

# RESUME

## Dr. Naveed Shahzad

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School of Biological Sciences,  
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## Academic Qualifications

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- 2009-2013** PhD, Cell and Molecular Biology/Tumor Virology  
IARC, World Health Organization, Lyon, France.  
**Thesis title:** Study of the biological properties of human polyomaviruses early genes products.
- 2008-2009** Master M2/MPhil, Microbiology Ecology  
University of Claude Bernard Lyon1, France.
- 2005-2007** MSc.Hons., Veterinary Microbiology  
University of Agriculture Faisalabad, Pakistan.
- 2001-2005** Doctor of Veterinary Medicine (D.V.M)  
University of Agriculture Faisalabad, Pakistan.

## Honours and Awards

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- Travel grant to attend Congress on Virology and Infectious Diseases, November 20-22, 2017 in Miami USA 2017.
- Travel grant to attend 11<sup>th</sup> International Virology and Microbiology conference, July 27-28, 2018 Vancouver, Canada.
- Honorarium awarded by School of Biological Sciences, University of the Punjab Lahore, for exceptional performance for consecutive three years (2017- 2019).
- 1<sup>st</sup> Poster prize in 2<sup>nd</sup> International Symposium on Advances in Molecular Biology of Plants & Health Sciences, held at Center of Excellence in Molecular Biology Lahore, 21-23 Nov 2017.
- HEC approved PhD supervisor.
- Five years (2008-2013) overseas scholarship for MPhil leading to PhD in France awarded by Higher Education Commission, Government of Pakistan.
- Merit scholarship in Matriculation, F. Sc, and DVM.

## Grants and Funding

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- Methylation analysis of MyC associated gene factor X (MAX) and its interacting genes in breast cancer. 2015, SRGP HEC, Pakistan (**PI, 0.5 Million PKR**)
- Antimicrobial susceptibility testing of biomaterial-associated bacterial biofilms. 2016, SRGP HEC, Pakistan (**Co-PI, 0.5 Million PKR**)
- Specific detection of human BK and JC Polyomaviruses in urine samples of nephropathic patients from Pakistan. 2016, Punjab University Grant, Pakistan (**PI, 0.150 Million PKR**)

- Investigating therapeutic potential of indigenous Euphorbiaceous plants against breast cancer by targeting CXCL1 & CXCL2 chemokines. 2017, NRPU, HEC, Pakistan (**PI, 4.00 Million PKR**)
- Phylogenetic analysis of Merkel cell polyomavirus and investigation of its co-infection in HBV/HCV positive patients of Pakistan. 2017, Punjab University Grant, Pakistan (**PI, 0.150 Million PKR**)
- Mining of novel epigenetically regulated tumor suppressor genes to be used as biomarkers for early breast cancer diagnosis. 2018, NRPU HEC, Pakistan (**PI, 5.00 Million PKR**)
- Expression profiling of PALB2 in Pakistani Breast Cancer patients. 2019, Forman Christian College University Lahore (**Co-PI, 0.2 Million PKR**)

### Working Experience

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**14-11-2006-** Worked as “Research Officer (BPS-17)” in Animal Quarantine Department,  
**30-06-2008** Ministry of Food and Agriculture, Pakistan.

**07-11-2014-** Working as “Assistant professor (TTS-19)” in School of Biological Sciences,  
**To date** University of the Punjab Lahore, Pakistan.

**List of Publications:** **Cumulative IF: 62.1,** **Total Citations: 281**

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#### ➤ Published manuscripts

