Prof. Haseeb A. Khan
PhD, FRCPath, FRSC
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Biography

Dr. Haseeb A. Khan is a Distinguished Professor at the Department of Biochemistry, College of Science, King Saud University, Riyadh, Saudi Arabia. He is Group Leader of Analytical and Molecular Bioscience Research Group and Chair Professor at Research Chair for Biomedical Applications of Nanomaterials. He completed his PhD from India and received trainings at USA, UK, France, Denmark and Finland. He made significant contribution in bridging gaps between chemistry, biology, computation and medical sciences. He discovered dual biomarker potential of HbA1c for glycemic control and dyslipidemia. This pioneering research compelled the Japanese pharmaceutical company, Kissei Pharmaceuticals, to display his data in their product brochures. He identified novel SNPs in carnitine transporter gene and discovered the role of carnitine homeostasis in heart disease. His innovative research includes the development of methods for analysis of ATP, GFAP and tyrosine hydroxylase in mouse brain; efficient extraction of skin lipids; computer-aided quantification of gastric ulcers in rats, immunological response of nanomaterials, and novel therapies for cancer. He developed 8 software tools for biomedical applications, which were published and demanded by >300 scientists from 45 countries. The factorial equation developed by him has been utilized by scientists from Emory University, USA and Swinburne University, Australia for creating their own bioinformatics tools. He is a recipient of Microsoft eScience Award and listed in Top-2% world ranking of scientists.

CV Summary

H-Index	H-Index = 44, i-10 Index = 172, Citations > 8600
Academic Qualifications	BSc, MSc, MPhil, PhD
Professional Certifications	FRCPath, FRSC (UK), Chartered Chemist
Trainings and Conferences	Trainings = 12; Conferences = 32; Invited lectures = 12
Teaching Experience	19 Years
Research Experience	29 Years
International Awards	eScience Award, Microsoft (USA); IAAM Scientist Medal (Sweden); Environmental Protection Award (India)
Journal Editor	15
Journal Reviewer	86
Patents filed/published	8
Copyrights (Software tools)	6
Books	2
Book Chapters	20
Publications	>300
GenBank Submissions	210
dB SNP Submissions	13
Research Grants	17
Thesis Supervision	11

Personal Details

Nationality:	Indian
US Resident Status:	US Green Card, E11 (Valid unit 11/26/2031)
Date of Birth:	29 May 1959
Marital Status:	Married
Address:	A-614, Columbia Plaza Apartments, 2301 E St NW, Washington DC 20037, USA
Email:	khan_haseeb@yahoo.com / haseeb@ksu.edu.sa

Professional Qualification

- FRCPath (Clinical Biochemistry) (2014 -) Fellow, Royal College of Pathologists, London, UK.
- FRSC, C.Chem (1998 -) Fellow and Chartered Chemist, Royal Society of Chemistry, UK.

Educational Qualification

- Ph. D. (1989), Chemistry, Aligarh Muslim University, Aligarh, India.
- M. Phil. (1986), Chemistry, Aligarh Muslim University, Aligarh, India.
- M. Sc. (1983), Chemistry, Rohilkhand University, Bareilly, India.
- B. Sc. (1978), Chemistry, Zoology, Botany, Rohilkhand University, Bareilly, India.

Scientific Training

- Centre de Recherche des Cordeliers (CRC), Ecole de Médecine, Paris, France. Agilent Seahorse XF e96 Analyzer Operational Training. 3 July, 2018.
- Applied Biosystems SCIEX, Warrington, UK. Applications of LC-MS/MS. 25-26 June, 2018.
- Ohio State University, Aronoff Lab, USA. Cytotoxicity and Lipid Analysis. 4-8 June, 2013.
- National Institute of Health, Bethesda, USA. Animal and Human Cell Culture: Method and Applications, 29 April - 3 May, 2013.
- University of York, UK. Flow Cytometry Course, 22-25 January, 2013.
- University of Jyvaskyla, Finland. DNA microarray & Data Analysis, 17-19 Oct, 2012.
- Seahorse Bioscience, Copenhagen, Denmark. Introductory XF Training, 25-27 October, 2011.
- White Oak Conservation Center, Florida, USA - Recent Advances in Conservation Genetics Course, Feb 7-20, 2010.
- Genomics and Proteomics Short Course, New Delhi. June-July, 2006.
- Applied Biosystems, Warrington, Cheshire, UK - ABI 310 Genetic Analyzer and ABI 394 Basic DNA Synthesis Training Course, 5-7 September, 2001.
- University of California, Davis, USA - Proteomics Short Course, 20-24 August, 2001.
- Washington University School of Medicine, St. Louis, USA - Real-time PCR, RFLP, SNP detection, Primer Express and Primer 3 software, 27-31 August, 2001.

