

ABID ALI KHAN

Ph.D.

Molecular Biology & Biomedicine



A young and accomplished scientist with plenty of post Ph.D. experience (teaching and research) in interdisciplinary sciences (microbiology, molecular biology, biochemistry and nanobiotechnology). I am an independent and responsible researcher who strives for excellence with high motivation for challenging scientific positions in the academia to become a part of a dynamic group/team in an institute, organization or university.

 www.linkedin.com/in/abid-ali-khan-75b95423/

EXPERIENCE

Last Most Recent

12/2012 – 09/2019

Senior (Level) Postdoc. (entitled as)/**Assistant Professor** (in Pakistan)
Department of Biosciences, COMSATS University Islamabad, Pakistan

- Remained an Assistant Scientific Coordinator of A Own Small Team
- Taught (Grad./Undergrad.) Microbiol., Nanobio. & Biotech. courses
- Conducted Research in Microbiology/Molecular Biology & NanoBiotech.
- Look After A Microbiology Lab in the Department of Biosciences, CUI
- Helped in and/or Wrote Grants for Fundings & Managed Existing Ones
- Supervised and/or helped in Research Students for Grad./Undergrad. Theses
- Wrote/Published Reports & Articles for Nat./Internat. Journals/Conferences

10/2013-09/2014

UTM Postdoctoral Research Fellow
Institute of Bioproduct Development, Universiti Teknologi Malaysia,
Skudai, Johor Bahru, Malaysia

06/2009-08/2012

Predocctoral Research Scientist
CIC nanoGUNE Consolider, Nanoscience Research Centre,
Donostia-San Sebastián, Spain

01/2009-03/2009

Research Assistant
Department of Biochemistry, University of Gothenburg, Sweden

DOCTORATE

2009-2012

Ph.D. Molecular Biology & Biomedicine (NanoBiotechnology)
APTO CUM LAUDE (Passed with Excellence)
University of Basque Country, San Sebastian-Donostia, SPAIN
“Tobacco Mosaic Virus (TMV) as a nanoscaffold for inorganic assemblies”

EDUCATION

2006-2008

Master of Science in Biology (Molecular Biology & Microbiology)
University of Gothenburg/Chalmers University of Technology, Sweden.
Degree Project: Role of TOR in *Saachromyces* as an energy sensor.

2002-2006

Bachelor of Biotechnology
University of Peshawar, KPK, Pakistan
Degree Project: Homology modeling of Ring Necked Pheasant hemoglobin

RESEARCH PROJECTS

07/2018 – 06/2020
(as CO-PI)
(in Progress)

Production and Nano-Encapsulation of Micronutrient for Food Fortification to Fight Malnutrition in Pakistan
Total Budget Approved: 23,000/- USD

- Encapsulation of Micronutrients for better bioavailability
- Characterizing and Selecting Best Nano-carrier Platforms

PERSONAL INFO

Address

Eichenring 36, 14469
Potsdam, Germany

Phone

0152 0256 3770

Email

getabidalikhan@gmail.com

LANGUAGES

- English
(Expert/Top-Notch)
- German
(A1 Level/Basic)
- Spanish
(Intermediate/Good)
- Urdu
(Native)

PORTABLE SKILLS

- Project Management
- Commercial Acumen
- Resource Management
- Conflict Resolution
- Communication Skills
- Leadership/Teamwork

LEGAL STATUS

Allowed to live and work
Full Time in Germany

REFERENCES

1. Alexander Bittner
Professor, CIC nanoGUNE,
San Sebastian, Spain
a.bittner@nanogune.eu

2. Christer Larsson
Professor, Biology & Biological
Engineering, Chalmers University
of Technology, Sweden
christer.larsson@chalmers.se

3. M. Arshad Rafiq
Assoc. Scientist, PEM, PGCL,
Toronto, Ontario, Canada;
Professor, COMSATS University
Islamabad, Pakistan
arshad.rafiq@comsats.edu.pk

04/2016 – 03/2018

(as PI)

(Completed)

The Living Nano-Magnets

Project Awarded by COMSATS University Islamabad, Pakistan

Total Budget Approved: 1,870/- USD (approx.)