- Accardi R, Rubino R, Scalise M, Gheit T, **Shahzad N**, Thomas M, Banks L, Indiveri C, Sylla BS, Cardone RA, Reshkin SJ and Tommasino M. E6 and E7 from human papillomavirus type 16 cooperate to target the PDZ protein Na/H exchange regulatory factor 1. *Journal of Virology*, 8208-16, (2011).
- Polesel J, Gheit T, Talamini R, **Shahzad N**, Lenardon O, Sylla B, La Vecchia C, Serraino D, Tommasino M and Franceschi S. Urinary human polyomavirus and papillomavirus infection and bladder cancer risk. *International journal of cancer*, 222-6, (2012).
- Saulnier A, Vaissière T, Siouda M, Accardi R, Creveaux M, Sebastian S, **Shahzad N**, Gheit T, Hussain I, Torrente M, Maffini FA, Menezes AM, Brennan P, Herceg Z, Tommasino M and Sylla BS. Inactivation of the putative suppressor gene DOK1 by promoter hypermethylation in primary human cancers. *British Journal of Cancer*, 2484-94, (2012).
- **Shahzad N**, Shuda M, Gheit T, Cornet I, Saidj D, Hasan U, Chang Y, Moore PS, Accardi R and Tommasino M. The T antigen locus of Merkel Cell Polyomavirus down regulates human Toll-Like Receptor 9 Promoter. *Journal of Virology*, 87(23):13009-19, (2013).
- Ramzan M, Ain N, Ilyas S, Umer M, Bano S, Sarwar S, **Shahzad N\*** and Shakoori AR. A cornucopia of screening and diagnostic techniques for human papillomavirus associated cervical carcinomas. *Journal of Virological Methods*. 222:192-201, (2015).
- **Shahzad N\***, Aslam B, Hussain I, Ijaz M, Rasool MH, Tasneem F, Hamid T, Tayyeb A and Hussain T. Distribution and Phylogenetic Analysis of Bacterial Isolates from Urinary Tract Infection Patients of Pakistan. *Pakistan Journal of Zoology*, 48(6):1925-1930, (2016).

- Akhter H, Aslam B, **Shahzad N**, Farooq T, Umer M and Rasool MH. Molecular and Serological Detection of Avian Influenza H9N2 Virus in Asymptomatic Commercial Layers in Faisalabad District, Punjab. *Pakistan Journal of Zoology*, 49(1):1-3, (2016).
- Tayyeb A, **Shahzad N** and Ali G. Differentiation of mesenchymal stem cells towards nephrogenic lineage and their role in the repair of ischemic renal injury model in- vitro. *Iranian Journal of kidney diseases*, 11(4), (2017).
- Hussain I, Tasneem F, Umer M, Pervaiz A, Raza M, Arshad MI and **Shahzad N\***. Specific and quantitative detection of human polyomavirus BKPyV and JCPyV in the healthy Pakistani population. *Virology Journal*, 14:86, (2017).
- Qamar MU, Saleem S, Arshad U, Rasheed MF, Ijaz H, **Shahzad N** and Jahan S. Anti-bacterial efficacy of Manuka honey against New Delhi metallo- $\beta$ -lactamase producing Gram negative bacteria isolated from blood cultures. *Pakistan Journal of Zoology*, 49(6):1997-2003, (2018).
- Alvi RF, Aslam B, **Shahzad N**, Rasool MH and Shafique M. Molecular basis of quinolone resistance in clinical isolates of *Klebsiella pneumoniae* from Pakistan. *Pakistan Journal of Pharmaceutical sciences*, 31(4)1591-1596, (2018).
- Gilani US, Memoona, Rasheed A, Shahid M, Tasneem F, Arshad MI, Rashid N, and **Shahzad N\***. The implication of CRISPR/Cas9 genome editing technology in combating human oncoviruses. *Journal of Medical Virology*, 91(1):1-13, (2018).
- Musaddaq G, **Shahzad N** and Arshad MI. Circulating liver-specific microRNAs as non-invasive diagnostic biomarkers of hepatic diseases in human. *Biomarkers*, 1-7, (2018).
- Akhtar J, Saleem S, **Shahzad N**, Waheed A, Jameel I, Rasul R, Rasheed F and Jahan S. Prevalence of metallo- $\beta$ -lactamase IMP and VIM producing gram negative bacteria at different hospitals of Lahore, Pakistan. *Pakistan Journal of Zoology*, 50(6): 2343-2349, (2018).
- **Shahzad N\***, Hussain I, Gilani US, Tayyeb A, Aslam MA, Khurshid M, Hassan U, Tasneem F, Umer M, and Rashid N. Merkel cell polyomavirus DNA sequences in the blood of healthy population of Pakistan. *Future Microbiology*, 14 (7); 599-608, (2019).
- Waqar N, Amin Q, Munir T, **Shahzad N**, Mirza A, Ali A, Arshad MI. One Health case study of transmission dynamics and prevalence of methicillin-resistant *Staphylococcus aureus* at the equine-human interface. *Tropical Animal Health and Production*, 51 (7); 1927-1933 (2019).
- Hayat S, Siddique MH, Aslam B, Nadeem H, Ashraf A, Muhammad Saqalein M, Khurshid M, **Shahzad N**, and Muzammil S. Extended-Spectrum- $\beta$ -Lactamase producing multidrug resistant *Klebsiella pneumoniae* isolates from pediatrics. *Pakistan Journal of Zoology*, 51(4); 1251-1257, (2019).
- Habib M, Bhatti S, Rehman S, Javeed N, Aslam MA, **Shahzad N**, Abbas Z. Hepatoprotective Role of Swimming against Arsenic Induced Oxidative Stress in Mice. *Journal of King Saud University - Science*, 32 (1), 822-827 (2019).
- Iqbal T, Rashid U, **Shahzad N**, Afroz A, Malik MF, Idrees M. Molecular detection of hepatitis E virus in layer chickens: a possible public health risk in Pakistan. *Pakistan Journal of Zoology*, 51(6); 2329-2335, (2019).
- Waheed A, Saleem S, **Shahzad N**, Akhtar J, Saeed M, Jameel I, Rasheed F, Jahan S. Prevalence of Extended spectrum- $\beta$ -lactamases SHV and OXA producing gram negative