Employment History

- Professor (Distinguished), Department of Biochemistry, King Saud University, Riyadh, Saudi Arabia (12 May 2014 onward).
- Chair Professor, Research Chair in Biomedical Applications of Nanomaterials, King Saud University, Riyadh, Saudi Arabia (1 Jan 2020-).
- Chair Professor, Prince Sultan Research Chair for Environment and Wildlife, King Saud University, Riyadh, Saudi Arabia (24 Nov 2008 to 31 Dec 2019).
- Associate Professor, Department of Biochemistry, KSU, Riyadh (23 Feb 2008 to 23 Nov 2008).
- Assistant Professor, Department of Biochemistry, KSU, Riyadh, Saudi Arabia (1 Sept 2004 to 22 Feb 2008).
- Senior Scientist, Research Center, Armed Forces Hospital, Riyadh, Saudi Arabia (21 May 2001 to 31 Aug 2004).
- Scientific Officer, Armed Forces Hospital, Riyadh, Saudi Arabia (30 Oct 1993 to 20 May 2001).

Honors / Distinctions

- Listed in Top-2% World Ranking of Scientists (2021-2023), published by Stanford University, USA.
- His research data on diagnostic pathology has been included in a product brochure of a Japanese pharmaceutical company, Kissei Pharmaceuticals, Japan.
- His research work on diabetic biomarker has been cited in a product brochure of Point of Care HbA1c test by Abbott, India).
- Developed the software that can compute Fisher's exact probability for >10,000 frequencies (other software tools fail beyond 100 frequencies).
- Developed 8 software tools for biomedical applications, which were published and demanded by more than 300 scientists from 45 countries.
- The factorial equation developed by him has been utilized by scientists from Emory University, USA and Swinburne University, Australia for creating their own bioinformatics tools.
- On the Panel of Judges for the Arab Technology Business Plan Competition, Sharjah, UAE.
- On the Panel of Referees for TWAS Prize in Medical Sciences, The Academy of Sciences for the Developing World (TWAS), Trieste, Italy.
- On the Panel of Judges for selecting Best Poster Awards at the International Conference on Applications of Smart Materials at Annamalai University, India during 5-7 February, 2020.
- On the Panel of Judges for selecting best paper published in the Journal, Biosciences, Biotechnology Research Asia, Oriental Science Publishers, India.
- On the Panel of Examiners to evaluate research thesis for the award of PhD Degree in Applied Chemistry from Aligarh Muslim University, Aligarh, India.
- On the Panel of Examiners to evaluate research thesis for the award of PhD Degree in Bioinformatics from Bharathiar University, Coimbatore, Tamilnadu, India.
- Appointed as Expert to recommend best e-content (including e-health and e-science) for nomination to Manthan Award (Commonwealth Award).
- Consultant, Saudi National Biotechnology Incubator, Riyadh (managed by Oxford Innovation, UK)
- Consultant for research project "A comprehensive study on Saudi scorpions with special reference to development of immunodiagnostic assay and therapeutic modalities" funded by KACST, Riyadh, Saudi Arabia.
- Consultant for the research project "A study on metabolic syndrome and contributing risk factors among Saudi army recruits" funded by KACST, Riyadh, Saudi Arabia.
- Listed on the Website of Aligarh Muslim University, Aligarh, India as an Illustrious Alumni in the field of Medical Sciences (Toxicology).
- Listed on the Website of Department of Applied Chemistry, Aligarh Muslim University, Aligarh, India, among the ten Notable Alumni.

Awards / Scholarships

- Smart Clients for eScience Award from Microsoft Corporation, USA (2006).
- IAAM Scientist Medal, International Association of Advanced Materials, Sweden (2023)
- Environmental Protection Award, Agricultural and Environmental Development Society, Uttrakhand, India (2023).
- Research Excellence Award, College of Science, King Saud University, Saudi Arabia (2022)
- Indian Overseas Best Faculty Award, GISR Foundation, Noida, India (2019)
- Achievement Award from College of Science, King Saud University, Saudi Arabia (2013)
- Achievement Award from the Department of Botany and Microbiology, College of Science, King Saud University, Riyadh, Saudi Arabia (2012)
- Achievement Award from Saudi Biological Society, Riyadh, Saudi Arabia (2012).
- Achievement Award from Saudi Biological Society, Riyadh, Saudi Arabia (2011).
- Certificate of Appreciation from the Research Center, Armed Forces Hospital, Riyadh (2004).
- Scientific Achievement Award from Department of Postgraduate and Academic Affairs, Armed Forces Hospital, Riyadh, Saudi Arabia (2000).
- Foreign Travel Grant from CSIR, New Delhi to participate in IAWPRC/IWSA conference on Nitrogen Pollution of Water, held at Brussels, Belgium, 12-19 November, 1987.

