Email: <u>naveed5438@gmail.com</u>; <u>https://scholar.google.com/citations?hl=en&user=VYVW_8EAAAAJ&view_op=list_works&sortby=pubdate</u>

EDUCATION		
PhD	Biochemistry, Cell & Molecular Biology, University of Hull, UK	1999
MSc	Cell Biology, Genetics, Parasitology, University of London, UK	1996
BSc	Biomedical Sciences, Zakariya University, Pakistan	1993

COMPETENCIES

Mission: Transform an academic institution into an intellectual prospect that is creative and facilitates quality education. I aim to excel in scholarly activities and contribute to a research-led environment to impact society.

Scientific Passion: To me, science is not a subject but a way of life. This philosophy has enabled me to achieve a productive scientific career with >355 peer-reviewed publications, 7 books, 7 book chapters, over 50 graduate research students (16 PhDs), significant grant income (>\$4 million). Based on my research, I received Hull Royal Infirmary, UK award in 1998; Schwentker award for Best Research by Johns Hopkins University in 2002; Kut Foundation, UK award in 2007; prestigious 'Best Research Award" by Govt. of Pakistan in 2013; Gold Medal by Zoological Society of Pakistan in 2014. In 2014, I was selected among the top 10 productive scientists in Pakistan in Biological Sciences (from 2,728 Scientists). In 2015, I received the prestigious 'Pakistan Academy of Sciences' Gold Medal Award. In 2016, I received Silver Medals by Ministry of Science, Technology & Innovation, Malaysia. I received Gold Medal in Bio-Innovation award, and Research Excellence Award in Pharma-Innovation at Pharma+Bio Asia 2016. I was awarded the title of "Distinguished Professor" of the University in 2016. I received "Order of Merit" award at the Korea Inventor Award Festival-2016 in Seol, Korea. In 2017, I received silver medals at 28th International Invention, Innovation and Technology, Malaysia. In 2018, I was invited as keynote speaker at ICBMS 2018 in Thailand, ICBMB 2018 Malaysia and ICOPA 2018 in Korea and selected as Asian Council of Science Editors. In 2020 and 2021, I was selected among the top 2% of the world community of scientists. In 2020, I forged links and won a major research funding award from the US Office of Aerospace and Research and Development. In 2021, I received recognition by the American Chemical Society for achieving one of the highest number of publications in ACS Journals and also became the Editor of Scientific Reports, Nature; Experimental Results, Cambridge, and PLOS Global Public Health. In 2021, I established the first "Virology and Parasitology" research group at the University of Sharjah Medical College. In 2022, I was appointed as Global Fellow of the Ajou University, South Korea. In 2022, I was ranked as the top researcher (#1) in the UAE in the discipline of Microbiology and #27 in the UAE in all disciplines. My work has been highlighted consistently in the media. In particular, my work on "animals living in polluted environments could be rich stores of new antibiotics" caught worldwide attention. Google search of "Naveed Khan and Cockroaches" yields thousands of web pages.

Teaching: Originated PhD in Biological Sciences & BSc Biomedicine at Sunway University. I have developed and taught 3 BSc/MSc programmes, 6 UG and 3 PG courses at the University of London, University of Nottingham, Aga Khan University and Sunway University and written several books to promote teaching and learning activities.

Leadership: Pursued leadership positions throughout my academic career. Position titles include HoD, Biological Sciences; Chair, Dept. Biological & Biomedical Sciences; Chair, Graduate Programme; Director, BSc programmes; Chair, Board of Examinations, Chair, PhD review committees; Scientific advisor to conferences for >10 years.

Ethics: Co-developed new professional ethical standards for use and care of animals in research, teaching and clinical diagnostic laboratories at AKU. Served as a member of Ethics Review committees (human & animals).

Collaboration: Partnered with colleagues on challenging committees including faculty tracks and compensation, chair PhD review committee, university strategic committee, research council, search/promotion committees etc.

Communication: Interviewed with worldwide media channels. Delivered over 200 presentations at national/international conferences; >150 invited talks and over 20 years of clear classroom communication.

Google scholar: <u>https://scholar.google.com/citations?hl=en&user=r4CeMs4AAAAJ&view_op=list_works&sortby=pubdate</u>

Publications to date:358Total Impact Factor:>1,300Citations:11,520h-index:55i10-index:219

POSITIONS HELD and signature achievements

02/2021 – present

Professor and Head, Virology and Parasitology, Department of Clinical Sciences, College of Medicine, University of Sharjah, United Arab Emirates.

- Established the first "Virology and Parasitology" research group at the University of Sharjah Medical College
- Forged links with the US Office of Aerospace and Research and Development and obtained research funding for project entitled, "Novel metabolites(s) from crocodile gut microbiome
- In 2021, I was listed among the top 2% of the world community of scientists.
- In 2022, I was ranked as the top researcher (#1) in the UAE in the discipline of Microbiology
- In 2022, I was listed among the world top 50 scientists (#27) in the UAE in all disciplines <u>https://www.adscientificindex.com/top-100-scientist/?country_code=ae</u>
- Editor, Experimental Results, Cambridge University Press, and PLOS Global Public Health, PLoS.
- Instigated the development of Masters in Medical Microbiology (dual degree between University of London and University of Sharjah
- Appointed as the Global Fellow of the Ajou University, South Korea
- Obtained competitive funding for my research in infectious diseases and antimicrobials

08/2019 – 01/2021 Professor and Head of Department of Biology, Chemistry and Environmental Sciences, College of Arts and Sciences, American University of Sharjah, United Arab Emirates.

- In 2020, I was listed among the top 2% of the world community of scientists.
- Successfully completed renovation of new building (AED 35 million project)
- Successfully completed re-accreditation of BS in Biology and BS in Chemistry by the Ministry of Higher Education, United Arab Emirates
- Editor, Scientific Reports, Nature
- Introduced courses in the field of medical parasitology and microbiology to offer for BS Biology students
- Increased UG student enrollment by >20%
- Established a molecular medical microbiology research group in the area of infectious diseases and antimicrobials and obtained research funding to support this group.

07/2015 - 08/2019

Distinguished Professor and Head of Department of Biological Sciences, Sunway University, Malaysia.

- Obtained competitive funding, consistently, for my research from the Ministry of Higher Education, Government of Malaysia in infectious diseases and antimicrobials
- In 2019, University received 6 highly competitive grants from the Ministry of Higher Education. Among these 4 were obtained by our department (two belonging to my research team)
- In 2018, I was invited as a keynote speaker at ICBMS 2018 in Thailand, ICBMB 2018 in Malaysia, and prestigious ICOPA 2018 in Korea.
- In 2018, I was selected as a member of Asian Council of Science Editors
- In 2017, I received silver medals at the 28th International Invention, Innovation and Technology Exhibition (ITEX), Malaysia.
- Based on our research, I received Gold Medal in Bio-Innovation award, as well as Research Excellence Award in Pharma-Innovation at the Pharma+Bio Asia 2016 convention.
- Based on research accomplishments, I was awarded the title of "Distinguished Professor" of the University in 2016.
- I received the "Order of Merit" award at the Korea Inventor Award Festival in Seol, South Korea.
- I received Silver Medal Awards by the International Invention & Innovation Exhibition, Ministry of Science, Technology & Innovation, Malaysia, 2016.
- Patent application on "Pharmaceutical combination for treatment of Acanthamoeba infections".
- PhD in Biology: Launched (first student intake 03/2016). By 2019, it became the most successful PhD prog of the University
- BSc (Hons) Biomedicine: Originated and launched (first student intake 01/2018).
- Increased PG students (yearly) by >75%, and UG students by >25%
- Obtained funding for four PhD studentships and offered to biology faculty to promote research.

07/2010 - 06/2015

Professor and Chair of Department of Biological & Biomedical Sciences, Aga Khan University, Pakistan.

