

# Sadia Sattar



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## Personal Statement

I completed my PhD in Biochemistry/ Molecular biology from Massey University New Zealand.

I have a strong ambition to utilize my research and teaching expertise for the betterment of institutions I serve and the country in general.

### Areas of strength

- Bacteriophage Isolation and Typing from diverse environmental samples.
- Computational and phylogenetic analysis of bacteriophage and viral genomes.
- I am also working on cloning and expression of lysins and use of bacteriophages for biofilm reduction

## Skills

### **Research and Teaching**

I am an enthusiastic researcher and have a great passion for teaching.

#### *Teaching skills.*

- I have been working as Assistant Professor at one of the top institutes in Pakistan (CIIT) since June 2014. I have taught Microbiology and immunology and principles of virology (BBS 4<sup>th</sup> and 7<sup>th</sup> semester in 4 years bachelors program respectively). I am also teaching Vaccinology to MS students (Designed and developed myself. I strongly encourage individual learning and encourage students to develop critical analysis skills. I believe in interactive teaching and building of strong concepts.
- I have worked as a demonstrator in 100 and 300 level Lab's training graduate research students at Massey University New Zealand. It had polished my skills to handle and develop experimental protocols for graduate classes. With my current qualification and training, I will be able to teach core courses for Virology, Biochemistry/ Molecular biology/ and Biotechnology.

- During my Lectureship at F.G Margallah College for women F 7/4, I developed multimedia presentations for teaching bachelor and pre-medical classes for the first time. I strongly believe in interactive teaching, and I have invested a lot of efforts in developing student's skills to handle such type of tests.

**Research skills.**

- **I am currently working on finding alternative cures using bacteriophages for control of Multiple Drug Resistant pathogenic bacterial species of animal and human origin such as *Salmonella*, *E.coli*, *A. baumannii*, *E. faecalis* and *K. pneumoniae* (Please see thesis supervision and publication list for reference)**
- During my PhD I developed skills in DNA recombination technology as well as in the development of special protocols for purification and large-scale production of filamentous phage based nano particles. Later I used these particles to test their immunogenic potential as vaccine carriers. I have a thorough experience of techniques required for vaccine development and serological typing of immune response. I have good experience of cloning and of general techniques required for bacterial and filamentous phage growth and purification, western blotting, southern blotting, ELISA, SDS PAGE, Dipstick assay development, FITC labeling of proteins etc. I also had a chance to work on sophisticated equipment like Transmission electron microscope, Phosphoimager as well as ultra-centrifuge. I have experience of working with mouse and chicken model.
- During my M. Phil I had a chance to get hand on experience on techniques required for Avian Influenza virus biological and immunological evaluation as well as whole virus inactivated vaccine development

## Work History

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### 1. **Assistant Professor**

- **Molecular virology labs, Department of Biosciences, Comsat University Islamabad** Pakistan, Chack Shehzad Islamabad Campus ,
- June 2014- June 2015 (IPFP)
- June 2015- to date (TTS)

### 2. **Lecturer (Regular BPS-17)**

- **Federal Government Margallah College for Women, F-7/4 Islamabad,**
- Pakistan December 2005 - January 2008
- Teaching Bachelor and Pre-medical classes

### 3. Research Fellow

- National Agricultural Research Center, Park Road, Islamabad Pakistan
- January 2006 - January 2008
- Biological and immunological typing of Avian Influenza Viruses

## Education

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1. Doctor of Philosophy (PhD) in Biochemistry: Institute of Fundamental Sciences, Massey University Palmerston North, New Zealand. February 2014
  - Successfully completed thesis dissertation with topic "**Filamentous phage-derived nano-rods for applications in diagnostics and vaccines**" under supervision of Dr. Jasna Rakonjac at Institute of Fundamental Sciences, Massey University, Palmerston North, New Zealand.
  - Research work conducted during PhD is partially published and part in preparation.
2. Post Graduate Certificate in Science, Institute of Fundamental Sciences, Massey University, Palmerston North, New Zealand. January 2009
  - Successfully completed course requirements by obtaining B+ in course Molecular Cell Biology, and A- in special topic involving a short research project.
3. Master of Philosophy (M. Phil) Biochemistry / Molecular Biology, Faculty of Natural Sciences, Quaid-i-Azam University, Islamabad, Pakistan. July 2005
  - Completed dissertation with CGPA 4.2 (83 %); thesis entitled "**Influence of virus strain on efficacy of H7N3 (Avian influenza) inactivated vaccines**". Research work conducted at NARC under supervision of Dr. Khalid Naem Khawaja and Dr. S.A. Malik at QAU.
  - Research work conducted during dissertation was published in International Journal of Poultry Sciences.
4. Master of Science (M.Sc.) in Biochemistry/ Molecular Biology, Faculty of Natural Sciences, Quaid-i-Azam University, Islamabad, Pakistan. December 2002
  - Successfully completed dissertation with 77.6 % marks.
5. Bachelor of Science (B.Sc.), Federal Government Margallah College for women F 7/4, Islamabad, Pakistan. April 2000
  - Successfully completed dissertation with following majors: Botany, Zoology, Chemistry
6. Higher Secondary School Certificate (HSSC) in Science, Federal Government Margallah College for Women F-7/4, Islamabad, Pakistan. April 1998