bacteria at tertiary care hospital of Lahore, Pakistan. *Pakistan Journal of Zoology*, 51(6); 2345-2351, (2019).

- Siddique M, Shafique M, Mateen A, **Shahzad N**, Aslam B, Ahmad N, Qamar MU. Prevalence and genotypic analysis of Hepatitis C Virus isolated from Liver Center, Faisalabad, Pakistan. *Pakistan Journal of Zoology*. 52(1) :313-319, (2019).
- Tasneem F, Shakoori F, **Shahzad N**, Alexey P, Ilyas M. Genetic diversity of Paramecium species on the basis of multiple loci analysis and ITS secondary structure models. *Journal of Cellular Biochemistry*. 11-17, doi: org/10.1002/jcb.29546, (2019)
- Gupta P, **Shahzad N**<sup>#</sup>, Harold A, Shuda M, Venuti A, Medina MR, Pacini L, Brault L, Taverniti V, Vargas H, Durand G, Kelm F, Gheit T, Accardi R, and Tommasino M. Merkel Cell Polyomavirus downregulates N-myc downstream regulated gene-1 (NDRG1) leading to cellular proliferation and migration. *Journal of Virology*. 17;94(3): e00899-19, (2020).
- Hussain I, Tasneem F, Gilani US, Arshad MI, Haque MF, Abbas Z, Umer M, and **Shahzad N**\*. Human BK and JC Polyomavirus: Molecular insights and prevalence in Asia. *Virus Research*. 278: 197860, (2020).
- Aslam B, Chaudhry TH, Arshad MI, Farooq RA, **Shahzad N**, Yasmeen N, Idris A, Rasool MH, Khurshid M, Ma Z, Call DR and Baloch Z. The first blaKPC-2 harboring Klebsiella pneumonia ST258 strain isolated in Pakistan". *Microbial Drug Resistance*. (2020). DOI: 10.1089/mdr.2019.0420
- Fatima M, Syed M, Zeeshan R, Shakoori F, **Shahzad N**, Ali M and Mutahir Z. Cytotoxic effect of MTH1 gene silencing in gemcitabine resistant breast cancer cells. *Pakistan journal of Zoology*, 1-7, (2020). DOI: <https://dx.doi.org/10.17582/journal.pjz/20200406140416>
- Yousaf M, **Shahzad N**, Mutahir Z, ALI M. Rab21, an endocytic Rab GTPase, is involved in drug resistance in prostate cancer cells. *Pakistan journal of Zoology*, 1-7, (2020). DOI: <https://dx.doi.org/10.17582/journal.pjz/20200119170115>
- **Shahzad N**\*, Munir T, Javed M, Tasneem F, Aslam B, Ali M, Mutahir Z, Ali MA, Umer M, Ahmad M, Farooq K, Hassan U, Mustafa T, Anjum RS and Shakoori AR. SHISA3, an antagonist of the Wnt/ $\beta$ -catenin signaling, is epigenetically silenced and its ectopic expression suppresses growth in breast cancer. *PLoS One*. 21; 15(7): e0236192.doi: 10.1371/journal.pone.0236192 (2020).
- Naz H, Bashir Q, **Shahzad N**\* and Rashid N. Isocitrate dehydrogenase 1 gene variants analysis of glioma patients from Pakistan. Accepted for publication in *Annals of Human Genetics*, Reference # AHG-MS-20-0253 (2020).