- Established a basic science research group in the area of infectious diseases and antimicrobials with significant publications & grants from the Government of Pakistan and Gates Foundation.
- Based on high research productivity in Biological Sciences, I received the prestigious 'Best Young Research Scholar Award" by the Government of Pakistan, Higher Education Commission.
- Based on high research productivity, I received the A R Shakoori Gold Medal Award by the Zoological Society of Pakistan.
- In 2013-14, I was selected as one of the top 10 productive scientists in Pakistan in the field of Biological Sciences (selected from 2,728 productive Scientists of Pakistan).
- Obtained funding for four postdoctoral fellowships to promote translational research.
- Originated a comprehensive Research Module in the MBBS curriculum.
- Launched 12 workshops nationally for professional development of scientists in Pakistan.
- Instigated the development and approval of MS in Science (Biomedical Sciences) at AKU.
- Instigated the development and approval of MSc in Science (Physiology) at AKU.
- Increased the research productivity (peer-reviewed publications and grant income by the department) by 4-fold within 4 years.
- Established research core facilities (microscopy/imaging suite, cell culture suite, and molecular biology suite) in the department.
- Led the development of Stem Cell Biology Research at AKU, in partnership with the UCSF, USA.
- Spearheaded the development and implementation of guidelines for the welfare and ethical use of animals in research, teaching and clinical laboratories.

• Responsible for reviewing and providing a direction for the PhD programme to enhance a research culture at the University.

09/2008 – 06/2010 Associate Professor of Molecular Microbiology, University Nottingham, UK.

- My work on insects as source of antimicrobials was highlighted as a breakthrough research in worldwide media.
- Led the development of and offered graduate writing strategies course to faculty and students.
- Instigated the development of an interdisciplinary research group bringing together biologist, chemist and physicist to understand pathogen crossing of the blood-brain barrier that led to recruiting research students, successful grant applications and high quality publications.
- Established formal links with Defence Sciences and Technology Laboratory, UK and obtained funding to develop collaborative projects on antimicrobial resistance.

06/2002 – 08/2008 Associate Professor (Senior Lecturer) in Microbiology, Birkbeck, University of London, UK.

- 10/2007 08/2008: Associate Professor (Senior Lecturer)
- 06/2002 09/2007: Assistant Professor (Lecturer)
- Introduced BSc in Biomedicine programme
- Consultant, London Technology Network interlinking academics and the industry
- Introduced and edited Research Newsletter to promote interdisciplinary research.
- Directed Postgraduate Research Students Committee and energized students and faculty
- Received Kut Foundation Awards

10/2000 - 06/2002

05/1999 - 10/2000

Senior Postdoctoral Research Fellow, Johns Hopkins University School of Medicine, USA.

- Carried our research in the field of bacteriology (E. coli meningitis) and virology (HIV, Rotavirus)
- Received Schwentker Award for Best Research by Johns Hopkins University
- Supervised undergraduate research students and lectures in the field of medical microbiology

Postdoctoral Research Fellow, Tufts University School of Medicine, USA.

- Carried our research in the field of parasitology (Acanthamoeba, Giardia)
- Supervised MD students to undertake research and gave lectures in the field of medical microbiology

of

PUBLICATIONS To date, 358 peer-reviewed publications

<u>2022</u>

- Siddiqui, R., Boghossian, A., Khatoon, B., Kawish, M., Alharbi, A. M., Shah, M. R., Alfajemi, H., Khan, N. A. (2022). Antiamoebic properties of metabolites against *Naegleria fowleri* and *Balamuthia mandrillaris*. *Antibiotics* 11(5): e539.
- Abdelnasir, S., Mungroo, A. R., Shahabuddin, S., Siddiqui, R., Khan, N. A., Anwar, A. (2022). Polyaniline-conjugated Tungsten Disulphide Nanoparticles Exhibiting Potent Effects against Braineating Amoebae. *Applied Microbiology and Biotechnology* (in press). doi: 10.1007/s00253-022-11899x.
- 3. Siddiqui, R., Makhlouf, Z., **Khan, N. A. (2022).** The increasing importance of the gut microbiome in acne vulgaris. *Folia Microbiologica* (in press).
- Siddiqui, R., Mungroo, M. R., Anuar, T. S., Alharbi, A. M., Alfaheni, H., Elmoselhi, A., Khan, N. A. (2022). Antiamoebic Properties of Laboratory and Clinically Used Drugs against *Naegleria fowleri* and *Balamuthia mandrillaris*. *Antibiotics* 11: e749.
- 5. Muhammad, J. S., Siddiqui, R., **Khan, N. A. (2022).** COVID-19 and alcohol use disorder: Putative differential gene expression patterns that might be associated with neurological complications. *Hospital Practice* (in press).
- 6. Siddiqui, R., Muhammad, J. S., Maciver, S. K., **Khan, N. A. (2022).** *Crocodylus porosus* sera a potential source to identify novel epigenetic targets: *in silico* analysis. *Veterinary Sciences* 9: e210.
- Akbar, N., Kawish, M., Khan, N. A., Shah, M. R., Alharbi, A. M., Alfahemi, H., Siddiqui, R. (2022). Hesperidin, curcumin and amphotericin B based nano-formulations as potential antibacterials. *Antibiotics* 11: e696.
- Ahmed, U., Ho, K. Y., Simon, S. E., Saad, S. M., Ong., S. K., Anwar, A., Tan, K. O., Sridewix, N., Khan, K. M., Khan, N. A., Anwar, A. (2022). Potential anti-acanthamoebic effects through inhibition of CYP51 by novel quinazolinones. *Acta Tropica* 231: e106440.
- 9. Mdkhana, B., Goel, S., Saleh, M. A. A., Siddiqui, R., **Khan, N. A.**, Elmoselhi, A. B. **(2022).** Role of oxidative stress in angiogenesis and the therapeutic potential of antioxidants in breast cancer. *European Review for Medical and Pharmacological Sciences* (in press).
- 10. Siddiqui, R., Boghossian, A., **Khan, N. A. (2022).** Sea cucumber as a therapeutic aquatic resource for human health. *Fisheries and Aquatic Sciences* 25(5): 251 263.
- 11. Siddiqui, R., Maciver, S. K., **Khan, N. A. (2022).** Gut microbiome-immune system interaction in reptiles. *Journal of Applied Microbiology* 132(4):2558-2571. doi: 10.1111/jam.15438.

- 12. Siddiqui, R., Abouleish, M. Y., Khamis, M., Ibrahim, T., **Khan, N. A. (2022).** Primary amoebic meningoencephalitis: Potential application of ionic liquids against brain-eating amoebae? *Acta Parasitologica* (in press).
- Yasir, N., Khan, A. S., Akbar, N., Hassan, M. F., Ibrahim, T. H., Siddiqui, R., Khan, N. A., Nancarrow, P. (2022). Amine-Based Deep Eutectic Solvents for Alizarin Extraction from Aqueous Media. *Processes* 10(4): 794.
- Niyyati, M., Mirabedini, Z., Khan, N. A., Onstad, N. H., Arab-Mazar, Z., Hamedanipour, M., Javanmard, E. (2022). Can free living *Acanthamoeba* act as a Trojan horse for SARS-CoV-2 in viral survival and htransmission in the environment? *Iranian Journal of Parasitology* (in press).
- 15. Siddiqui, R., Akbar, N., Khatoon, B., Kawish, M., Ali, M. S., Shah, M. R., **Khan, N. A. (2022).** Novel Plant-Based Metabolites as Disinfectants against *Acanthamoeba castellanii*. *Antibiotics* 11(2): 248.
- 16. Ahmed, U., Anwar, A., Ong, S. K., Anwar, A., **Khan, N. A. (2022).** Applications of medicinal chemistry for drug Discovery against *Acanthamoeba*. *Medicinal Research Reviews* 42(1): 462-512.
- Siddiqui, R., Shah, R. A., Akbar, N., Khamis, M., Ibrahim, T., Abouleish, M. Y., Khan, N. A. (2022). Antibacterial effects of octadecyl trimethylammonium micelle-clay complex against bacterial eye pathogens: potential as a contact lens disinfectant. *International Ophthalmology* 42(3):939-944. doi: 10.1007/s10792-021-02075-7.
- 18. Muhammad, J. S., Siddiqui, R., **Khan, N. A. (2022).** SARS-CoV-2: Can sunlight exposure reduce the risk of developing severe consequences of COVID-19? *Computational Biology and Chemistry* 96: e107602.
- 19. Akbar, N., Siddiqui, R., Abouleish, M. Y., Muhammad, J. S., **Khan, N. A. (2022).** Secretory profile of selected gut bacteria of cockroaches: A potential source of anti-infective agents. *Anti-Infective Agents* 20: e190122200350.
- 20. Akbar, N., Siddiqui, R., Abouleish, M. Y., Muhammad, J. S., **Khan, N. A. (2022).** Anti-*Naegleria fowleri* and anti-*Balamuthia mandrillaris* activities of Propolis. *Natural Products Journal* (in press). DOI: 10.2174/2210315512666220114103359
- 21. Saeed, B. Q., Hussain, K., Akbar, N., Khan, H., Siddiqui, R., Shah, M. R., Khan, N. A. (2022). Nanovesicles containing curcumin hold promise in the development of new formulations of anti-Acanthamoebic agents. *Molecular & Biochemical Parasitology* 247:e111430.
- 22. Siddiqui, R., Abouleish, M. Y., Khamis, M., Ibrahim, T., **Khan, N. A. (2022).** Cerebral mucormycosis: Intranasal route to deliver amphotericin B for effective management? *Current Medical Research and Opinion* 38(2): 299 – 301.
- 23. Akbar, N., **Khan, N. A.,** Muhammad, J. S., Siddiqui, R. **(2022).** The role of gut microbiome in cancer genesis and cancer prevention. *Health Sciences Review* 2: e100010.