- Successfully completed dissertation in grade A
7. **Secondary School Certificate (SSC) in Science**, Federal Government Girls  
High School No. 9, G-9/2, Islamabad, Pakistan. March 1996
- Successfully completed dissertation in grade A

# Teaching Services

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<b>Sr #</b>	<b>Course Title</b>	<b>Semester</b>	<b>Credit Hours</b>	<b>PhD/MS/Undergrad</b>	<b>Student Feedback in %</b>
1.	Microbiology and Immunology	Fall 2014	4 (3+1)	<b>Undergrad</b>	<b>95 %</b>
2.	Microbiology and Immunology	Spring 2015	4 (3+1)	<b>Undergrad</b>	<b>93.6 %</b>
3.	Principles of Virology	Fall 2015	3	<b>Undergrad</b>	<b>78.3 %</b>
4.	Principles of Virology	Spring 2016	3	<b>Undergrad</b>	<b>96 %</b>
5.	Principles of Virology	Fall2016	3	<b>Undergrad</b>	<b>82.25 %</b>
6.	Principles of Virology	Spring 2017	3	<b>Undergrad</b>	<b>84.2 %</b>
7.	Vaccinology	Spring 2017	3	<b>MS/PhD</b>	<b>92.62 %</b>
8.	Vaccinology	Fall 2017	3	<b>MS/PhD</b>	<b>95.1 %</b>
9.	Vaccinology	Spring 2018	3	<b>Undergrad</b>	<b>95.09 %</b>
10.	Microbiology and Immunology	Fall 2018	4 (3+1)	<b>Undergrad</b>	<b>96.3 %</b>
11.	Principles of Virology	Fall 2018	3	<b>Undergrad</b>	<b>96 %</b>
12.	Vaccinology	Spring 2019	3	<b>MS/PhD</b>	<b>87.7 %</b>
13.	Microbiology and immunology	Fall 19	4 (3+1)	<b>Undergrad</b>	<b>84.23 %</b>
14.	Principles of virology	Spring 2020	3	<b>Undergrad</b>	<b>Not Available</b>
15.	Principles of Virology	Fall 2020	3	<b>Undergrad</b>	<b>Not Available</b>
16.	Vaccinology	Spring 2021	3	<b>MS/PhD</b>	<b>95 %</b>
17.	Principles of Virology	Fall 2021	3	<b>Undergrad</b>	<b>80 %</b>
18.	Vaccinology	Spring 2022	3	<b>MS/PhD</b>	<b>81 %</b>
19.	Principles of Immunology	Fall 2022	3	<b>Undergrad</b>	<b>86 %</b>
20.	Principles of Virology	Fall 2022	3	<b>Undergrad</b>	<b>80 %</b>
21.	Vaccinology	Spring 2023	3	<b>MS/ PhD</b>	<b>Not Available</b>
22.	Principles of Virology	Spring 2023	3	<b>Undergrad</b>	<b>Not Available</b>

