase inhibitor of CTX-M-15 type extended spectrum β-lactamase**. In *"Third Annual Meeting of the Indian Academy of Biomedical Sciences & Symposium on Modern Trends in Human Diseases"* organised by Department of Biochemistry, Faculty of Medicine, Aligarh Muslim University, Aligarh, UP- 202002, India. 2013.

41. Rehman MT, Shamsi H and **Khan AU. Mapping the Binding Site of Imipenem on Human Serum Albumin: A spectroscopic and Molecular Docking Study**. In *"Recent Trends in Protein Structural Biology"* organised by Centre for Interdisciplinary Research in Basic Sciences, Jamia Millia Islamia (Central University), New Delhi-110025, India. 2013. . ***Journal of Proteins and Proteomics.*** (Conference Proceeding).

42. **Rehman MT**, Shamsi H and Khan AU (2013). Mapping the Binding Site of Imipenem on Human Serum Albumin: A spectroscopic and Molecular Docking Study

43. Ali SZ and **Khan AU** "Isolation and characterization of ESBLs producer *Enterobacteriaceae* in vegetables''. in the 3rd Annual Meeting of the Indian Academy of Biomedical Sciences and Symposium on Modern Trends in Human Diseases [December 14-15, 2013] organized by Department of Biochemistry, Faculty of Medicine, Jawaharlal Nehru Medical College, Aligarh Muslim University, Aligarh-202002, UP, India.

44. Sadaf Hasan, M. Danishuddin, M. Adil, Kunal Singh, Praveen K Verma and **Asad U. Khan. "**Presented poster in a DBT- sponsored workshop on "Current Advances in Bioinformatics", held on March 13th – 14th, 2013 at Distributed Information Sub-centre, Interdisciplinary Biotechnology Unit, Aligarh Muslim University, Aligarh.

45. Ahmad A and **Khan AU**, "Molecular differentiation of Invasive Candidiasis, antifungal susceptibility and clonal relatedness of Candida species: a Neonatal Intensive Care Units experience from Northern India" The 35th Annual Meeting of The Molecular Biology Society of Japan, **Tokyo 100-0013, Japan** during December 11-14, 2012.

46. Saeedut Zafar Ali **& Asad U Khan**, "Invitro susceptibility of *K. pneumoniae* isolates to 12 antibacterial agents: results from population based active surveillance programme Aligarh" National workshop on " faculty of Engineering & Technology, A.M.U, Aligarh, India during March 23-27, 2011. [Poster presentation].

47. **Khan, A***.U. "* In silico approaches in Drug design" WSEAS International Conference 23-25, 2010, February Cambridge University, Cambridge , England.

48. Khan, A.U. and Shakil S " Transmission of bla_{CTX-M} among ESBL-producing *E. coli* strains isolated from infected diabetic foot ulcers" International Conference on Antimicrobial Research (ICAR2010), 3-5 November, 2010, Valladolid (Spain).

49. Asad U. Khan, Shazi Shakil , Mohammad Akram, and Syed M Ali "Extended-Spectrum β-Lactamase Producing *Escherichia coli* Strains Isolated From Male and Female Neonates: Mode of Transmission of CTX-M Gene and a Clinico-Bioinformative Study" 4th Ditan International Conference on Infectious Diseases (DICID), 15-18, July, 2010 in China.

50. Anis Ahmad, M. Akram, Shahper N. Khan, Rosina Khan and **Asad U. Khan** "Mode of transmission of Candida infection in neonates and their drug resistant pattern: a concordance study" Satellite meeting 2009 of SFRR held at AMU, Aligarh during march 17-18, 2009.

51. Shakil, S Alvi, S, Beb, M and **Khan AU.** "Analysis of diabetic foot ulcer in tertiary care hospital- a clinico microbiological perspectives. " National Conference on " Antimicrobial resistance: from emerging threat to reality" at Allahabad Agriculture Institute during March 23-25, 2009.