- 24. Wehelie, Y. I., Nasih, A. L., Anwar, A., Siddiqui, R., Maciver, S., Khan, N. A. (2022). Natural products in targeting *Acanthamoeba* spp. *Anti-Infective Agents* (in press). DOI: 10.2174/2211352519666211119091316
- Wehelie, Y. I., Khan, N. A., Fatima, I., Anwar, A., Kanwal, Khan, K. M., Siddiqui, R., Anwar, A. (2022). Novel tetrazoles against *Acanthamoeba castellanii* belonging to the T4 genotype. *Chemotherapy* (in press). doi: 10.1159/000520585.
- 26. Hussain, R. H. M., Ghani, M. K. A., **Khan, N. A.**, Siddiqui, R., Anuar, T. S. **(2022).** *Acanthamoeba* species isolated from marine water in Malaysia exhibit distinct genotypes and variable physiological properties. Journal of Water and Health 20(1): 54 67.
- Mungroo, M. R., Khan, N. A., Anwar, A., Siddiqui, R. (2022). Nanovehicles in the improved treatment of infections due to brain-eating amoebae. *International Microbiology* 25: 225 – 235. doi: 10.1007/s10123-021-00201-0.
- 28. Shareef, Z. A., Khan, N. A., Ershaid, M., Soliman, S., Elmoselhi, A. B. (2022). Diversity in microbiota between Indian and Emiratis ethnicities is associated with benign prostatic hyperplasia. Advances in Biomedical and Health Sciences 1(1): 51 58.
- 29. Siddiqui, R., Abouleish, M. Y., Khamis, M., Ibrahim, T., **Khan, N. A. (2022).** Current medicines hold promise in the treatment of orphan infections due to brain-eating amoebae. *Expert Opinion on Orphan Drugs* 9: 227 235.

<u>2021</u>

- Abdelnasir, S., Mungroo, M., Shahabuddin, S., Siddiqui, R., Khan, N. A., Anwar, A. (2021). Polyanilineconjugated Boron Nitride Nanoparticles Exhibiting Potent Effects against Pathogenic Brain-eating Amoebae. ACS Chemical Neuroscience 12(19): 3579-3587.
- 31. Siddiqui, R., Maciver, S., Elmoselhi, A., Soares, N. C., **Khan, N. A. (2021).** Longevity, cellular senescence and the gut microbiome: Lessons to be learned from crocodiles? *Heliyon* 7(12) :e08594.
- 32. Akbar, N., Kawish, M., Jabri, T., Khan, N. A., Shah, M. R., Siddiqui, R. (2021). Enhancing efficacy of existing antibacterials against selected multiple drug resistant bacteria using cinnamic acid-coated magnetic iron oxide and mesoporous silica nanoparticles. *Pathogens and Global Health* 22; 1-17. doi: 10.1080/20477724.2021.2014235.
- 33. Mungroo, M. R., **Khan, N. A.,** Maciver, S., Siddiqui, R. **(2021).** Opportunistic free-living amoebal pathogens. *Pathogens and Global Health* 2: 1 15. DOI: 10.1080/20477724.2021.1985892
- 34. Khan, A. S., Ibrahim, T. H., Akbar, N., Khamis, M. I., Siddiqui, R., Nancarrow, P., Mjalli, F. S., Khan, N. A., Jabbar, N. A. (2021). Efficient extraction of phenol from aqueous solution using protic ammonium-based ionic liquids with carboxylate anions and their cytotoxicity on human cells. *Journal of Molecular Liquids* 342: e117447.

- 35. Reginald, K., Wong, Y. R., Shah, S. M. R., The, K. F., Jalin, E. J. F., **Khan, N. A. (2021).** Investigating immune responses of the house cricket, *Acheta domesticus* to pathogenic *Escherichia coli* K1. *Microbes and Infection* 23: e104876.
- 36. Akbar, N., Siddiqui, R., Iqbal, M., Sagathevan, S., Kim, K. S., Habib, F., Khan, N. A. (2021). Gut bacteria of *Rattus rattus* (rat) produce broad-spectrum antibacterial lipopeptides? ACS Omega 6, 18, 12261 12273
- 37. Siddiqui, R., Mungroo, M. R., Abouleish, M. Y., **Khan, N. A. (2021).** SARS-CoV-2: Possible factors contributing to serious consequences of COVID-19? *New Emirates Medical Journal* 3(1): 12 16.
- Mahmoud, M. M., Sabri, M. A., Djilali, E., Ibrahim, T. H., Khamis, M. I., Dalibalta, S., Siddiqui, R., Khan, N. A. (2021). Modified Composite Nanomaterials as Novel Approach to Dental Hygiene Formulation. *Letters in Applied NanoBioscience* 10.33263/lianbs114.39443953. 11(4): 3944 – 3953.
- Mukhtar, A., Shah, S., Iqbal, K., Khan, K. M., Khan, S. U., Zaib, S., Iqbal, J., Parveen, S., Taha, M., Hussain, S., Hameed, S., Khan, N. A., Siddiqui, R., Anwar, A. (2021). Synthesis of chalcones as potential α-glucosidase inhibitors, *in vitro* and *in silico* studies. *ChemistrySelect* 6(37): 9933-9940.
- 40. Akbar, N., Aslam, Z., Siddiqui, R., Shah, M. R., **Khan, N. A. (2021).** Zinc oxide nanoparticles conjugated with clinically-approved medicines as potential antibacterial molecules? *Applied Microbiology and Biotechnology Express* 11(1): e104.
- 41. Siddiqui, R., Qaisar, R., Goswani, N., **Khan, N. A.,** Elmoselhi, A. **(2021).** Effect of microgravity environment on gut microbiome and angiogenesis. *Life* 11: e1008
- 42. Khan, N. A., Soopramanien, M., Maciver, S. K., Anuar, T. S., Sagathevan, K., Siddiqui, R. (2021). *Crocodylus porosus* gut bacteria: A possible source of novel metabolites? *Molecules* 26, e4999.
- Siddiqui, R., Khamis, M., Ibrahim, T., Khan, N. A. (2021). Acanthamoeba keratitis: Developing a novel contact lens disinfectant remains an unmet need. *Re: GEN Open* 1(1): 92 94. DOI: 10.1089/regen.2021.0028.
- 44. Siddiqui, R., Akbar, N., **Khan, N. A. (2021).** Gut microbiome and human health under the space environment. *Journal of Applied Microbiology* 130(1):14-24.
- 45. Siddiqui, R., **Khan, N. A. (2021).** *Locusta migratoria* as a model to carryout laboratory investigations in vivo. Re: GEN Open 1 (1): 40-42.
- 46. Akbar, N., Gul, J., Siddiqui, R., Shah, M. R., **Khan, N. A. (2021).** Moxifloxacin and sulfamethoxazolebased nanocarriers exhibit potent antibacterial activities. *Antibiotics* 10 (8): e964.
- 47. Mungroo, M. R., Siddiqui, R., **Khan, N. A. (2021).** War of the microbial world: *Acanthamoeba* spp., interactions with microorganisms. *Folia Microbiologica* 66(5): 689 699.