# Students Supervised

Sr. #	Student Name	Thesis Title	Degree	Year of award	Status
<b><u>Supervisor (PhD)</u></b>					
1.	Akasha Yaqoob	To Explore the therapeutic potential of lytic bacteriophages in control and disruption of biofilms against opportunistic pathogens of humans and livestock	PhD	Fall 22	Enrolled
<b><u>Co- Supervision &amp; Member Supervisory Committee (PhD)</u></b>					
1.	Saiba Firdous	Whole Genome Sequencing and Phylogenetic Analysis of Lumpy Skin Disease Virus in Pakistan <b>(Co-Supervisor)</b>	PhD	Spring 21	Ongoing
2.	Aqsa Ameer	Analysis of Gut Microbiota Associated with Disease Resistance in Chickens: Identification of Novel Probiotic Therapeutics for Gut Dysbiosis	PhD	Spring 22	Ongoing
3.	Ihsan Ullah	Molecular Epidemiology of Echinococcosis in the human population of Pakistan	PhD	Spring 22	Thesis submitted
4.	Zainab Khan	Molecular Investigation of the Zoonotic Potential of Bovine Leukemia Virus	PhD	Spring 22	Completed
5.	Syeda Sumera Naqvi	Epidemiology, Characterization, and Antigen based Diagnostic Development, for Prevalent Strains of Foot and Mouth Disease Virus in Pakistan	PhD	Spring 22	Thesis submitted
6.	Asma Sadiq	Molecular Characterization of Human Rotavirus Strains in Pakistan Population	PhD	Spring 19	Completed
<b><u>Supervisor (MS)</u></b>					
1.	Haris Sana	Characterization of <i>Klebsiella Pneumoniae</i> Specific Lytic Bacteriophages SHS06, SHS07 and SHS04	MS	Fall 24	Enrolled
2.	Abdullah Adil	Characterization of <i>Klebsiella pneumoniae</i> Specific Lytic Bacteriophages SAS01, SAS02, SAS03, and SAS05	MS	Fall 24	Enrolled
3.	Madiha Mehfooz	Isolation and Characterization of Bacteriophages from Sewage Water Sample Active Against Extraintestinal Pathogenic <i>Escherichia coli</i> Isolates (ExPEC)	MS	Fall 23	Enrolled
4.	Izza Arshad	Isolation and Molecular Characterization of Lytic Bacteriophages Against Avian	MS	Fall 23	Enrolled

		Pathogenic <i>E. coli</i> (APEC) from Poultry Farm Waste Waters			
5.	Areeba Khubaib	Isolation and Characterization of Bacteriophages from Soil Samples against <i>Staphylococcus aureus</i> of Clinical and Bovine Origin	MS	Spring 23	Completed
6.	Saima Rani	Isolation and Characterization of Lytic Bacteriophages from Wastewater against <i>Staphylococcus aureus</i> Strains of Bovine and Clinical Origin	MS	Spring 23	Completed
7.	Samra Aman	Exploring Waste Waters for Isolation and Characterization of Lytic Bacteriophages against <i>Klebsiella pneumonia</i>	MS	Spring 22	Completed
8.	Sara Saif	Exploring Waste Waters for Presence of Lytic Bacteriophages against <i>Staphylococcus aureus</i>	MS	Spring 22	Completed
9.	Akasha Yaqoob	Large Scale Amplification and Characterization of Therapeutic Bacteriophages against MDR <i>Acinetobacter baumannii</i>	MS	Fall 21	Completed
10.	Hafsa Saleem	Physical and Molecular Characterization of Bacteriophages from Sewage Water Samples against <i>Enterococcus faecalis</i>	MS	Fall 21	Completed
11.	Javeria Munawar	Evaluation of Therapeutic Potential of Bacteriophages for Control of Multidrug Resistant <i>Escherichia coli</i> Strain	MS	Fall 21	Completed
12.	Muhammad Haseeb	<i>In-silico</i> Analysis of SARS-Cov2 Spike Proteins of Different Field Variants	MS	Fall 21	Completed
13.	Amna Pervaiz	Genetic and Protein Analysis of <i>Salmonella</i> Specific Bacteriophages Isolated from Sewage Water	MS	Spring 21	Completed
14.	Fakiha Sohail	Analysis and Cloning of Lysin Genes from <i>Salmonella</i> Specific Bacteriophages	MS	Spring 21	Completed
15.	Zeeshan Arfan	Isolation and Molecular Characterization of Bacteriophages Active Against Clinical Samples of MDR <i>Acinetobacter baumannii</i>	MS	Fall 20	Completed
16.	Sadia Afzal	Isolation, Typing and Molecular Characterization of Multiple Drug Resistant Pathogenic <i>Acinetobacter baumannii</i> Isolates from Human Origin	MS	Fall 20	Completed
17.	Anees Ur Rehman	Evaluation of Therapeutic Potential of Bacteriophages for Control of Endemic <i>E. Coli</i> Strain in Poultry and Humans <i>in-vitro</i>	MS	Fall 20	Completed
18.	Ayesha Arshad	Proteomic and Molecular Analysis of <i>E coli</i> Specific Bacteriophages	MS	Fall 19	Completed