52. Shazi Shakil and **Asad U. Khan,** "Isolation and characterization of microbial pathogens from the patients admitted to the endocrinology ward of a premier hospital of north India" Satellite meeting 2009 of SFRR held at AMU, Aligarh during march 17-18, 2009.

53. Farzana khatoon, Barira Islam, **Asad U. Khan** "characterization of adherence defective mutants of *streptococcus mutans* mutants" Satellite meeting 2009 of SFRR held at AMU, Aligarh during march 17-18, 2009.

54. Ahmad A, Akram, M, Khan, S N. Khan R, Zafar S, Khan, AU, " Invitro susceptibility of Candia isolates to six antifungal agenst: results from population based active surveillance programme Aligarh" National Conference on " Antimicrobial resistance: from emerging threat to reality" at Allahabad Agriculture Institute during March 23-25, 2009.

55. Barira Islam, Shahper N. Khan and **Khan, A.U.** "elucidating the novel properties of purified compound from *morus alba.* l. against human dental plaque" EMSI at Aligarh, during **January 1-3, 2008.**

56. Shahper N. Khan and **Asad U. Khan.** "Probing Midazolam Interaction with Human Serum Albumin and Its Effect on Structural State of Protein" Proceedings at 2nd International Conference on Perspectives in Vibrational Spectroscopy, Kerela. (2008) (**Oral presentation**).

57. Shahper N. Khan and **Asad U. Khan.** "Characterizing the Interaction of Adriamycin with Hemoglobin" Proceedings at International Conference on "Free Radicals & Natural Products in Health and Seventh Annual Meeting of the Society of Free Radical Research India, Jaipur (2008).

58. Shahper N. Khan and **Asad U. Khan** "Investigating the interaction of general anesthetic propofol with DNA by optical spectroscopy" Proceedings at International Symposium on the Predictive, Preventive and Mechanistic Mutagenesis & XXXIII EMSI Annual Meeting, AMU, Aligarh (2008)

59. **Khan AU,** *"*emerging trends of multi-drug resistance in bacteria: a journey from community acquired to nosocomial infection" EMSI at Aligarh, during **January 1-3, 2008 (Invited talk).**

60. Shazi Shakil, Saeedut Zafar Ali, Mohammad Akram , Syed Manazir Ali and **Khan, A.U.** *"*prevalence of multi drug resistant strains of *e. coli and klebsiella pneumoniae in* the neonatal intensive care unit of jnmc hospital, aligarh, india" EMSI at Aligarh, during **January 1-3, 2008.**

61. Sabri I, Ahmad J and **Khan A U**, "Effect of temperature and aging [time] on recovery of DNA in forensic blood samples" Forth young medics International Conference held in Yerevan, Armedia, UK **during September 20-23, 2007.**

62. Rosina Khan, Shahper N.Khan, Barira Islam, Mohd Akram, Shazi Shakil, Anis Ahmad, S Manazir Ali, Mashiatullah Siddiqui, Asad U. Khan **"**Antimicrobial activity of herbal extracts against multi-drug resistant strains of community acquired and nosocomial origin" AMI, Chinnai, during December 21-23, 2007.

63. **Khan SU and Khan A U** "Interaction of mitozantrone with human serum albumin" International Conference on Applied Bioengineering ICAB07 in Chennai, during 6-7 December, 2007. **(Best Paper award)**

64. Khan AU, "**Invited talk on**" Molecular methods in Gastrointestinal infection" in the Ist National Symposium on Diagnosis and Treatment of gastrointestinal infections held at PGIEMR, Chandigarh during **13-14 January, 2007**

65. Islam, B and **Khan A.U.** "Rediscovering traditional therapies in Dental Caries : Effect of herbal extracts on the cariogenic attributes of *S. mutants*" Association of Microbiologist of India 47th Annual conference, Microbiology: The challenges ahead, at Bhopal during **December 6-8, 2006.**