- 48. Siddiqui, R., Da Cruz Soares, N. A., **Khan, N. A. (2021).** Crocodile gut microbiome is a potential source of novel bioactive molecules. *ACS Pharmacology and Translational Sciences* 4(3): 1260 1261.
- Siddiqui, R., Abouleish, M. Y., Khamis, M., Ibrahim, T., Khan, N. A. (2021). Dual targeting of functionstructure for effective killing of pathogenic free-living amoebae. ACS Medicinal Chemistry Letters 12, 5, 672 – 676.
- Baig, A. M., Khan, N. A., Katyara, P., Lalani, S., Baig, R., Nadeem, M., Akbar, N., Nazim, F., Khaleeq A. (2021). Targeting the Feast of a Sleeping Beast: Nutrient and Mineral dependencies of an encysted *Acanthamoeba* trophozoite. *Chemical Biology and Drug Design* 97(1):18-27.
- 51. Siddiqui, R., Khan, S., **Khan, N. A. (2021).** Ebolavirus disease: Current perception of clinical features, diagnosis, pathogenesis, and therapeutics. *Acta Virologica* 65: 350 364. doi: 10.4149/av_2021_409
- 52. Masri, A., **Khan, N. A.,** Zoqratt, M. Z. H., Ayub, Q., Anwar, A., Rao, K., Shah, M. R., Siddiqui, R. **(2021).** Transcriptome analysis of *Escherichia coli* K1 after therapy with hesperidin conjugated with silver nanoparticles. *BMC Microbiology* 21:e51.
- 53. Siddiqui, R., Muhammad, J. S., **Khan, N. A. (2021).** Locust as *in vivo* model. *ACS Chemical Neuroscience* 19(9). 1469 1471.
- 54. Siddiqui, R., Makhlouf, Z., **Khan, N. A. (2021).** The increasing importance of *Vermamoeba vermiformis*? *Journal of Eukaryotic Microbiology* 68(5): e12857. doi: 10.1111/jeu.12857
- 55. Hussain, R. H. M., Afiqah, W. N., Ghani, M. K. A., Khan, N. A., Siddiqui, R., Anuar, T. S. (2021). In vitro effects of multi-purpose contact lens disinfecting solutions towards survivability of Acanthamoeba genotype T4 in Malaysia. Saudi Journal of Biological Sciences 28(4):2352-2359. doi: 10.1016/j.sjbs.2021.01.030.
- 56. Soopramanien, M., **Khan, N. A.,** Siddiqui, R. **(2021).** Gut microbiota of animals living in polluted environments are a potential resource of anticancer molecules. *Journal of Applied Microbiology* 131(3):1039-1055.
- 57. Siddiqui, R., Abouleish, M. Y., Khamis, M., Ibrahim, T., **Khan, N. A. (2021).** Potential application of vaporized drugs *via* nasal inhalers to prevent mortality and CNS damage caused by primary amoebic meningoencephalitis due to *Naegleria fowleri? ACS Pharmacology and Translational Sciences* 4(3):1249-1252.
- Jeyamogan, S., Khan, N. A., Siddiqui, R. (2021). Antitumour activities of selected pure compounds identified from the serum of *Crocodylus porosus*, *Malayopython reticulatus*, *Varanus salvator* and *Cuora kamaroma amboinensis*. *Asian Pacific Journal of Cancer Prevention* 22(S1):97-106. doi: 10.31557/APJCP.2021.22.S1.97.
- 59. Muhammad, J. S., Siddiqui, R., **Khan, N. A. (2021).** COVID-19: Is there a link between alcohol abuse and SARS-CoV-2-induced severe neurological manifestations? *ACS Pharmacology and Translational Sciences* 4(2):1024-1025. doi: 10.1021/acsptsci.1c00073.

- Mungroo, M. R., Tong, T., Khan, N. A., Anuar, T. S., Maciver, S. K., Siddiqui, R. (2021). Development of anti-Acanthamoebic approaches. *International Microbiology* 24(3):363-371. doi: 10.1007/s10123-021-00171-3.
- 61. Mungroo, M. R., **Khan, N. A.,** Siddiqui, R. **(2021).** The increasing importance of the novel coronavirus. *Hospital Practice* 49(1): 1 11. PMID: 32990100; doi: 10.1080/21548331.2020.1828888.
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- 8. A Silver Bullet Against the Brain-Eating Amoeba? https://www.nytimes.com/2019/01/14/health/brain-eating-amoeba-silver.html
- 9. Use of silver to kill brain-eating amoebae <u>https://gizmodo.com/scientists-think-they-can-use-silver-to-help-kill-brain-1829993764</u> <u>http://micetimes.asia/found-a-way-to-fight-brain-eating-amoeba/</u> <u>https://www.rdmag.com/article/2018/10/silver-nanoparticle-drug-combo-could-treat-brain-eating-amoeba</u> <u>https://www.sciencedaily.com/releases/2018/10/181024112231.htm</u>
- 10. Asia's Scientific Trailblazers: Naveed Ahmed Khan <u>http://www.asianscientist.com/2016/03/features/asias-scientific-trailblazers-naveed-ahmed-khan/</u>
- 11. PR Newswire Asia: Sunway University's Professor Naveed Khan Awarded Science Academy Gold Medal <u>http://en.prnasia.com/story/146907-0.shtml</u>
- 12. TEDx Talks: War on Terror Cells. <u>https://www.youtube.com/watch?v=tFLHMfjMHRo</u>
- 13. QS Wow News: Cockroaches, vile but enlightening <u>http://www.qsnews2wow-u.com/dev/2016/08/10/cockroaches-vile-enlightening/</u>
- 14. QS Wow News: The brain-eating amoebae and its fatal consequences <u>http://www.gswownews.com/2016/11/09/brain-eating-amoebae-fatal-consequences/</u>
- 15. Highlights available on linkedin page: <u>https://www.linkedin.com/in/naveed-khan-</u> <u>1a936831?trk=nav_responsive_tab_profile</u>
- 16. <u>https://www.facebook.com/557203457655109/photos/pcb.1034883156553801/1034880646554052</u> /?type=3&theater
- 17. https://vulcanpost.com/635992/research-sunway-university-projects/
- 18. My work on <u>"Cockroaches and locusts brains could be rich stores of new antibiotics"</u> gained worldwide media attention as described below. Several documentaries were made and shown on leading news channels, websites and peer reviewed journals. Google search of "Naveed Khan and Cockroaches" yields thousands of web pages on this topic (some of which are listed below).
- How cockroaches' brains can save our lives (BFM radio, Malaysia) <u>http://www.bfm.my/naveed-ahmed-khan-cockroach-brains#.vtpibdrwkeg</u>
- Cockroach healing (New Zealand radio)

http://www.radionz.co.nz/national/programmes/thiswayup/audio/2492112/cockroach-healing

- Cockroach scientist (Appeared in The Economic Times), <u>http://economictimes.indiatimes.com/news/news-by-industry/et-cetera/cockroach-scientist-seeks-indian-help/articleshow/8542680.cms</u>
- Cockroach brains coming to a pharmacy near you (Appeared on Science News in the US), 178 (8), p14. <u>http://www.sciencenews.org/index/generic/activity/view/id/63286/title/Cockroach_brains%2C_coming_to_a_pharmacy_near_you</u>
- Antimicrobials from insect brains (Appeared on TCE today by the Institution of Chemical Engineers) <u>http://www.tcetoday.com/tcetoday/NewsDetail.aspx?nid=13129</u>
- Cockroaches: unlikely source of antibiotics (Appeared on Futurity, a leading science newswire in the US)

http://www.futurity.org/health-medicine/unlikely-source-of-antibiotics-cockroaches/.