19.	Kaneez Fatima	Isolation and Characterization of Bacteriophages against Pathogenic <i>Escherichia coli</i> of Poultry Origin	MS	Spring 19	Completed
20.	Qurat ul Ain Zehra	Isolation and Strain Typing and Molecular Characterization of Antibiotic Resistance in Pathogenic <i>E coli</i> Isolates from Retail Poultry	MS	Spring 19	Completed
21.	Inam Ullah	Molecular typing and characterizations of <i>Salmonella</i> specific bacteriophages	MS	Spring 18	Completed
22.	Sajeela Daud	Molecular analysis of resistance profile of MDR <i>Salmonella</i> Isolates	MS	Fall 18	Completed
23.	Bushra Shamsi	Isolation of lytic bacteriophages against <i>Salmonella enterica</i> from poultry farm waste for therapeutic manipulations	MS	Fall 16	Completed
<b><u>Supervisor (BS)</u></b>					
1.	Maheen Ather	To explore potential of lytic bacteriophage Acenito-phage-ZA08 to control/disrupt MDR <i>Acinetobacter baumannii</i> biofilms	BS	Fall 23	Enrolled
2.	Abeer Bint-e-Baber	To explore potential of lytic bacteriophage Escherichia-phage-AJE3b to control/disrupt MDR <i>E coli</i> biofilms	BS	Fall 23	Enrolled
3.	Zoha Munir	Isolation of Lytic Bacteriophages against Multi-Drug Resistant <i>Staphylococcus aureus</i>	BS	Fall 22	Completed
4.	Areeba Tirmizi	Isolation of Lytic Bacteriophages against MDR <i>Klebsiella pneumoniae</i>	BS	Spring 22	Completed
5.	Muskan Amjad	Large-scale production and physical characterization of <i>Salmonella enterica</i> bacteriophages isolated from sewage waters	BS	Spring 21	Completed
6.	Javeria Munawar	Identification of Virulence genes in <i>E coli</i> isolates of Human and Poultry Origin	BS	Fall 19	Completed
7.	Fakiha Sohail & Amna Pervaiz	Isolation, Characterization and Genome Extraction of New Castle Disease Virus from Poultry Samples to assess the genetic variability of Hemagglutination-Neuraminidase and Fusion Protein Genes	BS	Spring 19	Completed
8.	Dania Kiyani	Isolation and characterization of Newcastle disease virus from suspected poultry samples	BS	Spring 17	Completed
9.	Kehkashan Khalid	Characterization of <i>Salmonella</i> isolates from poultry sources for multiple drug resistance acquisition and test bacteriophage cocktails for their therapy	BS	Fall 16	Completed
10	Saba Iftikhar	PCR Amplification, Cloning and Expression of Tag A an Exomysinase from vibrio cholera	BS	Fall 15	Completed



11.	Hasan Fajri	Expression of TagA: An Exo-mucinase from <i>Vibrio Cholerae</i>	BS	Spring 15	Completed
<b><u>MS Co-Supervisor</u></b>					
1.	Undleeb Aman	Disease Dynamics of Recent LSDV Outbreak in Pakistan using GPCR Gene	MS	Spring 23	Completed
2.	Naima Amir Kundi	Molecular Characterization of Recent LSDV Outbreak in Pakistan by Means of LSDV036 Gene	MS	Spring 23	Completed
3.	Hashmat Ullah	Prevalence of Enteric Viruses in Wastewaters from Kabul Afghanistan	MS	Spring 21	Completed
4.	Muhammad Kashif	Sero-Prevalence of Echinococcosis in High-Risk Groups	MS	Fall 2018	Completed
5.	Adnan Ibrar	Antigenic Characterization of Hydatid Cyst Fluid and its Use for Sero-Diagnosis of <i>Echinococcosis</i>	MS	Fall2018	Completed

# Projects Awarded

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Serial #	Name of Project	Awarding institution	Status
1.	Developing Potent Bacteriophage Cocktails against Multiple Drug Resistant Staphylococcus aureus strains of Food Animals	ALP	Submitted
2.	Preparation of Effective Bacteriophage Cocktails for Treatment of Acinetobacter baumannii Biofilms in Hospital Ventilator Settings to Reduce the Risk of Nosocomial Infections in ICU patients	HRI-NIH	Submitted
3.	To evaluate the zoonotic potential of poultry MDR E Coli strains and test efficacy of bacteriophages for treatment of biofilms on solid surfaces to reduce the risk spread	IFS Renewal grant (By invitation)	Submitted
4.	<b>Isolation of lytic bacteriophages against <i>Salmonella enterica</i> from poultry meat and farm waste for therapeutic manipulations (0.2 million)</b>	CIIT (PI)	Completed
5.	<b>Development of a lateral flow dip stick device for differential diagnosis of endemic <i>Vibrio cholera</i> sub clades in Pakistan” (0.5 million) SRGP</b>	Higher (PI) Education Commission Pakistan	Completed
6.	<b>"isolation and characterization of salmonella specific bacteriophage lysins as alternative to antibiotics for the control of multiple drug resistance (mdr) salmonella enterica species in poultry" (PI) (9.2 million)</b>	NRPU; HEC (PI)	Completed
7	<b>To test the therapeutic potential of lytic bacteriophages for cure of multiple drug resistant pathogenic E coli strains of poultry origin as an alternative to antibiotics (1.2 million)</b>	IFS	Completed
8	<b>Genomic and Proteomic based antigenic characterization of locally prevalent Echinococcal isolates for the identification of immunodominant epitopes, molecular diagnostics development and vaccine design" (Co-PI) (8.05 million)</b>	NRPU (Co-PI)	Completed
9.	<b>Development of rapid and cost-effective assays for the diagnosis of prevalent Echinococcal species in Pakistan. Co PI, (3.7 million)</b>	ALP funding (Co PI)	Completed