#### ➤ **Submitted Manuscripts**

- Haque MF, Bukhari SS, Ejaz R, Zaman F, Sreejith KR, Rashid N, Umer M and **Shahzad N**\*. A novel RdRp-based RT-LAMP assay for rapid detection of SARS-CoV-2 in clinical and sewage samples. Submitted in *Virus Research*, Ref # VIRUS-D-20-00261 (2020) .
- Naz H, Gul S, Bashir Q, **Shahzad N**\* and Rashid N. Thermococcus kodakarensis-derived L-asparaginase: a candidate for the treatment of glioblastoma. Submitted for publication in, *Biologia*. Reference # BIOL-D-20-00993 (2020).

- Fatima R, **Shahzad N**, Haque MF, Tasneem F and Mateen I. Directed Evolution of Proteins for Proficient Applications. Submitted for publication in *Saudi Journal of Biological Sciences*, Reference # SJBS-D-20-00149 (2020).
- Rehman MF, Riaz F, Anwar A, **Shahzad N**, Ahmad M, Mukhtar S, Haque MF. Novel coronavirus disease (COVID-19) pandemic: A recent mini review. Submitted in *Computational and Structural Biochemistry*, Ref # CSBJ-D-20-00416 (2020).

**Note** : \* shows correspondant author & # shows equal authors contribution

## Books/Book Chapters

- Book Title: Neoplasm  
**Naveed Shahzad** (Editor)  
DOI: 10.5772/intechopen.69560, (2018)  
ISBN: 978-1-78923-778-8, Publisher: INTECH Publisher, Croatia
- Book Chapter: Preventive strategies against Human Pappiloma Virus.  
**Naveed Shahzad\***, Muhammad Umer, Memoona Ramzan and Bilal Aslam  
ISBN 978-953-51-2440-5, (2016), INTECH Publisher, Coratia.  
Book title: Human Papillomavirus - Research in a Global Perspective.
- Book Chapter: Microbicides for the Prevention of HPV, HIV-1, and HSV-2: Sexually Transmitted Viral Infections.  
**Naveed Shahzad\***, Roman Farooq, Bilal Aslam and Muhammad Umer  
ISBN 978-953-51-3517-3, (2017), INTECH Publisher, Croatia.  
Book title: Fundamentals of Sexually Transmitted Infections.
- Book Chapter: Carbapenem resistance: mechanisms and drivers of global menace  
Bilal Aslam, **Naveed Shahzad**, and Muhamamd Imran Arshad  
Accepted for publication (2019), INTECH Publisher, Croatia.  
Book title: Pathogenic Bacteria
- Book Chapter : Ubiquitous Merkel Cell Polyomavirus : causative agent of the rare Merkel Cell Carcinoma  
**Naveed Shahzad\***, Usman Shah Gilani, Menahil Mahmood, Fareeda Tasneem, Muhammad Farhan Ul Haque and Iqra Hussain.  
Book title : Emerging Viral Diseases : A Hand Book  
Under review for publication (2020), CRC Press, Taylor and Francis Group, UK