- Senior Research Fellowship by the Council of Scientific and Industrial Research (CSIR), New Delhi, India form 1 March 1988 to 28 February 1990.
- Junior and Senior Research Fellowships by the University Grants Commission (UGC), New Delhi, India from 16 August 1985 to 29 February 1988.

Teaching

- General Biochemistry (BCH-101)
- Cellular Biochemistry (BCH-102)
- Biochemical Calculations (BCH-312)
- Biochemistry of Nutrition (BCH-282)
- Metabolic Disorders (BCH-451)
- Biotechnology and Genetic Engineering (BCH-462)
- Gene Expression (BCH-464)
- Molecular Genetics (BCH-465)
- Molecular Basis of Cancer (BCH-466)
- Biochemistry of Carcinogens (BCH-475)
- Research Methods (BCH-497)
- Advanced Metabolism (BCH-540)
- Molecular Biology of the Gene (BCH-550)
- Biochemistry of Cell Surface (BCH-570)
- Advanced Bioanalytical Techniques (BCH-602)
- Recent Aspects of Molecular Genetics (BCH-603)
- Recent Advances in Metabolism (BCH-607)
- Recent aspects in Biochemical Cell Signaling (BCH-611)
- Gene Regulation and Development (BOT-651)
- Introduction to Genetic Engineering (BOT-652)
- Medical Biochemistry (BCH-261, BCH-262): College of Dentistry, KSU.
- Clinical Chemistry (CLN-101): College of Applied Medical Sciences, KSU.

Research Interests (multidisciplinary)

- Biomedical Sciences (disease biomarkers, clinical biochemistry, molecular genetics, inflammation, metabolomics, neurodegeneration, animal models, pharmacology, toxicology)
- Nanomedicine (immunological response of nanomaterials, safety and biocompatibility, biochemical interactions, targeted drug delivery, diagnostic and therapeutic potential of nanomaterials)
- Animal Biotechnology (cytotoxicity assays, cellular responses to environmental stressors, oxygen consumption rate, DNA barcoding, molecular conservation)
- Bioinformatics (biomedical software development, artificial intelligence, evolutionary bioinformatics, microarray data analysis, phylogenetic analysis)

Thesis Supervision

- Khalid Elfakki Ibrahim (PhD in Biochemistry), Evaluation of biocompatibility and toxicity of gold nanoparticles in mice.
- Abdullah Al Aklabi (PhD in Molecular Biology), Molecular characterization of some endangered flora of Saudi Arabia.
- Ibrahim Abdal Hadi Saleh (PhD in Microbiology), Molecular evaluation of cyanobacterial toxins in waters of Saudi Arabia.
- Saud Ghazi Bader Alotaibi (PhD in Zoology), Neurohematological effects of the black snake venom Atractaspis microlepidota from different regions of Saudi Arabia on male rats.
- Khalid Elfakki Ibrahim (MSc in Biochemistry), Histopathological and immunohistochemical evaluation of target sites of iminodipropionitrile-induced behavioural syndrome in rats and mice
- Shafiqul Islam (MSc in Biochemistry), Appraisal of cardiac markers of acute myocardial infarction as presymptomatic predictors.

- Manar Al Walaei (MSc in Biochemistry), Role of proinfalmmatory cytokines in imminnodipionitrile induced toxicity in rats.
- Najla Al Harbi (MSc in Biochemistry), Proinflammatory cytokines gene expression in different organs of rats treated with naked and polyethylene glycol coated gold nanoparticles.
- Anwar Jamal Abdel Nasir (MSc in Biochemistry), Proinflammatory cytokines gene expression in liver and kidneys of rats exposed to Bitis arietans snake venom.
- Alaa Al Nakhli (MSc in Microbiology), Identification and diversity analysis of microflora using polymerase chain reaction.
- Mona Ahmed Ali AlMusawi (MPH in Clinical Epidemiology), The relationship between salivary glucose and cariogenic bacteria in Saudi type 2 diabetic patients from Riyadh.

Research Collaborations

- Ohio State University, Columbus, USA
- University of Saskatchewan, Canada
- Brunel University, London, UK
- Korea National University of Transportation, Chungju, South Korea
- University of Technology, Shah Alam, Selangor, Malaysia
- Prince Sultan Military Medical City, Riyadh, Saudi Arabia
- King Khalid University Hospital, Riyadh, Saudi Arabia
- Jawaharlal Nehru Institute of Advanced Studies, Hyderabad, India
- Indian Institute of Chemical Technology, Hyderabad, India
- University of Kashmir, Srinagar, India
- Annamalai University, Annamalai Nagar, Tamil Nadu, India