# Research Publications

Sr. #	Publication Details	Type Category HJRS	Impact Factor	Publisher	Journal/Conference	Year	Web-link
1.	Ff-nano, short functionalized nanorods derived from Ff (f1, fd, or M13) filamentous bacteriophage <b>Sattar S.</b> , Bennett NJ, Wen WX, Guthrie JM, Blackwell LF, Conway JF and Rakonjac J (2015). Front., Microbiology . 6:316. doi: 10.3389/fmicb.2015.00316 (2015)	Research Article (W)	5.2	Frontiers	Frontiers in Microbiology	2015	<a href="https://www.frontiersin.org/articles/10.3389/fmicb.2015.00316/full">https://www.frontiersin.org/articles/10.3389/fmicb.2015.00316/full</a>
2.	G3 and G9 Rotavirus genotypes in wastewater circulation from two major metropolitan cities of Pakistan. Scientific reports, 10(1), 8665. <a href="https://doi.org/10.1038/s41598-020-65583-z">https://doi.org/10.1038/s41598-020-65583-z</a> Naqvi, S. S., Javed, S., Naseem, S., Sadiq, A., Khan, N., <b>Sattar, S.</b> , Shah, N. A., & Bostan, N. (2020).	Research Article (W)	4.6	Nature Portfolio	Scientific Reports	2020	<a href="https://pubmed.ncbi.nlm.nih.gov/32457481/">https://pubmed.ncbi.nlm.nih.gov/32457481/</a>
3.	Influence of Virus Strain on the Efficacy of Vaccine Against Avian Influenza Virus Subtype H7N3. <b>S. Sattar</b> , K. Naem, Z. Ahmed and S.A. Malik, 2007. International Journal of Poultry Science, 6: 989-993.	Research Article (W)	ISSN: 1682-8356	Asian Network for Scientific Information	International Journal of Poultry Science	2007	<a href="https://scialert.net/abstract/?doi=ijps.2007.989.993">https://scialert.net/abstract/?doi=ijps.2007.989.993</a>
4.	Effect of Induced Mutation on Pathogenicity Index of Avian Influenza Virus Subtype H7N3. Sofia Khanum, Khalid Naem, Zaheer Ahmed, <b>Sadia Sattar</b> and Abdul Hameed, 2008. International Journal of Poultry Science, 7: 1132-1137.	Research Article (W)	ISSN: 1682-8356	Asian Network for Scientific Information	International Journal of Poultry Science	2008	<a href="https://scialert.net/abstract/?doi=ijps.2008.1132.1137">https://scialert.net/abstract/?doi=ijps.2008.1132.1137</a>
5.	Rotavirus: Genetics, pathogenesis, and vaccine advances. Sadiq, A., Bostan, N., Yinda, K. C., Naseem, S., & <b>Sattar, S.</b> (2018).	Review Article (W)	4.371	John Wiley & Sons Ltd	Reviews in medical virology	2018	<a href="https://pubmed.ncbi.nlm.nih.gov/">https://pubmed.ncbi.nlm.nih.gov/</a>