- Mashed up cockroach brains kill E. coli (Healthzone.ca) <u>http://www.healthzone.ca/health/newsfeatures/article/860802--mashed-up-cockroach-brains-kill-e-coli-study-finds</u>
- Cockroach brains may hold new antibiotics (National Geographic) <u>http://news.nationalgeographic.com/news/2010/09/100909-cockroach-brains-mrsa-ecoli-antibiotics-science-health/</u>
- Insect brains 'are source of antibiotics' to fight MRSA (BBC News online, Science & Environment) <u>http://www.bbc.co.uk/news/science-environment-11182437</u>
- Cockroaches Have Super Antibiotics in Their Brains; We Must Steal Them (Discover) <u>http://blogs.discovermagazine.com/80beats/2010/09/10/cockroaches-have-super-antibiotics-in-their-brains-we-must-steal-them/</u>
- Locust brains could thwart superbug plagues (New Scientist)
 <u>http://www.newscientist.com/article/dn19404-locust-brains-could-thwart-superbug-plagues.html</u>
- Sick and need antibiotics? Cockroach brains may help (Los Angeles Times) <u>http://www.latimes.com/health/boostershots/la-heb-cockroach-</u> <u>20100905,0,4847441.story?track=rss</u>
- Cockroach brains may be a source of antibiotics, research says (Bloomberg) <u>http://www.bloomberg.com/news/2010-09-07/cockroach-brains-may-be-a-source-of-antibiotics-research-says.html</u>
- 19. Contact lens users face new blindness risks, Evening Standard, London, Nov 4th, 2003, p:21
- 20. Eye of the storm, BBK magazine, Nov issue, 2003, p:3
- 21. Research into Acanthamoeba highlighted during royal visit, Optician, Nov 7th, 2003, p:5
- 22. Contact lens use, Evening Standard, London, Aug 16th, 2005, p:22
- 23. Cover image showing *Acanthamoeba* with characteristic acanthopodia on its surface for the Journal of Medical Microbiology, 2006, Vol. 55, No. 7.
- 24. My work on *Acanthamoeba* keratitis and *Escherichia coli* meningitis was presented to Princess Anne on her visit to Birkbeck, University of London, London, England, UK on Nov 5th, 2003 and reported in local media.

PHD STUDENTS 16 completed

PhD Students

•2021	Mr. Abdul Kader – Thesis title "The use of nanotechnology in the development of antibacterial agents (supervised jointly with R. Siddiqui, Sunway University).
• 2020	Ms. Kavitha Rajandran – Thesis title "Novel chemotherapeutic approaches against <i>Naegleria fowleri</i> (supervised jointly with R. Siddiqui, Sunway University).
•2020	Ms. Salwa Ali – Thesis title "Animals living in polluted environments are potential source of antibacterial(s) (supervised jointly with R. Siddiqui, Sunway University).
•2020	Ms. Shareni – Thesis title "Antitumour activities of crocodile lysates (supervised jointly with R. Siddiqui, Sunway University).
•2020	Dr. Noor Ahmad – Thesis title "Antibiotics from novel sources (supervised jointly with R. Siddiqui, Sunway University and M. Iqbal, NIBGE).
•2014	Dr. Yousuf Aqeel (completed September 2014) – Thesis title "Encystation in Acanthamoeba castellanii (supervised jointly with R. Siddiqui, Aga Khan University). Yousuf is currently working as a postdoctoral research fellow at the Boston University, Boston, MA, USA.
•2013	Dr. James Edwards-Smallbone (completed May 2013) – Thesis title "Pathogenesis of haematogenous spread in <i>Acanthamoeba castellanii</i> infections (jointly with R. Flynn, University of Nottingham). James is currently working as a postdoctoral research fellow at the University of Liverpool, UK.
•2012	Dr. LipNam Loh, (completed March 2012) – Thesis title <i>"Escherichia coli</i> K1 translocation of the blood-brain barrier (jointly with T. Ward, LSHTM). James is currently working as a postdoctoral research fellow at the St. Judes Children's Research Hospital, USA.
•2012	Dr. Ricky Dudley (completed January 2012) – Thesis title "Encystment in Acanthamoeba: physiological aspects and molecular mechanisms. Ricky is currently working as an analytical scientist at the Salamon and Seaber Ltd. London, England, UK.
• 2012	Dr. Khadijo Osman (completed February 2012) – Thesis title "Antibacterial compounds from locusts (joint with Drs. Gibbons, Bhakta & Goldsworthy).

• 2011 Dr. Parisa Mortazavi (completed June 2011) – Thesis title "The study of *Acanthamoeba* pathogenesis using novel *in vivo* and *in vitro* models. Parisa is currently a postdoctoral research fellow at Birkbeck, University of London.

- •2009 Dr. Ruqaiyyah Siddiqui (completed March 2009) Thesis title "*Balamuthia mandrillaris* cysts: properties and mechanisms of encystment. Ruqaiyyah is currently working as a Professor at the Sunway University, Malaysia.
- •2008 Dr. Selwa Alsam (completed January 2008) Thesis title "Mechanisms associated with the pathogenesis of *Acanthamoeba*". Selwa is currently working as a lecturer at the University of Essex, England, UK.
- •2008 Dr. Abdul Matin (completed March 2008) Thesis title "Pathogenesis of *Balamuthia mandrillaris*". Abdul is currently holds a faculty position in Saudi Arabia.
- •2006 Dr. Samantha Jayasekera (completed June 2006) Thesis title "Clinical diagnosis and pathogenesis of *Balamuthia mandrillaris*". Samantha is currently at the University of Southampton for her Postdoctoral experience.
- •2005 Dr. James Sissons (completed December 2005) Thesis title "Pathogenesis of *Acanthamoeba* infections". Based on his PhD work, he was awarded with the Birkbeck's prestigious "Rosalind Franklin Prize 2005" as well as "Armitage-Smith Prize 2005". James is currently working as a staff scientist at Seattle Biomedical Research Institute, USA.

GRADUATE and UNDERGRADUATE RESEARCH PROJECT STUDENTS

- >40 MS research project students (completed).
- >100 UG research project students (completed).

TEACHING

I have significant experience in teaching undergraduates and postgraduates. I believe in teaching as a way of communicating with students. I believe that I can help students learn the basic and advanced sciences and stimulate them in understanding and being critical towards my area of research. My commitment is to promote biomedical sciences and to help the next generation in choosing the appropriate filed thus potentiating their abilities.

I have been offering following courses in undergraduate and postgraduate programmes

•	Lectures in biochemistry Microbiology	(MBBS students) (PhD students)
•	Research Module	(MBBS module)
•	Aspects of Bacterial Diseases	(BSc module)
•	Protists and viruses of human importance	(BSc module)
•	Cell signaling	(BSc module – some lectures)
•	Immune system and disease	(BSc module – some lectures)
•	Molecules, Cells and Organisms	(BSc module – some lectures)

 Research and Human Biolo Microbiology Medical Para Parasitology Bacterial Path Practical Tech Grant writing 	gy (BS m (BS m (BS m (BS m (BS m (BS m (BS m (BS m (BS m (MSc m hogenicity (MSc m (MSc m (MSc m))))))))))))))))))))))))))))))))))))	(BSc module) (BS module) (BS module) (BS module) (MSc module) (MSc module) (MSc module –some lectures) (PhD students)					
AWARDS and FUND	Newton Fund (UK). Notably, large grants given to any Pl	2 proposals are under review by SWARD (UAE), funding received in UAE, Pakistan and Malaysia are s, as recruiting younger researchers in this part of unding awarded by these agencies are among large					
• 2022	In 2022, I was ranked as the top res	earcher (#1) in the UAE in the discipline of					
• 2022	. .	scientists (#27) in the UAE in all disciplines / <u>top-100-scientist/?country_code=ae</u>					
• 2021	>AED 1,500,000 – (as Head) resea research group at the University of	rch funding to establish Virology and Parasitology Sharjah Medical College.					
• 2021	Editor, PLOS Global Public Health, P	LOS publisher.					
• 2021	Appointed as the Global Fellow of the	ne Ajou University, South Korea					
• 2021	Editor, Antibiotics, MDPI Publishe Nanoparticles	r; special issue : New Frontiers in Antimicrobial					
• 2021 – 2023	Technologi MARA, Malaysia grant f	nding from the Penyelidikan dan Inovasi, Universiti or project entitled, "Unravelling the interactions of t with bacterial endosymbionts: One bridge from					
• 2021		ecognition by the American Chemical Society for r publications in a single year in ACS Journals.					
• 2021 – 2022		unding from the Collaborative Stimulus Research ed, "Discovery of novel antimicrobials".					
• 2021 – 2022		ing from the Research & Graduate Studies Central ject entitled, "Gut microbiome under microgravity					