Research Grants

- Interaction of innate immune soluble factors with nanoparticles and related biomedical applications (National Plan for Science and Technology (NPST), Saudi Arabia).
- Molecular docking of novel ligand molecules and their evaluation for breast cancer therapeutics (NPST, Riyadh, Saudi Arabia).
- Surface-modified graphene quantum dot nanoparticles for enhanced sensitivity and safety in magnetic resonance imaging technology (NPST, Riyadh, Saudi Arabia
- Polymeric nanofibers as new class of 3D scaffold and their application in stem cell research and tissue engineering (NPST, Riyadh, Saudi Arabia).
- Investigating the anticancer effects and possible underlying mechanism of solanum nigrum (NPST, Riyadh, Saudi Arabia).
- Analytical and Molecular Bioscience Research Group Grant; Batch-I to VIII (Deanship of Scientific Research, King Saud University, Riyadh, Saudi Arabia)
- Biophysical and biochemical characterization of experimental disease models using nanoparticles (NPST, Riyadh, Saudi Arabia).
- Characterization of plasma membranes of fibroblasts of desert birds and its association with their longevity (NPST, Riyadh, Saudi Arabia).
- Microsoft Excel Add-In for creation of survival curves (Microsoft Corporation, USA). [USD 25,000]
- Biochemical and molecular determinants in myocardial infarction with special reference to carnitine homeostasis (NPST, Riyadh, Saudi Arabia).
- Markers of DNA fingerprinting and assessment of genetic diversity in Arabian Oryx (Prince Sultan Research Chair for Environment and Wildlife, Riyadh, Saudi Arabia).
- OGG1 gene polymorphism and cancer susceptibility in Saudi cancer patients: A GeneChip approach (Saudi Arabian Basic Industries Corporation, Saudi Arabia).
- Determination of polyamines in human plasma and urine by high-performance liquid chromatography (Research Center, College of Science, KSU, Riyadh).
- A visual basic software for computation of normal tissue complication probability associated with cancer radiotherapy (Research Center, College of Science, KSU, Riyadh).

- Thin-layer chromatographic analysis of biogenic polyamines in biological fluids (Research Center, College of Science, King Saud University, Riyadh, Saudi Arabia).
- Studies on acrylonitrile-induced behavioral, neurochemical and vestibular toxicities in rats (Research Center, College of Science, King Saud University, Riyadh, Saudi Arabia).

Journals Editor

- Frontiers in Bioscience, FIB Publications, USA.
- Peer J, PeerJ Inc., Corte Madera, CA, USA.
- Archives of Medical Science, Termedia Publishing House, Poland.
- International Journal of Clinical and Experimental Medicine, eCentury Publishing, USA.
- International Journal of Immunopathology and Pharmacology, Sage Publications, UK.
- Biomed Research International, Lead Guest Editor, Hindawi Publishing Corp., USA.
- Journal of Nanomaterials, Lead Guest Editor, Hindawi Publishing Corp., USA.
- Bioinformation, Biomedical Informatics Publications, Singapore.
- World Journal of Experimental Medicine, Baishideng Publishing Group, China.
- Artificial Intelligence in Gastroenterology, Baishideng Publishing Group, China.
- Saudi Journal of Biological Sciences, Saudi Biological Society, Saudi Arabia.
- Biomedical Research, Allied Academies, USA.
- Current Nanomedicine, Bentham Science Publishers, UAE.
- Animal Biology Journal, Nova Science Publishers, USA.
- Journal of Functional Foods in Health and Disease (2010-11), Richardson, TX, USA.
- International Journal of Neurology Research, Sheung Wan, Hong Kong.
- Biosciences, Biotechnology Research Asia, Oriental Science Publishers, India.

Reviewer of Grants / Books / Faculty Promotion

- Evaluated grant proposal for United Nations University's Biotechnology Program for Latin America and the Caribbean (UNU-BIOLAC).
- Evaluated grant proposal for Science and Technology Program, Emirates Foundation, UAE.
- Evaluated grant proposal for Dean of Graduate Studies and Research, Ajman University, UAE.
- Evaluated grant proposal for Medical and Pharmaceutical Sciences Sector, Scientific Research and Innovation Support Fund, Ministry of Higher Education & Scientific Research, Jordan.
- Evaluated grant proposal for King Abdulaziz City for Science & Technology, Saudi Arabia.
- Evaluated grant proposal for Deanship of Scientific Research, Majmah University, Saudi Arabia.
- Evaluated Book Proposal, "Process Plant Safety Systems Environment and Toxic Effects" John Wiley, USA.
- Evaluated Book Proposal, "Simulation and Modelling in Chemical and Materials Engineering" for Bentham Science Publishers, USA.
- Evaluated Book Proposal, "Guidelines for Useful Immunohistochemistry" for Bentham Science Publishers, USA.
- Evaluated Book Proposal, "Natural and Synthetic Engineering Materials", Elsevier, USA.
- Evaluated research work for faculty promotion at Department of Chemistry, Al-Nahrain University, Baghdad, Iraq.
- Evaluated research work for faculty promotion at Department of Biochemistry, King Abdulaziz University, Jeddah, Saudi Arabia.
- Evaluated research work for faculty promotion at Department of Chemistry, Taibah University, Medina, Saudi Arabia.
- Evaluated research work for faculty promotion at Department of Biochemistry, College of Science, University of Tabuk, Saudi Arabia.
- Evaluated research work for faculty promotion at Department of Biochemistry, University of Jeddah, Saudi Arabia.
- On the panel of External Assessor for academic promotions at Institute of Biological Sciences, Faculty of Science, University of Malaya, Kuala Lumpur, Malaysia.

