

Faculty Details

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Area Of Research: Molecular Immunobiology and Vaccinology

Faculty Details

Dr. Nooruddin Khan, Ph.D.

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Professor

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Twitter: <https://twitter.com/noorlmiid>

Academic Profile:

- “ 2003-2008: PhD (Molecular Immunology); Manipal University/Center for DNA fingerprinting and Diagnostics(CDFD)
- “ 2001-2003: MSc (Biotechnology); Jamia Hamdarad University,
- “ 1998-2001: BSc (Botony), Ramjas College, University of Delhi

Career:

- “ 2020- until now: Associate Professor, Department of Animal Biology, University of Hyderabad, Hyderabad.
- “ May 1, 2017-until now: Courtesy Assistant Professor at the Department of Microbiology and Immunology in the College of Veterinary Medicine; Cornell University, USA
- “ 2011-2020: Assistant Professor, Department of Biotechnology and Bioinformatics, University of Hyderabad, Hyderabad

- “ May-August, 2018: Visiting faculty at the Department of Biomedical Engineering, Cornell University, USA
- “ November-December, 2017: Visiting faculty at the Department of Microbiology and Immunology, Cornell University, USA
- “ 2008-2011: Post Doctoral Fellow; Emory Vaccine Center, Emory University with Prof Bali Pulendran

Honors/Awards:

- “ 2019 University Chancellor's Award for excellence in teaching and research.
- “ 2016 USEFI Fulbright-Nehru Academic and Professional Excellence Flex Award.
- “ 2014 Shakuntla Amir Chand Prize for clinical research by ICMR (Indian council of Medical Research).
- “ 2014 DST-Fast-track.
- “ 2013 Chaturvedi Ghanshyam Das Jaigopal Memorial Award for outstanding research in Immunology by ICMR (Indian council of Medical Research).
- “ 2013 Bharat Jyoti Award, India International friendship society
- “ 2012 Bio Asia innovation award by Bio Asia Global Bio Business forum.
- “ 2007 Young Scientist Award by the Indian Immunological Society, India.
- “ 2005 INSA (Indian National Science Academy) Travel Grant.

“ 2005 DST (Department of science and technology) Travel Grant.

“ 2003 Noorul-Hasan Meritorious Award.

Membership in Academic/societies/professional bodies:

“ Member of Indian Immunological Society, India.

“ Member of Molecular Immunology Forum (MIF), India

Notice Board

No Records Available

Students And Project Trainees

Students/Projects Trainees

Name	Joined As	Mail	Contact		
Shaikh Matin Rahim	PhD	---	---		
Dr.Farhan Ahmed	Young Scientist	---	---		
Kanaparthi Kala Jyothi	PhD	---	---		
Rafiq Ahmad Khan	PhD	---	---		
Aradhana Mariam Philips	Integrated MSc-PhD	---	---		

Srinivas Duvvada PhD --- ---

Sai Nikhith Cholleti PhD --- ---

Former Students/Projects Trainees

Name Joined As Working

Dr. Srikanth Battu PhD Post Doctoral Fellow (La Jolla Institute of Immunology, USA)

Dr.Sumbul AfrozPhD Post Doctoral Fellow (Penn State University, USA)

Dr.Gillipsie Minhas Post Doctoral Fellow Novartis

Sai Sundeep MSc PhD (University of Nebraska Medical Center, USA)

Jeevan Giddaluru Project Student PhD (University of São Paulo, Brazil)

Koelina GangulyMSc PhD (University of Nebraska Medical Center, USA)

Yashika Ratra MSc PhD (National Institute of Immunology, India)

Dhirendra Sharma MSc Scientist (Bhabha Atomic Research Center, India)

Rohith Kumar Guddeti MSc PhD (Indian Institute of Science Education and Research, Tirupati)

Shama MSc PhD (The Hong Kong Polytechnic University, Hong Kong, SAR China)

Publications

34 Kanaparthi KJ, Afroz S, Minhas G, Moitra A, Khan RA, Medikonda J, Naz S, Cholleti NS, Banerjee S, Khan N (2022) , Immunogenic profiling of Mycobacterium tuberculosis DosR protein Rv0569 reveals its ability to switch on Th1 based immunity. , Immunol Lett, Elsevier,S0165-2478(22)00001-3,,.

33 Philips AM, Khan Nooruddin (2021) , Amino acid sensing pathway: A major check point in the pathogenesis of obesity and COVID-19 , Obesity Review, ,22(4),,e13221.