66. Khan S N, Islam, B and **Khan AU** "Effect of aesthetic supplement thiopental on the structure of human serum albumin: Spectroscopic approach " ACBICON-2006 (National conference of Association of clinical biochemists of India) held at Armed forces medical college (AFMC), Pune. During **23rd-26th November 2006 (oral presentation)**

67. Akram, M, Shahid, M and **Khan A.U,** " Etiology and antibiotic resistance pattern of community acquired tract infection in the Aligarh Hospital" Association of Microbiologist of India 47th Annual conference, Microbiology: The challenges ahead, at Bhopal during **December 6-8, 2006.**

68. **Khan A U,** Popolo A and Zarrilli R "carbapenem-resistant Acinetobacter baumannii isolated from a nosocomial outbreak in a Hospital" Association of Microbiologist of India 46th Annual conference at Hyderabad during December 8-10, 2005.

69. Xiaoyuan He[1]**, Asad U. Khan[2]**, Hailing Cheng[1], Mariela Reyes-Reyes[2], Michael Hampsey[2] and Claire Moore[1] "FUNCTIONAL INTERACTION BETWEEN THE RNAP II TRANSCRIPTION INITIATION AND 3'-PROCESSING MACHINERIES" Cold Spring Harbor Meeting on Mechanisms of Eukaryotic Transcription, Cold Spring harbor, New York, during August 27-31, 2003.

70. Xiaoyuan He, Hailing Cheng, **Asad U Khan**, Donald Papas , Michael Hampsey, and Clair Moore " Functional Interaction between the RNAPII Transcription machinery and RNA 3'Processing Machinery " Northeast Regional Yeast Meeting held at Cornell University , Ithaca , New York during July 12-13, 2002.

71. Xiaoyuan He, **Asad U Khan,** Hailing Cheng, Donald Papas , Michael Hampsey, and Clair Moore " Functional Interaction between the RNAPII Transcription initiation complex and the RNA 3'-end Processing Machinery in Saccharomyces cerevisiae". CSHL Meeting on Dynamic Organization on Nuclear Function, Cold Spring Harbor Laboratory, NY, USA. September 18-22, 2002.

72. **Khan, A. U.,** Ajamaluddin, M., and Lal, S.K., "Suppression of white halo phenotype: second site intra and extragenic revertants of nrdB intron of bacteriophage T4". National Symposium on Biological Chemistry Beyond 2000 A.D. held at Biochemistry Department Dr. R. M. L. Avadh University, Faizabad during November 27-28, 1999, p 11 (**Oral presentation).**

73. **Khan, A.U.,** Lal, S.K. and Ahmad, M . " A novel technique of halo phenotype to characterize the intron in the genome of bacterial virus" National Symposium on Characterization and Management of viruses held at NBRI, Lucknow during October 10-12, 1998, AV-3, P5 (**Oral presentation).**

74. **Khan, A.U.,** Lal, S.K. and Ahmad, M. " Structural and functional studies of secondary structure domains of group I introns of nrdB gene of bacteriophage T4" National Symposium on Radiation and Molecular Biophysics held at BARC, Tomboy, Mumbai during January, 21-14, 1998, I-47, p50 **(Oral presentation).**

75. **Khan, A.U**., Lal, S.K. and Ahmad, M. " Mapping of suppressor intron mutations to isolate extragenic revertants of T4 nrdB gene" 66th Annual Meeting of Society of Biological Chemists (India) held at Vishakapatanam during 22-24 December 1997.

76. **Khan, A.U**., Lal, S.K. and Ahmad, M. " Hybridation analysis of 31 splicing defective mutations of nrdB intron of bacteriophage T4" 66th Annual Meeting of Society of Biological Chemists (India) held at Vishakapatanam during 22-24 December 1997.

77. **Khan, A.U.,** Lal, S.K. and Ahmad, M. "Isolation and mapping of EMS induced intron mutants of bacteriophage T4" 65th Annual Meeting of Society of Biological Chemists (India) held at Bangelore during November 20-23, 1996.