- Isolated, Purified & Identified Magnetotactic bacteria from Pakistan
- Optimized conditions for biosynthesis of iron oxide nanoparticle *in vitro*
- Published the report in a renowned Elsevier journal

06/2010 – 09/2014

2010-2011

2010-2011

2011-2012

Grant Proposals as a Team Member (Ph.D. student)

Consumables Grant Plan Nacional (Awarded by Spanish Ministry of Science) 17,000 €

Travel Grant (CH-3429) for Synchrotron Experimentation (Awarded by ESRF, Grenoble, France)

Travel Grant (CH-3659 for Synchrotron Experimentation (Awarded by ESRF, Grenoble, France)

TECHNICAL SKILLS

Bacterial and Fungal Culture Assays
(Aerobic, Anerobic, Microaerophilic)
Primer Designing, Polymerase Chain Reaction
Blotting (Western, Southern, ELISA)
Antibacterial-&-Antifungal & Biofilm Assays
Spectroscopy (Mass Spec., UV-Vis, FTIR)
Nano-Antibiotics, Nano-Antibacterials
Dynamic Light Scattering & Zeta Potential
Publications (Reports, Articles, Posters)
Drug Encapsulation in Nanoscale carriers

Molecular Biology Capabilities
(DNA/Protein Isolation, Gel Electrophoresis)
Wet Chemistry of (Nanoparticle Synthesis)
Microbial Identification (Biochem., Molecul.)
Genetic Engineering (Bacteria/Yeast)
Nanomaterials/Nanobiomaterials
Drug Encapsulation in Nanoscale carriers
Cancer/Mammalian Cell Culture
Oral/Invited Talks (Conferences, Workshops)
Magnetometry Analysis (SQUID/VSM)

SELECTED PUBLICATIONS (Published – 17 ; Under-Review – 3; Submitted – 3; In Preparation – 5)

1. Wu, Z., Zierold, R., Mueller, A., Ruff, E.S., Ma, C., **Khan, A.A.**, Geiger, Knez, M., Nielsch, K., Bittner, A., Wege, C. and Krill, C. E. *Preparation and magnetoviscosity of nanotube ferrofluids by viral scaffolding and ALD on porous templates.* **Phys. Stat. Solid. B**, 10:2412-2423 (2010).
2. Eber, F.J., Degenhard, S., Eiben, S., **Khan, A.A.**, Wege, C. and Bittner, A.M. *Preparation of complexes of Tobacco mosaic virus and magnetic nanoparticles and investigation of their behavior in an oscillating magnetic field.* **Nanonewsletter (nanoresearch)**, 26:23-28 (2012)
3. **Khan, A.A.**, Fox, E.K., Gorzny, M., Nikulina, E., Brougham, D.F., Wege, C. and Bittner, A.M. *pH control of the electrostatic binding of nanoparticles on Tobacco Mosaic Virus.* **Langmuir**, 29, 2094-2098 (2013).
4. Bigall, N.C., Wilhelm, C., Beoutis, M.L., Hernandez, M.G., **Khan, A.A.**, Giannini, C., Ferrer, A.F., Mezzenga, R., Garcia, M.A., Gazeau, F., Bittner, A.M., Manna, L. and Pellegrino, T. *Colloidal Assemblies in a Polymer Shell – A Novel Type of Magnetic Nanobeads for Theranostic Applications.* **Chem. Mater.**, 25(7), 1055-1062 (2013).
5. Bigall, N.C., Dilela, E., Dorf, D., Marie-Lys B., Pugliese, G., Wilhelm, C., Gazeau, F., **Khan, A.A.**, Bittner, A.M., Garcia, M.A., Garcia-Hernandez, M., Manna, L. and Pellegrino, T. *Hollow Iron Oxide Nanoparticles in Polymer Nanobeads as MRI Contrast Agents.* **J. Phy. Chem. C**, 119(11), 6246-6253 (2015)
6. Abu Bakar, H.M., Sarmidi, M.R., Kai, C.K., **Khan, A.A.**, Hasniza, B.Z.H. and Yaakob, H. *Metabolomics – The Complementary Field in Systems Biology: A Review on Obesity and Type 2 Diabetes.* **Mol. Biosyst.**, 11, 1742-1774 (2015)
7. Noor, M.N., **Khan, A.A.**, Hasham, R., Talib, A., Sarmidi, M.R., Aziz, R., and Aziz, A.A. *Solid lipid particles as delivery vehicles for virgin coconut oil.* **IET Nanobiotech.**, 10(4), 195-199 (2016)
8. Shah, S.S., **Khan, A.A.**, Espinosa, A., Garcia, M.A., Nuansing, W., Ungureanu, M., Heddle, J.G., Chuvilin, A., Wege, C. and Bittner, A.M. *Virus-templated near-amorphous iron oxide nanotubes.* **Langmuir** 32(23), 5899-5908 (2016)
9. **Khan, A.A.**, Omer, K.A., Talib, A., Javed, M.A. and Sarmidi, M.R. *Green Tropical Phytoextracts – Promising Anticancer Alternative.* **Braz. Arch. Bio. Tech.** Vol.59: e16160062, January-December 2016
10. Bostan, N., Naeem, M., Mustafa, I., **Khan, A.A.**, Haider, W., Asif, S., Khan, M.R., Ahmed, R., Afzal, S.S., Ali, M.S. and Ahmed, H. *Impact of health care risk factors on seroprevalence of Hepatitis B and C viruses from rural areas of Northern Punjab (Sargodha District), Pakistan.* **Trop. Biomed.** 33(4): 599-607 (2016)