32 Divya Gupta, Farhan Ahmed, Dixit Tandel, Haripriya Parthasarathy, DhiviyaVedagiri, Vishal Sah, Krishna Mohan Bodduluru, Siddarth Shreedas Daga, Rafiq Ahmad Khan, ..., *Nooruddin Khan, *Krishnan Harinivas Harshan. (2021) , Development of Equine Immunoglobulin Fragment F (ab') 2 with High Neutralizing Capability against SARS-CoV-2 , BioRxiv, ,,,.

31 Vivek Dhar Dwivedi,ShivBharadwaj,SumbulAfroz, Khan Nooruddin, Mairaj Ahmed Ansari, Umesh Yadava, Ramesh Chandra Tripathi, Indra Prasad Tripathi,Sarad Kumar Mishra (2020) , Anti-Dengue infectivity evaluation of bioflavonoid from Azadirachta indica by dengue virus serine protease inhibition , Journal of Biomolecular Structure and Dynamics , ,28,,1-16.

30 Panigrahi GC, Qureshi R, Jakkula P, Kumar KA, Khan Nooruddin, Qureshi IA (2020) , Leishmanial aspartyl-tRNA synthetase: Biochemical, biophysical and structural insights , International J Biol. Macromol. , ,15,2869-2885,165(Pt B).

- 29 Afroz S, Battu S, Giddaluru J, Khan Nooruddin (2020) , Dengue Virus Induced COX-2 Signaling Is Regulated Through Nutrient Sensor GCN2 , *Frontier in Immunology* , ,13,1831,11.
- 28 Tejaswini Appidi, Deepak Bharadwaj Pemmaraju, Rafiq Ahmad Khan, ...Khan Nooruddin *, Aravind Kumar Rengan*. (2020) , NIR light triggered selective ROS dependent autophagy for effective breast cancer therapy by CfAc/IR780 Nanoliposomes , *Nanoscale* , ,12,,2028.
- 27 Khan Nooruddin (2019) , Cellular stress response and immunological regulation during Mycobacterium tuberculosis: Molecular Infection Biology, Pathogen , Springer, Berlin Germany,,.
- 26 Afroz S, Shama, Battu S, Matin S, Solouki S, Elmore JP, Minhas G, Huang W, August A, Khan Nooruddin (2019) , Amino acid starvation enhances vaccine efficacy by augmenting neutralizing antibody production , *Science Signaling* , ,12,607,12.
- 25 Khan RA, Afroz S, Minhas G, Battu S, Khan Nooruddin (2019) , Dengue virus envelope protein domain III induces pro-inflammatory signature and triggers activation of inflammasome , *Cytokine* , ,22,154780,123.
- 24 Alvi SB, Appidi T, Deepak BP, Rajalakshmi PS, Minhas G, Singh SP, Begum A, Bantal V, Srivastava R, Khan Nooruddin*Rengan AK* (2019) , The "nano to micro" transition of hydrophobic curcumin crystals leading to in situ adjuvant depots for Au-liposome nanoparticle mediated enhanced photothermal therapy , *Biomaterial Science* , ,163866-3875,,.
- 23 Saima Naz, Srikanth Battu, Rafiq Ahmad Khan, Sumbul Afroz,....Aleem Ahmed Khan, and Khan Nooruddin (2019) , Activation of integrated stress response pathway regulates IL-1 beta production in macrophages through post-transcriptional and translational reprogramming in mice , *European J Immunology* , ,49 ,277-289,2.
- 22 Bhat M.Y., Gul M.Z., Maurya R., Khan Nooruddin., Qureshi I.A., Ghazi I.A (2018) , Growth Inhibition and Apoptosis Inducing Effects of Artemisia absinthium L. Fractions on Chronic Myeloid Leukemia (K562) Cells , *Journal of Biologically Active Products from Nature* , ,8,70-89,2.
- 21 Naz S, Khan RA, Giddaluru J, Battu S, Vishwakarma SK, Subahan M, Satti V, Khan Nooruddin, Khan AA (2018) , Transcriptome meta-analysis identifies immune signature comprising of RNA binding proteins in ulcerative colitis patients , *Cell Immunol.* , ,334,42-48,.
- 20 Srikanth Battu, Sumbul Afroz, Jeevan Giddaluru, Saima Naz,...Avery August, SeyedEhtesham Hasnain and Khan Nooruddin (2018) , Amino acid starvation sensing dampens IL-1beta production by activating riboclustering and autophagy , *PLoS Biology* , ,16,e2005317,4.
- 19 Battu S, Minhas G, Mishra A, Khan Nooruddin (2017) , Amino Acid Sensing via General Control Nonderepressible-2 Kinase and Immunological Programming , *Frontiers in Immunology* , ,11,1719,8.
- 18 Pemmaraju D, Appidi T, Minhas G, Singh SP, Khan Nooruddin, Pal M, Srivastava R, Rengan AK. (2017) , Chlorophyll rich biomolecular fraction of A. cadamba loaded into polymeric nanosystem coupled with Photothermal Therapy: A synergistic approach for cancer theranostics , *Int J Biol. Macromol.* , ,28,,.
- 17 Afroz S, Medhi H, Maity S, Minhas G, Battu S, Giddaluru J, Kumar K, *Paik P, *Khan Nooruddin (2017) , Mesoporous ZnO nanocapsules for the induction of enhanced antigen-specific immunological responses , *Nanoscale* , ,9,14641-14653,38.