78. **Khan, A.U.,** Lal, S.K. and Ahmad, M. " Interaction of human IgG with anti human IgG antibody of rabbit" 65th Annual Meeting of Society of Biological Chemists (India) held at Bangelore during November 20-23, 1996.

79. **Khan, A.U.** and Khan, M. S. "Mutagenic and Carcinogenic activity of human food products" National Conference on Hifzane-Sehat and Tibe-Samaji held at Aligarh during April, 5-6, 1995.

National and International workshops:

1. **Attended Webinar** on Antimicrobial Surveillance and consumption data" organised by British Society of Antimicrobial Chemotherapy on September 17, 2020.
2. **Attended Webinar on "**Lets Talk Superbug: making sense of antimicrobials: organized by DBT-India Alliance on 24/11/20
3. **Attended Webinar** on RSC Medicinal Chemistry Desktop Seminar Series on October 14, 2020
4. **Attended Webinar** on " Post Covid-19 effects on society and its management" Organised by DBT Ministry of Science and Technology , India on September 11, 2020.
5. Attended Workshop on "Perspectives and current trends in bioinformatics" organized by CCMB, India during February 9-15, 2009.
6. Attended International Symposium on Avian Influenza In new Delhi, organized by ICGEB and CDC Atlanta during October, 29-31, 2007.
7. Attended 46th Annual conference organized by Association of Microbiologist of India at Hyderabad during December 8-10, **2005**.
8. Attended XVI Annual BTISnet Coordinators Meet during 3-4 February, 2005 in the Bioinformatic Centre , Birla Research Institute of Sciences , Jaipur, India organized by Department of Biotechnology , Ministry of Sciences and Technology, Government of India.
9. Attended national workshop on "Softcomputing , Machine learning and bioinformatics application" held during November 17-19, **2004** in Jamia Millia Islamia , New Delhi.
10. Attended XV Annual BTISnet Coordinators Meet during 5-7 February, 2004 in the Bioinformatic Centre , Centre for Biotechnology, Anna University , Chennai, India

organized by Department of Biotechnology , Ministry of Sciences and Technology, Government of India.

11. Attended Cold Spring Harbor Meeting on Mechanisms of Eukaryotic Transcription held during **August 27-31 2003** in Cold Spring Harbor Laboratory, **New York**.
12. Attended Northeast Regional Yeast Meeting held at Cornell University , Ithaca **, New York, during July 12-13, 2002.**
13. Attended DIMACS Workshop on DNA Sequence and Topology held at Centre for Descrite Mathmetical and Theoretical Computer Sciences at Rutgers University **, New Jersey, USA during April 19 to 20 , 2001**
14. Attended An Annual Symposium in Biomedical Research on Mechanisms for the Establishment and maintenance of Chromatin structure: Role in Development and disease held on April 18, 2001 at Wistar Institute , **University of Pennsylvania , Philadelphia, PA,**
15. Attended XIIIth International Conference of Indian Virological Society and National Symposium on Characterization and Management of Viruses held at NBRI, Lucknow, during October 10-12, 1998.
16. Attended National Symposium on Radiation and Molecular Biophysics at Bhaba Atomic Research Centre, Trombay, Mumbai, during January 21-24, 1998.
17. A Workshop on introduction to the use of personal computers and window based softwares in bioinformatics with special reference to nic-net connectivity and CD-ROM databases, sponsored by the Department of Biotechnology, Ministry of Sciences and Technology, Government of India held at Aligarh during March, 10-12, 1997.
18. A Workshop on introduction to the use of personal computer in Bioinformatics with special reference to molecular modelling and protein folding sponsored by Department of Biotechnology, Ministry of Sciences and Technology, Government of India held at Aligarh during the period of February, 23-27 1996.
19. Attended a 65th Annual Meeting of the Society of Biological Chemists (India) held at Bangalore during November 20-23, 1996.

Personal data:

Date and Place of Birth: 04/04/1972, Budaun

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Religion Islam

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Marital Status: Married

Declaration

I hereby declare that foregoing information is correct and complete to the best of my knowledge.

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