11. Talib, A., **Khan, A.A.**, Jilani, G. and Ahmed H. *The Nano-Magnetic Dancing of Bacteria Hand-in-Hand with Oxygen*. **Braz. Arch. Bio. Tech.** Vol.60: e17160769, January-December 2017
12. Ahmed, H., Ali, S., Afzal, M.S., **Khan, A.A.**, Raza, H., Shah, Z.N. and Simsek, S. *Echinococcosis is a Neglected Tropical Disease: A concerning issue for future research in Pakistan?* **Infec. Dis. Pov.** 6:90-94 (2017)
13. Talib, A., Bokhari, H., Syed, H., Ahmed, H. Jilani, H. and **Khan, A.A.** *Respiring Cellular Nano-Magnets*. **Mater. Sci. Engg. C.** 80:526-531(2017)
14. Rashid, A., Gondal, M.A., **Khan, A.A.**, Ali, A., Khan, M.A., Rafiullah, Ahmed, S., Wazir, I., Sajjad, S.A.S. and Khan, S. *Molecular and serological study of caprine and ovine brucellosis in district Peshawar*. **J. Ent. Zool. Stud.** 5(6):1436-1440 (2017)
15. Javed, F., Khanzadi, N.M., Ali, M., Irshad, U.H., Khan, A.A, Zaib, A. and Manzoor, S. *Zika Virus: What we need to know?* **J. Bas. Microbio.** 58(1):3-16 (2018)
16. Mehmood, A., Talib, A., Jadoon, Z.K., Khan, G. and **Khan, A.A.** *Investigative evaluation of Cassia absus for antibacterial capacity and biomimetic synthesis of silver nanoparticles*. **IET Nanobiotech.** 12(8):1062-1066 (2018)
17. Aasim, M., Khan, M.H., Rahman, I.U., Bibi, N.S., Ali, W., Khan, N.Z. and **Khan, A.A.** *Comparative analysis of the methods used for finding energy to investigate protein interaction behaviour on chromatographic supports*. **Biotech. Prog.** 35(4):July/August e2828 (2019)
18. Akhtar, M.U., **Khan, A.A.**, Khan, W.J. and Furqan, T. *Microalgae as sources of biofuel production through waster water treatment*. **Nov. Res. Microbio. J.** 3(5):464-470 (2019)
19. Manzoor, K.N. and **Khan, A.A.** *CRISPR/Cas9: Nature's Gift to Prokaryotes and an Auspicious Tool in Genome Editing*. **ACCEPTED/In-Press (J. Basic Microbiol.)**
20. Khan, S., Akhtar, S., Ahmed, W., Habib, M.B. and **Khan, A.A.** *Nanocontainer (niosome)-encapsulated levofloxacin as a nano-antibacterial for Brucella species isolated from raw milk samples*. **ACCEPTED/In-Press (J. Basic Microbiol.)**
21. Ejaz, A., Talib, A., Adnan, F., Badshah, M., Sarmidi, M.R. and **Khan, A.A.** *Niosomes Entrapped Virgin Coconut Oil (VCO) as an Antimicrobial Agent against Multidrug Resistant (MDR) S. aureus*. **Under-Review (Micro & Nano Letters)**
22. Talib, A., Ali, W., Saeed, M., Adnan, F., Badshah, M., Aasim, M. and **Khan, A.A.** *Biogenic Copper Nanoparticles as A Nanoscale Solution to Address Multiple Drug Resistance in Bacteria*. **SUBMITTED (Enferm. Infec. Microbiol. Clin)**
23. Shabbir, A., Sher, B., Manzoor, K.N., Pervez, F. and **Khan, A.A.** *Investigative Analysis of Extended Spectrum Beta Lactamase Producing Pseudomonas aeruginosa from Clinical Isolates*. **In-Preparation.**
24. Suhaib, K., Manzoor, K.N., Khan, S., Bokhari, H. and **Khan, A.A.** *Clinically isolated Pseudomonas aeruginosa exploited for the biosynthesis of iron oxide magnetic nanoparticles*. **In-Preparation.**
25. Ullah, H., Khan, Z., Talib, A., Adnan, F., Nuansing, W. and Khan, A.A. *Nosocomial multidrug resistant bacterial infections of major hospitals of Peshawar and their tackling through metallic nanoparticle-drug conjugates*. **In-Preparation.**