Conferences / Symposia / Workshops

- 58th Assembly of Advanced Materials Congress, Miami, USA, 26 February to 1 March 2024.
- International Conference on Recent Advances In Applied Chemical Sciences, Maulana Azad National Urdu University, Hyderabad, India, 23-24 February, 2024
- 3rd Annual Symposium on Computational and Mathematical Methods in Medicine, King Saud University, Riyadh, Saudi Arabia, February 2-3, 2024.
- Advanced Materials World Congress, Orlando, USA, 9-12 November, 2023.
- International Conference on Oncology and carcinogenesis (ICOC-23), Washington DC, USA, 12 October, 2023.
- IoT with MATLAB Workshop, College of Science, King Saud University, Riyadh, 8 Feb, 2023.
- AI with MATLAB Workshop, College of Science, King Saud University, Riyadh, 7 Feb, 2023.
- International Conference & Exhibition for Science (ICES2023), King Saud University, Riyadh, Saudi Arabia, 6-8 February, 2023.
- 3rd International Conference on Nanomaterials, Nanofabrication and Nanocharacterization (NANOMACH2022), Oludeniz, Turkey, 22-28 April, 2022.
- International Conference on Graphene Industry-Challenges and Opportunities (ImagineNano-2021), Bilbao, Spain, 23-25 November, 2021.
- International Conference on Applications of Smart Materials, Annamalai University, Chidambaram, India, 5-7 February, 2020.
- International Conference on Nanoscience, Nanotechnology and Advanced Materials, Academics World, Riyadh, Saudi Arabia, 28-29 January, 2020.
- 5th Int. Conference on Nanotechnology in Medicine, Manchester, UK, 27-28 June, 2018.
- International Symposium on Infectious Diseases, New Delhi, India. 12-14 November, 2018.
- 21st International Neuroscience and Biological Psychiatry "Stress and Behaviour" Conference, St-Petersburg, Russia, 16-19 May, 2014.
- National Bioinformatics Workshop on Application of Computational Biology, System Biology and RNAi technology in Agriculture and Health Care, Biotech Park, Lucknow, India 22-24 July 2014.
- World Biodiversity Congress, Chiang Mai, Thailand, 26-30 November, 2013.
- International Conference on Modern Technologies in the Field of Biotechnology and Genetic Engineering, Amman, Jordan, 5-8 October, 2013.
- Drug Discovery and Therapy World Congress, Boston, USA, 3-6 June, 2013.
- 9th Annual Biomarkers and Diagnostics World Congress, Philadelphia, USA, 6-8 May, 2013.
- 2nd International Conference on Molecular Recognition, Rhodes, Greece, 5-10 June, 2012.
- Deanship of Skills Development, King Saud University, Riyadh, Saudi Arabia - Effective Teaching and Assessment of Learning Outcomes. 1-4 December, 2012.
- 24th International Conference of Saudi Biological Society, Biotechnology: Reality and Applications, Taibah University, Medina, Saudi Arabia, 9-11 April, 2009.
- King Abdulaziz City for Science and Technology, Riyadh, Saudi Arabia - 1st Saudi Arabian Bioinformatics Symposium and Workshop, 18-22 February, 2006.
- King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia - Gas Chromatography: Basic Principles and Applications Course, 5-6 April, 2005.
- National Scientific Corporation, Riyadh - Application training in HPLC (Waters) with diode-array, UV, and EC detectors and Breeze and Empower software, 1-4 Feb., 2004.
- King Faisal Specialist Hospital and Research Center, Riyadh, Saudi Arabia - Fundamentals of conducting research, 6 April, 2002.
- 7th Pan-Arab Union of Neurological Scientists, Armed Forces Hospital, Riyadh, Saudi Arabia, March 1-5, 1997.
- Int. Conference on Heavy Metal Pollution, Aligarh Muslim University, India, January 8-10, 1990.
- International Conference on Air/Water Environmental Pollution and Hazardous Wastes, held at New Delhi, India, November 16-18, 1989.
- Symposium on Development without Destruction, Kashmir University, Srinagar, India, 17-20 October, 1989.