- 16 Sumbul Afroz, Jeevan Giddaluru, Sandeep Vishwakarma, Saima Naz, Aleem Ahmed Khan and Khan Nooruddin (2017) , A comprehensive gene expression meta-analysis identifies novel immune signatures in Rheumatoid Arthritis patients , *Frontiers in Immunology* , ,2,74,8.
- 15 Bhat M.Y., Gul M.Z., Khan Nooruddin., Qureshi I.A., Ghazi I.A (2017) , Cytoprotective Activity and Anti-inflammatory Properties of *Artemisia nilagirica* (Clarke) Extracts-A Study with Macrophages , *Journal of Biologically Active Products from Nature* , ,228-244,,.
- 14 Minhas G, Sharma J, Khan Nooruddin (2016) , Cellular Stress Response and Immune Signaling in Retinal Ischemia-Reperfusion Injury , *Frontiers in Immunology* , ,7,,444.
- 13 Afroz S, Giddaluru J, Abbas MM, Khan Nooruddin (2016) , Transcriptome meta-analysis reveals a dysregulation in extra cellular matrix and cell junction associated gene signatures during Dengue virus infection , *Scientific Report* , ,6,,33752.
- 12 Khubaib M, Sheikh JA, Pandey S, Srikanth B, Bhuwan M, Khan Nooruddin, Hasnain SE, Ehtesham NZ (2016) , Mycobacterium tuberculosis Co-operonic PE32/PPE65 Proteins Alter Host Immune Responses by Hampering Th1 Response , *Frontiers in Microbiology* , ,7,,719.
- 11 Ganguly K, Giddaluru J, August A, Khan Nooruddin (2016) , Post-transcriptional Regulation of Immunological Responses through Riboclustering , *Frontiers in Immunology* , ,7,,161.
- 10 Ravindran R, Loebbermann J, Nakaya HI, Khan Nooruddin, Ma H,...,Martinez J, Pulendran B (2016) , The amino acid sensor GCN2 controls gut inflammation by inhibiting inflammasome activation , *Nature* , ,531,523-7,7595.
- 9 Tenguria S, Ansari SA, Khan Nooruddin, Ranjan A, Devi S, Tegtmeyer N, Lind J, Backert S, Ahmed N (2014) , *Helicobacter pylori* cell translocating kinase (CtkA/JHP0940) is pro-apoptotic in mouse macrophages and acts as auto-phosphorylating tyrosine kinase , *International Journal of Medical Microbiology* , ,304,1066-76,8.
- 8 Ravindran R, Khan Nooruddin, Nakaya HI, Li S, Loebbermann J, Maddur MS, Park Y, Jones DP, Chappert P, Davoust J, Weiss DS, Virgin HW, Ron D, Pulendran B (2014) , Vaccine activation of the nutrient sensor GCN2 in dendritic cells enhances antigen presentation , *Science* , ,343,313-7,6168.
- 7 Li S, Park Y, Duraisingham S, Strobel FH, Khan Nooruddin, Soltow QA, Jones DP, Pulendran B (2013) , Predicting network activity from high throughput metabolomics , *PLoS Comput Biol.* , ,9,e1003123,7.
- 6 Nakaya HI, Wrammert J, Lee EK, Racioppi L, Marie-Kunze S, Haining WN, Means AR, Kasturi SP, Khan Nooruddin, ...,Pulendran B (2011) , Systems biology of vaccination for seasonal influenza in humans , *Nature Immunology* , ,12,786-95,8.
- 5 Khan Nooruddin, Alam K, Mande SC, Valluri VL, Hasnain SE, Mukhopadhyay (2008) , S. Mycobacterium tuberculosis heat shock protein 60 modulates immune response to PPD by manipulating the surface expression of TLR2 on macrophages , *Cell Microbiology* , ,10,1711-22,8.
- 4 Khan Nooruddin, Alam K, Nair S, Valluri VL, Murthy KJ, Mukhopadhyay S (2008) , Association of strong immune responses to PPE protein Rv1168c with active tuberculosis , *Clinical Vaccine Immunology* , ,15,974-80,6.