- 2021 In 2021, I was selected among the top 2% of the world community of scientists
- 2021 Editor, Experimental Results, Cambridge University Press; Invited to be Member of Asian Council of Editors.
- 2020 2023 AED 800,000 (as Co-PI) research funding from the US Office of Aerospace and Research and Development for project entitled, "Novel metabolites(s) from crocodile gut microbiome".
- 2020 2022 AED 520,000 (as PI) research funding from the FRG, American University of Sharjah for project entitled, "Gut Bacteria of Animals/Pests Living in Polluted Environments Are a Potential Source of Novel Antibacterial Agents".
- 2020 2022 AED 147,360 (as PI) research funding from the FRG, American University of Sharjah for project entitled, "Naegleria Fowleri Interactions with the Nasal Epithelium: A Primary Step in Parasite Invasion of the Central Nervous System".
- 2020 In 2020, I was selected among the top 2% of the world community of scientists
- 2018 2020 RM150,000 (as PI) research funding from the FRGS, Ministry of Higher Education, Government of Malaysia, to source antibacterials from novel sources.
- 2018 2020 RM120,000 (as Co-PI) research funding from the FRGS, Ministry of Higher Education, Government of Malaysia, for developing effective contact lens disinfectants.
- 2019 In total, University received 6 highly competitive grants from the Ministry of Higher Education. Among these 4 were obtained by our department (two belonging to my research team)
- 2015 2017 RM195,000 (as PI) research funding from the FRGS, Ministry of Higher Education, Government of Malaysia, for Drug-resistant microbes and the need for new antimicrobials.
- 2018 Invited as a keynote speaker at ICBMS 2018 in Thailand, ICBMB 2018 in Malaysia, and prestigious ICOPA 2018 in Korea.
- 2018 In 2018, I was selected as a member of Asian Council of Science Editors
- 2017 I received Silver Medal Awards at the 28th International Invention & Innovation Exhibition, Ministry of Science, Technology & Innovation, Malaysia.
- 2016 I received the "Order of Merit" as well as "Thomas Edison award at the 5th Korea Inventor Award Festival held in Seol, South Korea.

- 2016 Based on research accomplishments, I was awarded the title of "Distinguished Professor" of the University.
- 2016 I received "Gold Medal in Bio-Innovation Award", as well as "Research Excellence Award" and a "Bronze Medal in Bio-Innovation Award" for three research projects presented at the Pharma+Bio Asia 2016 convention, Kuala Lumpur, Malaysia.
- 2016 Based on innovative research, I received Silver Medal Awards by the International Invention & Innovation Exhibition, Ministry of Science, Technology & Innovation, Malaysia.
- 2016 Patent application filed on "Pharmaceutical combination for treatment of Acanthamoeba infections" to Intellectual Property Corporation of Malaysia (PI 2016702513).
- 2016 2017 RM40,000 research funding from the University Research Grants, Sunway University for developing novel gold-conjugated antimicrobial compounds against pathogens.
- 2015 Based on high research productivity, I received the prestigious 'Pakistan Academy of Sciences' Gold Medal Award in Biological Sciences.
- 2015 2016 Rs. 2,000,000 research funding from the University Research Council, Aga Khan University in developing strategies in the improved management of *Acanthamoeba* keratitis (PI is Ruqaiyyah Siddiqui).
- 2014 Based on high research productivity, I won the prestigious A R Shakoori Gold Medal Award by the Zoological Society of Pakistan.
- 2014 Included in the List of Productive Scientists of Pakistan for performance in 2012 by the Pakistan Council for Science and Technology and received Research Productivity Award (ranked in the "A" category).
- 2013 Based on high research productivity in Biological Sciences, I received the prestigious 'Best Young Research Scholar Award" by the Government of Pakistan, Higher Education Commission (awarded on 25 September 2013 with a cash prize).
- 2013 2014 The Pakistan Council for Science and Technology (PCST), in its recent Directory titled "Productive Scientists of Pakistan 2013-14", has ranked Dr. Naveed Ahmed Khan among the top 10 productive scientists in Pakistan in the field of Biological Sciences. For evaluation of the Scientific Productivity, 2,728 Scientists of Pakistan were considered, employed in public/private sector universities, colleges and R&D organizations and have contributed in research, supervision of students and any other productive work, applied in 12 Disciplines. The scoring system took into account research related parameters including research publications in ISI Indexed journals, authorship of books, cumulative impact factor, international citation of publications,

research supervision at PhD/MS/MPhil level, national/international patents registered and winning of competitive national/international grants.

- 2013 Awarded Certificate of Excellence by Elsevier in recognition of outstanding contribution to the quality of the journal, Molecular and Biochemical Parasitology.
- 2013 2016 Rs. 5,715,000 research funding from the Higher Education Commission, Pakistan for work on neuropathogenic *E. coli* interactions with the brain endothelium, a key step in the development of neonatal meningitis.
- 2013 Included in the List of Productive Scientists of Pakistan for performance in 2011 by the Pakistan Council for Science and Technology and received Research Productivity Award (ranked in the "C" category).
- 2013 2016 Rs. 1,500,000 research funding from the AKU Faculty of Health Sciences Seed Money Programme for Research in the Development and production of new generation recombinant antibodies.
- 2013 2016 Rs. 4,047,310 research funding from the Higher Education Commission, Pakistan for work on insects as source of potential antimicrobials.
- 2013 2016 Research funding from Center for Vaccine Development, University of Maryland, Baltimore School of Medicine, USA as Co-PI (PI is Dr. Anita Zaidi with total grant value of \$262,871), for work "Ultra-fast and Sensitive Detection of Typhoidal and Nontyphoidal Salmonella in Blood Using Microwave-Accelerated Metal-Enhanced Fluorescence ("MAMEF").
- 2013 2016 Rs. 1,773,661 research funding from the Pakistan Science Foundation for work on carbohydrate analyses of cysts of *Acanthamoeba* and *Balamuthia*.
- 2012 Best Speaker's Award of the year in the Continuing Medical Education Lecture series for 2012, Aga Khan University.
- 2010 2013 Research funding from NIH, USA as Co-PI (PI is Dr. Anita Zaidi with total grant value of \$3,379,231), for work "Etiology of diarrheal disease in Infants and young children in developing countries - Global Enteric Multi-center Study".
- 2011 2013 Rs. 2,500,000 research funding from University Research Council, Aga Khan University Medical College for work on bacterial invasion of the central nervous system.
- 2011 2013 Rs. 2,250,000 sponsored research funding for Dr. Junaid Iqbal as a postdoctoral fellow from Aga Khan University Medical College Life Sciences Research grant.
- 2012 2015 Rs. 5,546,496 research funding from the Higher Education Commission, Pakistan for work on developing therapeutic approaches against *Acanthamoeba* keratitis.

- 2010 SVMS Life Sciences conference grant for presenting work on *Acanthamoeba* at the 2nd International Conference on Drug Discovery and Therapy, Dubai, UAE.
- 2010 £4,550 Higher Education Commission, Pakistan (sponsored research for Ms. Saba Riaz for work on antimicrobials.
- 2010 2011 \$20,000 research funding from Medical Sciences Faculty Research, Aga Khan University Medical College for work on novel infection control strategies in hospitals.
- 2009 2010 £4,000 (Jointly with Dr. J. Nicklin) Birkbeck Life Sciences Faculty Research Grant for work on *Escherichia coli* trafficking within the endothelial cells.
- 2009 2012 £72,500 [Nottingham University Research Studentship (Jointly with Dr. R. Pleass, School of Biology): Three Years Full Support Awarded on "Pathogenesis of neuropathogenic protists".].
- 2009 The Institute of Infection, Immunity and Inflammation award for presenting work at the 13th International Meeting on the Biology and Pathogenicity of Free-Living Amoebae, Tenerife, Canary Islands, Spain.
- 2009 SVMS Life Sciences conference grant to attend Wellcome Trust Advanced Course (2 6 March 2009) entitled "Working with Pathogen Genomes" (covering genomics & proteomics; sequence & structure analysis; and molecular modeling), at the Wellcome Trust Genome Campus, Hinxton, Cambridge, England, UK
- 2009 2012 £85,500 [Three year full support for Sponsored research for Ms. Anisah Nordin (from Malaysia).
- 2009 2012 £72,500 [Nottingham University Research Studentship (Jointly with Dr. H. Atkins, Ministry of Defence, UK): Three Years Full Support Awarded on "Identification of novel antimicrobial compounds from locusts".].
- 2009 Research Innovation Services, University Research Committee, University of Nottingham award for quality publication.
- 2009 £1,850 granted, partly by Brazilian Congress of Parasitology (£850) and the University of Nottingham (£1,000) for presenting work on Acanthamoeba at the XXI Brazilian Congress of Parasitology, to be held in Iguassu Falls, Brazil.
- 2009 2010 £3,000 SVMS, University of Nottingham Faculty Research Grant for work on Acanthamoeba.
- 2008 2011 £60,500 [Birkbeck College International Research Studentship (Parisa Mortazavi was appointed) for work on the development of novel models to study *Acanthamoeba* pathogenesis.]