- Symposium on Analytical Applications in Biological Sciences, North Eastern Hill University, Shillong India, 15-17 November, 1988.
- 26th Annual Convention of Chemists, Indian Chemical Society, Devi Ahilya University, Indore, India, December 26-29, 1989.
- IAWPRC Conference on Nitrogen Pollution of Water, Brussels, Belgium, Nov.24-28, 1987.

Invited Lectures

- Theranostic potential of graphene oxide conjugated manganese oxide nanoparticles for cancer treatment and imaging. Advanced Materials World Congress, Orlando, USA, 11 November, 2023.
- Role of impaired energy metabolism in cytotoxic effects of Solanum nigrum extract on breast cancer cells. 5th International Conference on Climate Change and its Impact (CCI-2023), Sher-e-Kashmir University of Agriculture, Science and Technology, India, 9-11 June, 2023.
- Biomarkers of glycemic control. 2nd International Conference of Indian Society of Personalized Medicine, Era University, Lucknow, India, 24 March, 2021.
- From data analysis to interpretation, Clinical Trials Training Course, Medical Services Department, Ministry of Defense, Riyadh, Saudi Arabia, 1 March, 2021.
- Criteria of safety and efficacy evaluations, Clinical Trials Training Course, Medical Services Department, Ministry of Defense, Riyadh, Saudi Arabia, 28 Feb, 2021.
- Evaluation of drug safety and efficacy in clinical trials. 53rd International Virtual Learning Series, Arulmigu Kalasalingam College of Pharmacy, Krishnankoil, Tamil Nadu, India, 4 August, 2020.
- Smart nanomaterials for biomedical applications, International Conference (Virtual) on Materials and Mathematical Sciences, Kalasalingam Academy of Research and Education, Srivilliputhur, Tamil Nadu, India, 19-20 June, 2020.
- Functionalized nanomaterials for theranostic applications, International Conference on Applications of Smart Materials, Annamalai University, Annamalai Nagar, India, 5 Feb, 2020.
- From data analysis to interpretation, Clinical Trials Training Course, Medical Services Department, Ministry of Defense, Riyadh, Saudi Arabia, 12 Nov, 2019.
- Criteria of safety and efficacy evaluations, Clinical Trials Training Course, Medical Services Department, Ministry of Defense, Riyadh, Saudi Arabia, 11 Nov, 2019.
- Composite graphene quantum dot nanoparticles for cancer imaging and photodynamic therapy, 29th Assembly of Advanced Materials Congress, Stockholm, Sweden, 10 Oct, 2019.
- Techniques in DNA fingerprinting, Inaugural Workshop of Prince Sultan Research Chair for Environment and Wildlife, Riyadh, Saudi Arabia 11 May, 2009.

Patents

1. Khan HA, Arif IA. Indexing gene expression data to compare gene signatures (US Patent App. 14/202487).
2. Arif IA, Khan HA, Al Homiadan AA, Al Farhan AH, Shobrak M. Molecular fingerprinting to identify inbreeding and out-breeding depressions (US Patent App. 13/878423).
3. Khan HA, Shaik MR, Alrashood ST, Ekhzaimy A. Hybrid nanoparticles comprising manganese oxide and highly reduced graphene oxide for theranostic applications (US Patent Appl.17863066)
4. Khan HA, Alhomida AS, Al-Hoshani A, Isab MA. Anticancer gold complexes, process of synthesis and method of treatment thereof (US Patent Appl. 17957476)
5. Alrokayan SH, Khan HA, Moffouk F, Hussain T, Abu-Salah K. Self-assembled copolymeric 3D nanowire scaffold for cell growth and proliferation and a method for producing thereof (US Patent Appl. 18091640)
6. Khan HA, Alrashood ST, Shaik MR, Ekhzaimy A. Nanocomposites of nitrogen-doped graphene oxide-and manganese oxide for photodynamic therapy and magnetic resonance imaging of cancer cells (US Patent App. 18/308537)
7. Khan HA, Prasad NR, Alghamdi AA, Alrokayan S. Herbal composition comprising Solanum nigrum for the treatment of cancer (US Patent App. 17/981,660).
8. Khan HA, Alhomida AS, Isab MA, Gatasheh M, Prasad NR, Al-Hoshani A. Gold complexes as anticancer agent (US Patent Application No. 18/383,517)

Copyrights

1. Khan HA. CalcFisher for computing Fisher's exact test (Copyright: ISBN, 978-9960-55-954-4)
2. Khan HA. CalcDose for drug dosage conversion (Copyright: ISBN, 978-9960-55-949-0)
3. Khan HA. ArrayVigil for comparison of molecular gene signatures (ISBN, 978-9960-55-953-7)
4. Khan HA. ArraySolver for display and analysis of gene expression data (ISBN 978-9960-55-9506)
5. Khan HA. SCEW for creation of survival curves (Copyright: ISBN, 978-9960-55-951-3)
6. Khan HA. CalcNTCP for selecting safe radiation dose for radiotherapy (ISBN 978-9960-55-952-0)

Books

1. Khan HA (2012) A simple guide to metabolic disorders; Nova Publishers, USA (ISBN: 978-1-62100-278-9).
2. Khan HA, Arif IA (2012) Toxic effects of nanomaterials; Bentham Science Publishers, USA (ISBN: 978-1-60805-283-7).