- 3 Khan Nooruddin, Ghousunnissa S, Jegadeeswaran SM, Thiagarajan D, Hasnain SE, Mukhopadhyay S (2007) , Anti-B7-1/B7-2 antibody elicits innate-effector responses in macrophages through NF-kappa B-dependent pathway , International Immunology ,19,477-86,4.
- 2 Khan Nooruddin, Rahim SS, Boddupalli CS, Ghousunnissa S, Padma S, Pathak N, Thiagarajan D, Hasnain SE, Mukhopadhyay S (2006) , Hydrogen peroxide inhibits IL-12 p40 induction in macrophages by inhibiting c-rel translocation to the nucleus through activation of calmodulin protein , Blood ,107,1513-20,4.
- 1 Rahim SS, Khan Nooruddin, Boddupalli CS, Hasnain SE, Mukhopadhyay S (2005) , Interleukin-10 (IL-10) mediated suppression of IL-12 production in RAW 264.7 cells also involves c-rel transcription factor , Immunology ,114,313-2,3.

Grants

Sponsored Research Projects:

C Completed:

“ Role of integrated stress response (ISR) pathway in the regulation of immune responses during Dengue virus infection” under “Fast Track scheme for Young Scientists” (DST, India), (Amount: Rs 27,00,000). [Duration (2014-2017)], Role-PI

“ Programming protective humoral responses with novel vaccine formulations against Dengue Virus (DBT, Task force) (Amount: Rs 64,15,000. [Duration (2014-2017)], Role-PI

- “ Nano-bead based approach to identify suitable vaccine candidate for latent Tuberculosis (DST, Nano-mission) Rs 49,40,690)-Role PI

- “ Structural and Functional Characterization of GCN5-related Acetyl-transferases from M. tuberculosis. (3 lakhs, UPE-2 sponsored)-Co-PI.

- “ Functional characterization of the novel virulence mechanism encoded by the genomic plasticity zone of the human gastric pathogen H. pylori (under the Infection Biology Task Force DBT, 0.97 crore).

- “ Programming immunogenicity of latency-associated antigens of Mycobacterium Tuberculosis through Toll-Like receptors (TLRs)-UGC-MRP (14.5 lakhs)-Role-PI

- “ RNA binding protein mediated protein aggregation in the regulation of inflammation (UPE-II, 3.5 lakhs)-Role-Co-PI

- “ Functional-hollow-porous-biopolymer based Nanoformulations and Interventions for Treatment of Cancer and Prevention of Tuberculosis: concept of nanomedicine with multiple drugs for multiple diseases. (Rs 50.82 lakhs)-Role Co-PI.

“ Poly Amino acid based Nanomedicine tbr Cotreatment of Cancer and Tuberculosis (UPE-II, 3.5 lakhs)

“ 12R-Lipoxygenase as a Target for Development of Drugs against Psoriasis; Drugs and Pharmaceuticals under Department of Science and Technology (F.No.VI-D&P/560/2016-17/TDT dated 30 December, 2016, (205 lakhs) Co-PI

Ongoing sponsored projects:

“ Development of microbial Nano vesicle based multivalent Vaccine formulation against multiple poultry disease under DBT BIRAC (50 lakhs_-PI

“ Nanovesicle based approach to develop tetravalent vaccine against Dengue Virus by ICMR (32.5 lakhs)-PI

“ Inter and trans disciplinary project entitled "Development of new generation vaccine formulations against human and poultry pathogens and survey of its possible socio-economic implications in healthcare." No.UOH/IOE: RC1-20-017 “ funded by IoE, University of Hyderabad, (Duration 3 years; Rs 229 lakhs) in collaboration with School of Chemistry, School of Engineering and Department of Anthropology, University of Hyderabad. (Project Coordinator)

Ongoing Consultancy/Industry Projects:

Development of Inactivated COVID 19 virus as antigen for the production of therapeutic immunoglobulin fragment for treatment of COVID 19 infection” funded by VINS Bio-products Ltd , (Duration 1 years and extendable; Rs 13.8 lakhs) (Role-PI)

Technology Transfer :

Technology transfer for developing antibody fragment-based immunotherapy for immediate treatment of COVID-19 pandemic to Vins Bioproducts Ltd, a well-known anti-sera manufacturing company.

Patents

“ A novel protein as potential candidate for development of anti-tuberculosis therapeutics. (US Patent Application No: 2010/0159, 485).

“ A novel candidate protein to diagnose patients with active tuberculosis. (US Patent Application No: 2010/0129, 809).

“Heterocyclic compounds as Lipoxygenase inhibitors” Provisional Indian Patent Application no. 201941024295; PCT Filing Date: May, 2020