	Reviews in medical virology, 28(6), e2003. <a href="https://doi.org/10.1002/rmv.2003">https://doi.org/10.1002/rmv.2003</a>						<a href="https://doi.org/10.1002/rmv.2003">h.gov/30156344/</a>
6.	Phenotypic Characterization and Genome Analysis of a Novel Salmonella Typhimurium Phage having Unique Tail Fiber Genes. <b>Sadia Sattar</b> , Inam Ullah, Sofia Khanum, Marc Bailie, Bushra Shamsi, Ibrar Ahmed, Syed Tahir Abbas Shah, Sundus Javed, Aamir Ghafoor, Amna Pervaiz, Fakiha Sohail, Naseer Ali Shah, Kaleem Imdad, Nazish Bostan & Eric Altermann, Sci Rep 12, 5732 (2022).	Research Article (W)	4.6	Nature Portfolio	Scientific Reports	2022	<a href="https://www.nature.com/articles/s41598-022-09733-5">https://www.nature.com/articles/s41598-022-09733-5</a>
7.	Genome Analysis and Therapeutic Evaluation of a Novel Lytic Bacteriophage of Salmonella Typhimurium: Suggestive of a New Genus in the Subfamily Vequintavirinae. <b>Sattar, S.</b> , Ullah, I., Khanum, S., Bailie, M., Shamsi, B., Ahmed, I., Abbas Shah, T., Javed, S., Ghafoor, A., Pervaiz, A., Sohail, F., Imdad, K., Tariq, A., Bostan, N., Ali, I., & Altermann, E. (2022). Viruses, 14(2), 241. <a href="https://doi.org/10.3390/v14020241">https://doi.org/10.3390/v14020241</a>	Research Article (W)	5.818	MDPI	Viruses	2022	<a href="https://www.mdpi.com/1999-4915/14/2/241">https://www.mdpi.com/1999-4915/14/2/241</a>
8.	Molecular detection and genetic characterization of human metapneumovirus strains circulating in Islamabad, Pakistan. Yasir Arshad, Muhammad Suleman Rana, Aamer Ikram, Muhammad Salman, Uzma Bashir Aamir, Syed Sohail Zahoor Zaidi, Muhammad Masroor Alam, Salmaan Sharif, Shahzad Shaukat, Adnan Khurshid, Rabia Hakim, Ghulam Mujtaba, Massab Umair, <b>Sadia Sattar</b> & Nazish Bostan, Sci Rep 12, 2790 (2022).	Research Article (W)	4.6	Nature Portfolio	Scientific Reports	2022	<a href="https://www.nature.com/articles/s41598-022-06537-5">https://www.nature.com/articles/s41598-022-06537-5</a>

9.	Molecular Investigation of Possible Relationships Concerning Bovine Leukemia Virus and Breast Cancer. Zanib Khan, Muhammad Abubakar, Muhammad Javed Arshed, Roohi Aslam, <b>Sadia Sattar</b> , Naseer Ali Shah, Sundus Javed, Aamira Tariq, Nazish Bostan & Shumaila Manzoor, Scientific Reports volume 12, Article number: 4161 (2022)	Research Article (W)	4.6	Nature Portfolio	Scientific Reports	2022	<a href="https://www.nature.com/articles/s41598-022-08181-5">https://www.nature.com/articles/s41598-022-08181-5</a>
10.	High prevalence of Panton-Valentine leukocidin positive, multidrug resistant, Methicillin-resistant Staphylococcus aureus strains circulating among clinical setups in Adamawa and Far North regions of Cameroon. Mohamadou, M., Essama, S. R., Ngonde Essome, M. C., Akwah, L., Nadeem, N., Gonsu Kamga, H., <b>Sattar, S.</b> , & Javed, S. (2022). PloS one, 17(7), <a href="https://doi.org/10.1371/journal.pone.0265118">https://doi.org/10.1371/journal.pone.0265118</a>	Research Article (W)	3.752	PLOS	PLOS ONE	2022	<a href="https://pubmed.ncbi.nlm.nih.gov/35802616/">https://pubmed.ncbi.nlm.nih.gov/35802616/</a>
11.	Characterization of two novel lytic bacteriophages having lysis potential against MDR avian pathogenic Escherichia coli strains of zoonotic potential. <b>Sadia Sattar</b> , Marc Bailie, Akasha Yaqoob, Sofia Khanum, Kaniz Fatima, Anees Ur Rehman Bin Altaf, Ibrar Ahmed, Syed Tahir Abbas Shah, Javeria Munawar, Quaratul Ain Zehra, Sajeela Daud, Ayesha Arshad, Kaleem Imdad, Sundus Javed, Amira Tariq, Nazish Bostan & Eric Altermann. Sci Rep 13, 10043 (2023). <a href="https://doi.org/10.1038/s41598-023-37176-z">https://doi.org/10.1038/s41598-023-37176-z</a>	Research Article (W)	4.996	Nature Portfolio	Scientific Reports	2023	<a href="https://www.nature.com/articles/s41598-023-37176-z">https://www.nature.com/articles/s41598-023-37176-z</a>
12.	Evolutionary Dynamics of Foot and Mouth Disease Virus Serotype A and Its Endemic Sub-Lineage A/ASIA/Iran-05/SIS-13 in Pakistan.	Research Article (W)	5.818	MDPI	Viruses	2022	<a href="https://pubmed.ncbi.nlm.nih.gov/">https://pubmed.ncbi.nlm.nih.gov/</a>