Book Chapters (selected)

1. Sherwani SI, Khan HA (2024) Biopesticides and their Mode of Action: Communicating Sustainable Agricultural Practices amid Climate Change Threats. Biopesticides Handbook (2nd Edition). CRC Press, USA. (In Press).
2. Khan HA, Khan I, Lee Y (2018) Role of immune factors on toxicity and bioavailability of carbon nanomaterials. Fullerenes, Graphenes and Nanotubes: A Pharmaceutical Approach. Elsevier, USA. (ISBN: 978-012-813-691-1).
3. Khan HA, Sakharkar M, Nayak A, Kishore U, Khan A (2017) Nanoparticles for biomedical applications. Nanobiomaterials: Nanostructured Materials for Biomedical Applications. Elsevier, USA. pp. 357-384. (ISBN: 978-008-100-716-7).
4. Khan HA, Ullah Q, Ahmad A, Alhomida AS, Alrokayan S (2016) Methods of trace amines analysis in mammalian brain. Trace Amines and Neurological Disorders: Potential Mechanisms and Risk Factors. Elsevier, USA. pp. 11-26. (ISBN: 978-012-803-603-7)
5. Sherwani SI, Khan HA (2016) Trace amines in neuropsychiatric disorders. Trace Amines and Neurological Disorders: Potential Mechanisms and Risk Factors, Elsevier, USA. pp. 269-284. (ISBN: 978-012-803-603-7)
6. Khan HA, Alhomida AS, Alrokayan S, Ola MS, Rusop M (2015) Plant DNA barcoding: brief methodology: DNA extraction - sequencing. Plant DNA Barcoding and phylogenetics; Lambert Academic Publishing, Germany; pp. 191-206. (ISBN: 978-365-928-095-5)
7. Sherwani SI, Khan HA (2015) Modes of action of biopesticides. Biopesticides Handbook. CRC Press, USA. (ISBN: 978-146-659-652-8)
8. Ola MS, Khan HA, Alhomida AS (2014) Role of diet and exercise in diabetic retinopathy. Diet and Exercise in Cognitive Function and Neurological Diseases. Wiley Blackwell, USA.
9. Saad PSM, Alrokayan SAH, Khan HA, Rusop M. Multiwall carbon nanotubes in semiconducting conjugated polymer based organic solar cells (Chapter 5), Renewable Energy and Sustainable Developments. Scientific & Academic Publishing, USA. 2014; pp. 176-196.
10. Arif IA, Khan HA, Al Rokayan S, Alhomida AS, Bakir MA, Khanam F (2012) Toxicologic and environmental issues related to nanotechnology development. Toxic Effects of Nanomaterials. Bentham Science Publishers, USA, pp. 137-147. (ISBN: 978-1-60805-421-3).
11. Khan HA (2011) Impaired mitochondrial respiration as a causative factor in Parkinson's disease. Cell Respiration and Cell Survival: Process, Types and Effects. Nova Science Publishers, New York, USA, pp. 211-224. (ISBN: 978-1-60876-462-4).
12. Khan HA (2009) Determination of pesticides in human blood and urine by high-performance liquid chromatography. Handbook of Pesticides: Methods of Pesticide Residues Analysis, CRC Press, USA, pp. 541-570. (ISBN: 978-1-42008-245-6).
13. El-Saeid MH, Khan HA (2009) Analysis of pesticides in food samples by supercritical fluid chromatography. Handbook of Pesticides: Methods of Pesticide Residues Analysis, CRC Press, USA, pp. 93-114. (ISBN: 978-1-42008-245-6).

Publications (selected)

1. Khan HA, Isab AA, Alhomida AS, Gatasheh M, Al-Hoshani A, Aldhafeeri BA, Prasad NR. Synthesis of a novel gold (I) complex and evaluation of its anticancer properties in breast cancer cells. Anticancer Agent Med Chem. 2024; 24(5): 379-388.
2. Khan HA, Kishore U, Alrokayan SH, Ibrahim KE. Activation of the complement lectin pathway by iron oxide nanoparticles and induction of pro-inflammatory immune response by macrophages. Curr Nanoscience. 2023. DOI: 10.2174/0115734137270924231117112124
3. Khan HA, Prasad NR, Alrokayan SH, Alghamdi AA. Antiproliferative effect of Solanum nigrum L. water extract on breast cancer cells: potential roles of apoptosis and oxidative stress. Cell Mol Biol. 2023; 69(10): 136-142.
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GenBank Submissions