## Students Supervision

### **MPhil:**

No.	Student's Name	Thesis Title	Status
1.	Ijaz Ahmed	Genetic relatedness among Escherichia coli strains isolated from urinary tract infections of Pakistani patients.	Completed (2015)
2.	Ayesha pervaiz	<i>In-vitro</i> assessment of the therapeutic potential of indigenous Euphorbiaceous plants against breast cancer.	Completed (2016)

3.	Iqra Hussain	Specific and quantitative detection of Human polyomaviruses BKV, JCV and MCV in healthy blood of Pakistani population.	Completed (2016)
4.	Muffarah Mehboob	Comparison of BKV and JCV polyomavirus infection in healthy and diabetic nephropathy patients from Pakistan.	Completed (2017)
5.	Mariam Javed	Expression and methylation analysis of novel tumor suppressor genes in breast cancer patients from Pakistan	Completed (2017)
6.	Sumroon Ephriam	Biochemical and genetic profiling of PALB2 within PALB2-BRACA2 interface among Pakistani breast cancer patients.	Completed (2017)
7.	Haseeb Tariq	Biochemical and genetic profiling of BRACA2 within PALB2-BRACA2 interface among Pakistani breast cancer patients.	Completed (2017)
8.	Usman Shah Gillani	Exploring the role of CXCL12 chemokine on the invasiveness of breast cancer	Completed (2018)
9.	Tehreem Munir	Epigenetic inactivation of SHISA3 gene in human Breast Cancer	Completed (2018)
10.	Qurat-ul-Ain Amin	Phylogenetic analysis of Merkel cell polyomavirus and investigation of its co-infection in HBV/HCV positive patients	Completed (2018)
11.	Chaudry Luqman Abid	Targeting CXCL16/CXCR6 chemokine axis to reduce the proliferation and metastasis of breast cancer cells	Completed (2019)
12.	Menahil Mehmood	Investigation of Merkel Cell Polyomavirus in patients with breast cancer in Punjab, Pakistan	Completed (2019)
13.	Noreen Majeed	Characterization and analysis of bioluminescent bacteria from fish and their Water reservoir	Completed (2019)
14.	Rabia Ejaz	Detection of polyomaviruses (BK & JC) and Sars-CoV2 in clinical and environmental samples from Lahore, Pakistan.	Completed (2020)
15.	Maria Qamar	Active fraction determination of Euphorbia helioscopia and Euphorbia royleana plants against breast cancer cell line.	Completed (2020)

**PhD:**

No.	Student's Name	Thesis Title	Status
1.	Roman Farooq Alvi	Molecular basis of antibiotic resistance and transcriptional analysis of indigenous <i>Klebsiella pneumoniae</i> to fluoroquinolones	Completed (2018)
2.	Huma Naz	Mutational analysis of IDH1/2 genes in glioblastoma patients of Pakistan and evaluation of various approaches to combat glioma.	On-going
3.	Shereen Gul	Investigating therapeutic potential of indigenous Euphorbiaceae plants against breast cancer by targeting CXCL1 and CXCL2 chemokines.	On-going
4.	Kokab Farooq	Mining of novel epigenetically regulated tumor suppressor genes to be used as biomarkers for early breast cancer diagnosis	On-going

5.	Iqra Qadir	Methylation analysis of a panel of Tumor suppressor Genes in cell free DNA of breast cancer patients	On-going
6.	Syeda Saadia Bukhari	Investigation of oncogenic potential of NDV isolated from Pakistan	On-going
7.	Hafiza Rida Farooq Chaudhry	Viorne Analysis of Canal Water from Lahore, Pakistan	On-going

## Conferences

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### ➤ Organized

Member of Central/Core organizing Committee of International Conference of Punjab University 2019 on “Recent Innovations in Molecular Science”. November 06-08, 2019, University of the Punjab, Lahore, **Pakistan**.