	Naqvi, S. S., Bostan, N., Fukai, K., Ali, Q., Morioka, K., Nishi, T., Abubakar, M., Ahmed, Z., <b>Sattar, S.</b> , Javed, S., Tariq, A., & Sadiq, A. (2022). Viruses, 14(8), 1634. <a href="https://doi.org/10.3390/v14081634">https://doi.org/10.3390/v14081634</a>						<a href="http://h.gov/35893699/">h.gov/35893699/</a>
13.	Molecular Epidemiology of Cystic Echinococcosis in Rural Baluchistan, Pakistan: A Cross-Sectional Study. Ullah, I.; <b>Sattar, S.</b> ; Ali, I.; Farid, A.; Ullah, A.; Eid, R.A.; Samir A. Zaki, M.; Alaa Eldeen, M.; Ahmed, I.; Ullah, I. Pathogens 2023, 12, 40. <a href="https://doi.org/10.3390/pathogens12010040">https://doi.org/10.3390/pathogens12010040</a>	Research Article (W)	4.41	MDPI	Pathogens	2023	<a href="https://www.mdpi.com/2076-0817/12/1/40">https://www.mdpi.com/2076-0817/12/1/40</a>
14.	High prevalence of Pantone-Valentine Leucocidin (PVL) toxin carrying MRSA and multidrug resistant gram-negative bacteria in late onset neonatal sepsis indicate nosocomial spread in a Pakistani tertiary care hospital, Zainab Zahoor, Amna Mumtaz, Zia-ur-Rehman Farooqi, Noor Rehman, Nighat Batool, Zobia Noreen, <b>Sadia Sattar</b> , Nazish Bostan, Sundus Javed Journal of Infection and Public Health, Volume 16, Issue 2, 2023, Pages 266-271, ISSN 1876-0341, <a href="https://doi.org/10.1016/j.jiph.2022.12.017">https://doi.org/10.1016/j.jiph.2022.12.017</a> .	Research Article (W)	7.537	Elsevier	Journal of Infection and Public Health	2023	<a href="https://www.sciencedirect.com/science/article/pii/S1876034122003677">https://www.sciencedirect.com/science/article/pii/S1876034122003677</a>
15.	Preparation and in Vitro Evaluation of Tamoxifen-Conjugated, Eco-Friendly, Agar-Based Hybrid Magnetic Nanoparticles for Their Potential Use in Breast Cancer Treatment. Zanib Khan, <b>Sadia Sattar</b> , Muhammad Abubakar, Muhammad Javed Arshed, Roohi Aslam, Syed Tahir Abbas Shah, Sundus Javed, Aamira Tariq, Shumaila Manzoor, and Nazish Bostan, ACS Omega DOI: 10.1021/acsomega.3c00844	Research Article (W)	4.132	American Chemical Society	ACS OMEGA	2023	<a href="http://doi.org/10.1021/acsomega.3c00844">http://doi.org/10.1021/acsomega.3c00844</a>

<b>16</b>	Binding Selectivity Analysis of AURKs Inhibitors through Molecular Dynamics Simulation Studies Rima D. Alharthy, Ghulam Fatima, Numan Yousaf Muhammad Shaheen Iqbal, <b>Sadia Sattar</b> , Abdullah R. Alanzi, Ijaz Ali, Muhammad Muddassar, Plos ONE, EMID:b8b6e3d3a47eb12b, 2023	Research Article (W)	3.7	PLOS	PLOS ONE	2023	EMID:b8b6e3d3a47eb12b
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## Conference Publications

Sr. #	Title	Type	Level	Country	Duration	From	To	Participation
<b>1.</b>	Novel Lytic Bacteriophage of Salmonella Typhimurium; Suggestive of a New Genus in Subfamily Vequintavirinae	Conference VoM22	International	Portugal	6 days	18 July 22	22 July 2022	Poster presentation <a href="https://vom.phage.directory/?abstract=TCGPX9RZ3">https://vom.phage.directory/?abstract=TCGPX9RZ3</a>
<b>2.</b>	Evaluation of the Therapeutic Potential of a Novel Bacteriophage of Enterococcus faecalis for Bacterial Control and Biofilm Disruption	Conference Phage Futures Europe 2022	International	Netherlands	2 days	6 July 22	7 July 22	Poster presentation
<b>3.</b>	Lytic bacteriophages for control of multiple drug resistant Salmonella isolates from poultry and human stool samples; Sattar et al. Targeting phage and antibiotic resistance 5th world congress on targeting infectious diseases, May 17-18, 2018, Florence Italy	Conference 5th world congress on targeting infectious diseases,	International	Florence Italy	2 Days	17 May 18	18 May 2018	Poster presentation
<b>4.</b>	3 <sup>rd</sup> Annual Students Symposium 2012	PSA-Massey University	International	New Zealand	1 Day	2012	22 Nov	Organizer/Presenter