- Arabian Oryx; mtDNA 12S rRNA gene sequences: 24 (Accession Nos. FJ914291-FJ914314)
- Arabian Oryx; mtDNA16S rRNA gene sequences: 24 (Accession Nos. FJ914267-FJ914290)
- Arabian Oryx; mtDNA cytochrome b gene sequences: 24 (Accession Nos. FJ937660-83)
- Arabian Oryx; mtDNA control region: 24 (FJ797434, FJ821297-313, FJ860220-FJ860225)
- Arabian Sand Gazelle; 16S rRNA gene sequences: 20 (Accession Nos. JN376025-JN376044)
- Arabian Sand Gazelle; cytochrome b gene sequences: 20 (Accession Nos. JN376045-64)
- Arabian Sand Gazelle; control region gene sequences: 20 (Accession Nos. JN376006-24)
- Arabian partridge; COI sequences: 3 (Accession Nos. HQ168027-HQ168029)
- Philby's rock partridge; COI sequences: 2 (Accession Nos. HQ168030-HQ168031)
- Asian houbara bustard; COI sequences: 4 (Accession Nos. HQ168032-HQ168035)
- Spotted crake; COI sequence: 1 (Accession No. HQ168036)
- Palm dove; COI sequences: 3 (Accession Nos. HQ168037-HQ168039)
- Collared dove; COI sequences: 2 (Accession Nos. HQ168040-HQ168041)
- Namaqua dove; COI sequences: 3 (Accession Nos. HQ168042-HQ168044)
- White cheeked bulbul; COI sequences: 5 (Accession Nos. HQ168045-HQ168049)
- Black scrub robin; COI sequences: 4 (Accession Nos. HQ168050-HQ168053)
- House sparrow; COI sequences: 4 (Accession Nos. HQ168054-HQ168057)
- Spanish sparrow; COI sequence: 1 (Accession No. HQ168058)
- Isabelline shrike; COI sequence: 1 (Accession No. HQ168059)
- Crested lark; COI sequences: 2 (Accession Nos. HQ168060-HQ168061)
- Spotted flycatcher; COI sequence: 1 (Accession No. HQ168062)
- Green bee-eater; COI sequences: 4 (Accession Nos. HQ168063-HQ168066)
- Lappet-faced vulture; COI sequences: 2 (Accession Nos. HQ168067-HQ168068)
- Rhazya stricta; rbcL gene sequence (Accession No. JN375994)
- Lycium shawii; rbcL gene sequence (Accession No. JN375995)
- Moricandia sinaica; rbcL gene sequence (Accession No. JN375996)
- Bassia eriophora; rbcL gene sequence (Accession No. JN375997)
- Withania somnifera; rbcL gene sequence (Accession No. JN375998)
- Chenopodium murale; rbcL gene sequence (Accession No. JN375999)

- Salsola imbricata; rbcL gene sequence (Accession No. JN376000)
- Scorzonera intricate; rbcL gene sequence (Accession No. JN376001)
- Panicum antidotale; rbcL gene sequence (Accession No. JN376002)
- Erodium laciniatum; rbcL gene sequence (Accession No. JN376003)
- Erodium glaucophyllum; rbcL gene sequence (Accession No. JN376004)
- Melilotus indicus; rbcL gene sequence (Accession No. JN376005)

dbSNP Submissions

- CPT1B Gene: SNP id, KSU-CPT1B-01; Accession, ss715578388; Feature, I66V
- CPT1B Gene: SNP id, KSU-CPT1B-02; Accession, ss715578389; Feature, G320D
- CPT1B Gene: SNP id, KSU-CPT1B-03; Accession, ss715578390; Feature, S427C
- CPT1B Gene: SNP id, KSU-CPT1B-04; Accession, ss715578391; Feature, L436L
- CPT1B Gene: SNP id, KSU-CPT1B-05; Accession, ss715578392; Feature, E531K
- CPT1B Gene: SNP id, KSU-CPT1B-06; Accession, ss715578393; Feature, A627E
- CPT1B Gene: SNP id, KSU-CPT1B-07; Accession, ss715578394; Feature, Non-coding
- CPT2 Gene: SNP id, KSU-CPT2-01; Accession, ss715578395; Feature, S292G
- CPT2 Gene: SNP id, KSU-CPT2-02; Accession, ss715578396; Feature, V368I
- CPT2 Gene: SNP id, KSU-CPT2-03; Accession, ss715578397; Feature, F602F
- CPT2 Gene: SNP id, KSU-CPT2-04; Accession, ss715578398; Feature, M647V
- CPT2 Gene: SNP id, KSU-CPT2-05; Accession, ss715578399; Feature, Non-coding
- CPT2 Gene: SNP id, KSU-CPT2-06; Accession, ss715578400; Feature, Non-coding