- 2008 2011 £65,500 [Bloomsbury Colleges Research Studentship (Jointly with Dr. T. Ward, London School of Hygiene and Tropical Medicine): Three Years Full Support Awarded on "Escherichia coli K1 translocation of the blood-brain barrier".].
- 2008 2013 £10,500 Three Valleys Water Research Grant (sponsored research for Vydeki Shan as a graduate research student to study "Prevalence of *Balamuthia mandrillaris* in the natural environment).
- 2007 The Royal Society Award for presenting work on *Balamuthia mandrillaris* at the XIIth International Meeting on the Biology and Pathogenicity of Free-Living Amoebae, Wako City, Japan.
- 2007 2010 £62,000 [Bloomsbury Colleges Research Studentship (Jointly with Dr. S. Bhakta, Prof. G. Goldsworthy, School of Biological and Chemical Sciences, Birkbeck & Prof. S. Gibbons, School of Pharmacy): Three Years Full Support Awarded on "Antibacterial compounds from locust".]
- 2007 2008 £3,000 BORS Award (Birkbeck Overseas Research Scholarships sponsored research for Parisa Mortazavi as a graduate research student)
- 2007 2008 £2,000 Kut Foundation (sponsored research for Ruqaiyyah Siddiqui as a graduate research student)
- 2007 2008 £1,000 Kut Foundation (sponsored research for Ricky Dudley as a graduate research student)
- 2007 £2,250 Society for General Microbiology (IRG06/2) for work on *Balamuthia mandrillaris* cysts
- 2007 Individual Specialty Award for best research by Medical Research Society Spring Meeting, Royal College of Physicians, London, England, UK.
- 2007 2008 £4,995 Birkbeck Life Sciences Faculty Research Grant for work on amoebae traversal of the human blood-brain barrier
- 2007 Annual faculty award for presenting best research at the 12th International Meeting on the Biology and Pathogenicity of Free-living Amoebae, Wako City, Japan.
- 2006 2007 £2,000 Kut Foundation (sponsored research for Ricky Dudley as a graduate research student)
- 2006 Annual faculty award for presenting best research at the 11th International Congress of Parasitology, Glasgow, Scotland, UK.

- 2006 2007 £5,500 Birkbeck Life Sciences Faculty Research Grant for work on *Balamuthia mandrillaris*.
- 2006 £5,875 Heptagon Fund for the commercial assessment on the development of a novel strategy in the prevention and improved treatment against *Acanthamoeba* keratitis.
- 2005 2006 £2,000 Kut Foundation (sponsored research for Samantha Jayasekera as a graduate research student).
- 2005 2006 £17,000 Korean Research Foundation (sponsored research for Dr. Suk-Yul Jung as a Postdoctoral Research Fellow).
- 2005 The Royal Society Award for presenting work entitled "Balamuthia mandrillaris: clinical diagnosis and pathogenesis" at the XIth International Meeting on the Biology and Pathogenicity of Free-Living Amoebae, České Budějovice, Czech Republic.
- 2005 Annual faculty award for presenting best research at the 156th Society for General Microbiology Conference, Edinburgh, UK.
- 2005 2006 £2,000 College Research School grant for writing skills course (scientific writing, grant writing) for students in biology and chemistry
- 2005 2008 £45,000 [Birkbeck College International Research Studentship (Abdul Matin was appointed)]. Three Years Full Support Awarded on the *Balamuthia* amoebic encephalitis.
- 2005 Society for General Microbiology Award for presenting work entitled "Balamuthia mandrillaris exhibit metalloprotease activities" at the 157th Society for General Microbiology Conference, Keele University, Keele, England, UK.
- 2005 2006 £7,307 Birkbeck Life Sciences Faculty Research Grant for work on *Acanthamoeba*.
- 2004 2005 £11,700 Tehran University of Medical Sciences fellowship for Dr. Maghsood's work on Acanthamoeba
- 2004 The Royal Society award for presenting work entitled "Mechanisms associated with *Acanthamoeba* traversal of the blood-brain barrier" at the IX European Multicolloquium of Parasitology (EMOP IX) Conference in Valencia, Spain.
- 2003 2004 £4,995 FEMS fellowship programme for Dr. Kilic's work on Acanthamoeba.
- 2003 2006 £40,000 research grant from The British Council for Prevention of Blindness for work on *Acanthamoeba*.
- 2003 2005 £6,000 research grant from The Nuffield Foundation for work on *Acanthamoeba*.

- 2003 2004 £10,000 research grant from The Royal Society for work on Acanthamoeba.
- 2003 Annual faculty award for presenting best research at the 152nd Society for General Microbiology Conference, Edinburgh, UK.
- 2003 2006 £56,000 [Birkbeck College Research Studentship (James Sissons was appointed)]. Three Years Full Support Awarded on the pathogenesis of *Acanthamoeba* infections.
- 2003 £6,302 research grant from Central Research Fund, University of London for work on *Acanthamoeba*.
- 2002 2003 £10,000 faculty life sciences research grant from Birkbeck, University of London for work on *Acanthamoeba*.
- 2002 Annual Schwentker award for best research "Cytotoxic necrotizing factor-1 contributes to *Escherichia coli* K1 invasion of the central nervous system" organized by Department of Pediatrics, Johns Hopkins University School of Medicine, Baltimore, MD, USA.
- 2000 2002 Senior Postdoctoral fellowship, The Johns Hopkins University School of Medicine, Baltimore, MD, USA.
- 2001 Infectious Diseases Society of America Awards for excellent work entitled "Role of Tat in HIV-1 pathogenesis" presented at 39th IDSA meeting in San Francisco, CA, USA.
- 1999 2000 Postdoctoral fellowship, Tufts University School of Medicine, Boston, MA, USA
- 1997 1998 £1,000 Hull Royal Infirmary fellowship for work on "the development of PCR-based methods for the identification and differentiation of pathogenic *Acanthamoeba*".
- 1997 1998 £10,000 University of Hull fellowship for work on "the identification and differentiation of pathogenic *Acanthamoeba* using phage display antibody technology".

ADMINISTRATION

•	2021 - present	Head, Virology and Parasitology, Department of Clinical Sciences,
-	2021 present	College of Medicine, University of Sharjah, UAE.
•	2019 - 2021	Head, Department of Biology, Chemistry and Environmental Sciences,
		College of Arts & Sciences, American University of Sharjah, UAE.
•	2015 - 2019	Head, Department of Biological Sciences, Faculty of Sciences and
		Technology, Sunway University, Malaysia.
•	2010 - 2015	Chairman, Department of Biological and Biomedical Sciences, Aga Khan
		University. Pakistan
•	2011 – 2014	Programme Director, MSc in Sciences (Biomedical Sciences). Instigated its development.