5.	functionalized “Nanoparticles or Nano-phages” for applications in diagnostics and vaccine development. Bacteriophage in Medicine, Food and Biotechnology	Conference Europhage 2012; Bacteriophage in medicine	International	St Hilda’s College Oxford, United Kingdom	3 days	Sep 24 2012	Sep 26 2012	ORAL PRESENTATION <a href="http://lpmhealthcare.com/europhages-2012/">http://lpmhealthcare.com/europhages-2012/</a>
6.	Sattar, S., Wen, WX., Bennett, N., Guthrie, JM., Blackwell, LF., & Rakonjac, J. (2011). Developing “nanophage” particles for use in diagnostic tests. presented at the meeting of New Zealand Microbiological Society. Palmerston North	New Zealand Microbiological Society	International	New Zealand	3 days	2011	Nov 12-14	Poster presentation <a href="https://www.nzms.org.nz/">https://www.nzms.org.nz/</a>
7.	Sixth International Biennial Conference of Microbiology	QAU, Islamabad Pakistan	National	Pakistan	4 Days	2007	March 18-21	Oral Presentation

## Workshops, Courses and Awards

1.	HEC merit Scholarship for PhD abroad phase2 batch 2	HEC	National	Pakistan	6 years	2008	Successfully completed PhD from Massy University New Zealand	
2.	Pak-China Business Forum	CUI	International	Pakistan	4 days	2015	March 27-30 <sup>th</sup>	Participation
3.	Spoken Arabic Language Course	Department of Humanities CUI	National	Pakistan	12 Days	2016	July 25 <sup>th</sup> -August 5 <sup>th</sup>	Successful completion
4.	National Training on Laboratory Quality Management System	WHO	International	NIH-Pakistan	5 Days	2018	June 25-29	Successful Completion



5.	Responsible conduct in Lifesciences	NIH-Fogarty	International	Pakistan	5 Days	2018	Dec. 6-10	Successful Completion
6.	Responsible conduct in Lifesciences	NIH-Fogarty	International	Pakistan	5 Days	2019	Feb 4-8	Successful Completion
7.	Biosafety Leadership Summit	NIH-Fogarty	International	Pakistan	3 Days	2019	March 18-20	Successful Completion
8.	Responsible conduct in Lifesciences	NIH-Fogarty	International	Pakistan	5 Days	2019	April 1-5	Successful Completion
9.	Pakistan Biological Safety Association (PBSA) member	NIH	National	Pakistan	Lifetime	2018	To date	Member
10	Research Writing in Science	INSAP UK in collaboration with IFS	International	Pakistan	6- weeks	2022	April 5-16 May	Successful Completion
11.	Understanding Microbial Communities through in situ Omics data synthesis	Microbiology and Public Health Lab with University of Glasgow	International	Pakistan	One Day	2023	16 <sup>th</sup> July	Participation

Sr. #	<b>Administrative Work</b>	<b>Semester</b>
1.	Secretary Curriculum Review Committee	September 2014
2.	Member Extra Curricular Activities Committee	September 2014
3.	Assistant Undergraduate Program	May 2015
4.	Debating Society Coordinator	October 2015
5.	Member China Cultural Day celebration committee	Feb 2016
6.	Debating Society Coordinator	March 2016
7.	Member ISO9001:2015 accreditation Committee	August 2016
8.	Lab in charge and Lab representative Molecular Virology Labs CUI	Sep 2016
9.	Member Departmental Emergency coordination committee	November 2016
10.	Member Internal Audit Committee	January 2017
11.	Member Graduate Program Committee	January 2017
12.	Member Departmental Biosafety Committee	Fall 2017
13.	Member Terminal Examination Monitoring Team 2017	January 2018
14.	Member Departmental Undergraduate Program Committee	January 2018
15.	Member Departmental Biosafety Committee	Fall 2018
16.	Incharge Student Research Quality Committee	Fall 2018
17.	Coordinator BS Terminal viva Committee	May 2018
18.	Member Technical Evaluation Committee Procurement	Feb 2019
19.	Member Campus Proctorial Board	Spring 2023

Sr. #	<b>Community Work</b>	
1.	Corona Virus Awareness Talk arranged by IEEE EMBS CUI	March 2020
2.	Reviewer for Microbial Genomics (IF- 4.868) (AMS)	June 23
3.	Reviewer for International Journal of Molecular Sciences (MDPI)	2023
4.	External Examiner for MS viva voice exams QAU	Spring 2021
5.	External Examiner for MS viva voice exams QAU	Fall 2021
6.	Project reviewer HEC	2015
7.	Paper setting for BSC. QAU Annual Examination 2017	2017
8.	Thesis Examiner NIGAB, NARC	2015
9.	Donor Sweet home Orphan adoption program CUI	2015
10.	Certificate of appreciation for being an active community member of Massey Muslim Society New Zealand	2012

# Referees

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