### ➤ Participated

- **Oral** presentation at “Emerging Oncogenic Viruses”, 30 May-3 June, 2012, Saint Pietro in Bevagna, Manduria, **Italy**.
- **Oral** presentation at “Journée des Doctorants de l’Ecole Doctorale, BMIC”, 11-12 November, 2012. Ecole Normal Superior (ENS), Lyon, **France**.
- **Oral** presentation at 11<sup>th</sup> Biennial Conference (Molecular Biosciences), November 25-28, 2013. University of the Punjab, Lahore, **Pakistan**.
- **Oral** presentation at 34<sup>th</sup> Pakistan congress of Zoology, March 12-15, 2014, Bahauddin Zikrya University, Multan, **Pakistan**.
- **Poster** presentation at 13<sup>th</sup> biennial conference on Biotechnology and Molecular Biology, 25-28 August 2016. COMSAT, Abbotabad, **Pakistan**.
- **Poster** presentation at 5<sup>th</sup> symposium on Biomaterials COMSAT, 14-16 December 2016, Lahore, **Pakistan**.
- **Participated** in latest trends in genomics of wild animals, Virtual University, 21-22 November, 2016, Lahore, **Pakistan**.
- **Key note speaker** at 3<sup>rd</sup> International Conference on Biotechnology: Challenges and opportunities in Pakistan. February 8-9, 2017, University of South Asia, Lahore, **Pakistan**.
- **Invited speaker** at conference on Future of Medicinal Plants in Cancer research and Therapy, Kohat University of Science and technology, 23-25 October, 2018, Kohat, **Pakistan**.
- **Invited speaker** at 2<sup>nd</sup> GRIP ‘s International conference on Pharmaceutical & Biochemical Sciences, 15-17 January, 2019, Expo center, Lahore, **Pakistan**.
- **Oral presentation** at International Conference of Punjab University 2019 (ICPU 2019) on “Recent Innovations in Molecular Science”. November 06-08, 2019, University of the Punjab, Lahore, **Pakistan**.

## Workshops/Seminars

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### ➤ **Organized**

- 2<sup>nd</sup> National Workshop on Recombinant DNA Technology, April 25-30, 2016, School of Biological sciences, University of the Punjab, Lahore, **Pakistan**.
- 3<sup>rd</sup> National Workshop on Recombinant DNA Technology, April 3-8, 2017, School of Biological sciences, University of the Punjab, Lahore, **Pakistan**.
- National Workshop on Recombinant protein production and purification. November 6-11, 2017, School of Biological sciences, University of the Punjab, Lahore, **Pakistan**.
- 4<sup>th</sup> National Workshop on Recombinant DNA Technology, April 2-7, 2018, School of Biological sciences, University of the Punjab, Lahore, **Pakistan**.

### ➤ **Participated**

- Three weeks preactical training on 'Experimental Lab animal handling' April 2012, **France**
- Workshop on Viral Diagnostic techniques, December 17-19, 2103, NIAB, Faisalabad **Pakistan**.
- Workshop on Art of grant and scientific writing, November 20, 2014, COMSAT, Lahore, **Pakistan**.
- Seminar on Crimean Congo Hemorrhagic fever, September 09, 2016, GCU, Faisalabad, **Pakistan**.
- Faculty Orientation Program, 8-11 May, 2017, PU, Lahore, **Pakistan**.
- Hands-on training workshop on Biosafety and Biosecurity : Principals and Practices', April 21,2017, Virtual University, **Pakistan**.
- Workshop on Bioinformatics : analysis and annotation of variants in NGS data., January 3-4, 2017, Virtual University, **Pakistan**.
- Application of Computational Biology in Biotechnology, 31 July, 2017, NIBGE, **Pakistan**

## Editorial Member/Reviewers of Scientific Journals

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- Journal of Cancer
- Oncotarget
- Biomedicine & Pharmacotherapy
- Pakistan Journal of Zoology
- Poultry Science
- Advances in Modern Oncology Research
- South Asian Journal of Life Sciences
- Antiviral Research
- Journal of the São Paulo Institute of Tropical Medicine