•	2011 – 2015	Spearheaded the development and implementation of guidelines for the welfare and ethical use of animals in research, teaching and clinical laboratories.
•	2011 – 2015	Responsible for reviewing and providing a direction for the PhD programme to enhance a research culture at the University.
•	2010 - 2015	Module co-chair of Research Module for MBBS students, Aga Khan University.
•	2010 – 2015	Module co-chair of Microbiology course for graduate students (PhD), Aga Khan University.
•	2010 – 2015	Member of essential University Committees including, University Strategy Steering, Ethics Review, Health & Safety, Faculty Tracks and Compensation, University Research Council, PhD Committee.
•	2009 – 2010	Module leader of Health and Disease in the BVM curriculum at the School of Veterinary Medicine and Science, University of Nottingham.
•	2006 – 2008	Chair, Sub-Board of Examiners for School of Biological and Chemical Sciences, Birkbeck College, University of London.
•	2004 – 2007	Director, BSc Biomedicine, School of Biological and Chemical Sciences, Birkbeck College, University of London.
•	2002 – 2007	Organizer of Annual Research Seminar Series for the School of Biological and Chemical Sciences, Birkbeck College, University of London.
•	2002 – 2003	Director, BSc Molecular Biology, School of Biological and Chemical Sciences, Birkbeck College, University of London
•	2003 – 2005	Business Fellow and Consultant, London Technology Network (www.ltnetwork.org).
•	2003 – 2008	Director, Postgraduate Research Students Committee, School of Biological and Chemical Sciences, Birkbeck College, University of London
•	2003 – 2008	Editor of the Research Newsletter for the School of Biological and Chemical Sciences, Birkbeck College, University of London (<u>http://www.bbk.ac.uk/bcs/research</u>)

Administrative experience for International Conferences

2015-present	Permanent	Member	of	the	International	Scientific	Committee,	Free-Living	Amoebae
	Conferences								

- 2021 2022 Member of the Scientific Committee, Animal Science and Veterinary Medicine (ASVM2022, March 28-30, 2022), Dubai, UAE.
- 2018 2019 Member of the Program Committee, 3rd Asian Conference on Science, Technology & Medicine (ACSTM, February 12 14, 2019), Dubai, UAE.
- 2016 2017 Member of the International Scientific Committee, 17th Free-Living Amoebae Meeting (FLAM, April 10 15, 2017), Djerba, Tunisia.

2014 – 2015 Member of the International Scientific Committee, 16th Free-Living Amoebae Meeting (FLAM, May 18 – 22, 2015), Alghero, Italy.

- 2012 2013 Member of the International Scientific Committee, 15th Free-Living Amoebae Meeting (FLAM, July 14 19, 2013), Vienna, Austria.
- 2010 2011 Member of the International Scientific Committee, 14th Free-Living Amoebae Meeting (FLAM, October 10 15, 2011), Montego Bay, Jamaica.

2011 Chair, oral session – 2 at the 14th International Meeting on the Biology and Pathogenicity of Free-living Amoebae, Montego Bay, Jamaica (October 2011).
 2010 Co-Chairman, session: central nervous system at the 2nd International Conference on Drug Discovery and Therapy, Dubai, UAE (February 2010).
 2009 Co-Chairman, session: pathogenesis of free-living amoebae at the 13th International Meeting on the Biology and Pathogenicity of Free-living Amoebae, Tenerife, Spain (May 2009).
 2008 – 2009 Member of the International Scientific Committee, 13th Free-Living Amoebae Meeting (FLAM,

May 17 – 21, 2009), Tenerife, Canary Islands, Spain.

PROFESSIONAL DEVELOPMENT

Memberships

- American Chemical Society
- International Society for Development and Sustainability
- European Society of Clinical Microbiology and Infectious Diseases
- Institute of Structural Molecular Biology (2006 2008)
- Society for General Microbiology
- London Microvascular Forum
- American Society for Microbiology

Editorial responsibilities

Associate Editor for:

- Experimental Results, Cambridge University Press (2021 present)
- Nature Scientific Reports (2011 present)
- Medicine[®] (2014 present)
- PLoS Global Public Health (2021 present)
- Advances in Biomedical and Health Sciences (2021 present)
- Peruvian Journal of Health Research (2021 present)
- Molecular and Biochemical Parasitology (2013 2021)
- Experimental Parasitology (2014 2018)
- Journal of Eukaryotic Microbiology (2006 2010) and then (2015 2018)
- World Journal of Microbiology and Biotechnology (2004 2015)
- Microbiology Research International (2012 2018)
- International Journal of Medicine and Medical Sciences (2011 2018)
- Global Journal of Molecular Sciences (2006 2015)
- Global Journal of Biotechnology and Biochemistry (2006 2015)

Reviewer

Review grant proposals for the following agencies:

- 1. Austrian Science Foundation (ASF)
- 2. Biotechnology and Biological Sciences Research Council (BBSRC), UK
- 3. Czech Science Foundation
- 4. Hadwen Trust for Humane Research
- 5. Higher Education Commission, Pakistan

- 6. NC3Rs, UK (National Centre for the Replacement, Refinement and Reduction of Animals in Research, UK)
- 7. National Fund for Scientific & Technological Development (FONDECYT), Chilean Government **Research Funding Agency**
- 8. Medical Research Council (MRC), UK
- 9. Meningitis Research Foundation, UK
- 10. The Royal Society
- Review modules for Physicians Information and Education Resource (PIER). American College of Physicians—American Society of Internal Medicine, USA
- Review research articles for the following journals:
- Acta Parasitologica ٠
- Acta Protozoologica •
- Acta Tropica •
- African J Microbiol Res •
- Antimicrob Agent Chem
- Archives of Microbiology ٠
- Archives of Virology •
- Asian Pac J Trop Medicine •
- Biochimie •
- BMC Compl Alter Medicine •
- **BMC** Genomics ٠
- **BMC Microbiology**
- BMC Research Notes
- Br J Ophthalmology
- **Chemical Reviews** •
- Clin Microbiol Infection ٠
- Clinical Ophthalmology •
- Cornea •
- Current Drug Targets •
- Current Microbiology ٠
- **Environ Microbiol** ٠
- **Environ Microbiol Reports** •
- Experimental Parasitology ٠
- Expert Rev Ophthalmol •
- Egyp J Botany ٠

2012

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- FEMS Immun Med Microbiol ٠
- FEMS Microbiology Ecology •
- FEMS Microbiology Letters •

University.

- Immunobiology •
- Infection and Immunity •
- Infect Dis J Pak •
- Interdiscip Pers Infect Dis •
- Int J Biomed Science
- Int J Med Med Sci ٠
- Int J Mol Sci •
- Int J Parasitol •
- Invest Ophthalmol Vis Sci
- Int J Biomed Sci •
- J Antimicrob Chemother
- J Appl Microbiol •
- J Clin Microbiol
- J Diab Complicat
- J Essent Oil Bearing Plants •
- J Euk Microbiol •
- J Fish Diseases •
- J Hydrology •
- J Infection
- J Marine Systems •
- J Medical Microbiology •
- J Ocul Pharmacol Ther
- J Sao Paulo Inst Trop Med
- J Separation Science •
- Lett Appl Microbiol

- **Medicine**[®] ٠
- Memór Inst Oswaldo Cruz •
- **Microb Environ** •
- **Microb Pathogenesis**
- Microbiol Open
- **Microbiol Res Int** •
- Mol Biochem Parasitol •
- Nature Communications •
- Natural Product Res •
- Nature Scientific Reports •
- Neurobiol Disease •
- Neurocritical Care •
- Pak J Zoology
- Parasite Immunol
- Parasit Vectors •
- Parasitol •
- Parasitol Int •
- Pathol Res & Practice •
- Pediatric Infect Dis J •
- Pharmaceutical Biol •
- PLoS One •
- **PLoS Neglect Trop Dis** •
- Protist •
- The Open Parasitol J •
- Tran R Soc Trop Med Hyg •
- W Appl Sci J
- W J Microbiol Biotechnol
- J Parasitology
- •
- - Kor J Parasitology

 - Mayo Clinic Proceedings

Chair, PhD Thesis Oral Defence (Sep 10, 2012), Institute for Educational

٠ 2010 - 2011 Chair, PhD Review Committee, Faculty of Health Sciences, Aga Khan

Development, Aga Khan University.

Internal and external examiner of PhD students

• I have acted as internal and external examiner for over 30 research students (Masters and PhD) in the UK, Spain, Pakistan and Malaysia.

CONFERENCES / ABSTRACTS >200 (presented at conferences) & >150 invited talks

REFERENCES

Available upon request