

PERSONAL INFORMATION

Dr. Ismail Zeb



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Sex Male | Date of birth 09/08/1993 | Nationality Pakistan.

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POSITION

Assistant Professor (IPFP Fellow)

WORK EXPERIENCE

October, 2022–June, 2024

Lecturer

Bacha Khan University, Charsadda, Pakistan.

- Preparing and delivering lectures.
- Developing curricula and course material that can be used across several platforms.
- Demonstrate experience through applied knowledge, publications, and research papers.
- Collaborating with other academics and lecturers to improve teaching methods and expand the knowledge base.
- Attending faculty meetings and Conferences.
- Attending departmental and faculty meetings with other staff members.
- Setting and grading assignments, tests, and exams.
- Attending and participating in meetings, conferences, and other events in and outside of the institution.
- Conduct tutorial sessions, seminars, and laboratory classes (where relevant).
- Maintaining student progress records through maintaining email, coursework, assessments, and records of participation.
- Participate in the work of other relevant teaching and professional associations.
- Participating in training opportunities and initiatives at the institution.
- Providing support to students and other colleagues.
- Supervision of bachelor students in an effective manner.

December, 2021–July, 2022

Research Assistant

Universidade Federal Do Rio Grande Do Sul, Porto Alegre, Brazil.

- Rearing tick colonies on rabbits and cattle in the veterinary house for vaccination trials.
- Prepared experimental designs, protocol optimization, and implementations.
- Preparation of required chemicals, glassware, and instrument lists.
- Wet lab experiments including DNA, RNA, and Protein extractions, PCR assay, and sequencing.
- Partial protein expression, antigen preparation, and vaccination trials.
- Dot blot, SDS, western blot, ELISA assays, and tick infestation on rabbits.
- Validating data and analysis using different software.
- Discuss findings with other personnel to evaluate the validity of findings.
- Presentation and discussion of obtained results.
- Compiling results for publication and report writing.

March 2019– April, 2021

Research Associate

Abdul Wali Khan University–Mardan, Pakistan.

- Management of project entitled “Improvement in Anti-tick vaccine against *Rhipicephalus (Bopillus) microplus*; A Pakistani strain” Performed laboratory work for data generation and analysed for project

report.

- Planning, organizing, and conducting research, developing plans for projects or studies guidelines for projects prepared by professional staff members to outline research procedures to be followed.
- Plan schedule according to the variety of methods to be used, availability and quantity of resources, and number of subordinate personnel assigned to participate in the project.
- Conduct research, utilizing the institution's library, archives, collections, and other sources of information, to collect, record, analyse, and evaluate facts.
- Develop new ideas on research directions and draft research proposals.
- Discuss findings with other personnel to evaluate the validity of findings.
- Prepare reports of completed projects for publication in technical journals, for presentation to agencies requesting projects, or for use in further applied or theoretical research activities.
- Work collaboratively as a part of a diverse multidisciplinary research team.
- Draft reports, abstracts, and scientific papers.
- Management of laboratory requirements and project budget.
- Supervision of BS, Masters, and doctoral student's laboratory work, data analysis, and thesis write-up.

MARCH, 2018-MARCH,
2019

Visiting Lecture

Government Post Graduate Jahanzeb College, Saidu Sharif, Swat, Pakistan.

- Deliver lectures, seminars, and workshops in Zoology.
- Contributed to course design and content, ensuring alignment with academic standards.
- Foster an interactive learning environment, encouraging student participation and discussion.
- Created and grade assignments, exams, and other assessments to evaluate student performance.
- Provided academic guidance and support to students, including office hours for one-on-one consultations.
- Engaged in research activities, potentially collaborating with faculty and students.
- Integrated into the department and support ongoing initiatives.
- Stayed updated in their field through research, conferences, and professional organizations.
- Participated in the departmental meetings, curriculum reviews, and other academic committees as required.
- Gathered and responded to student feedback to enhance course delivery and effectiveness.

FEBRUARY, 2018-FEBRUARY
2019

Senior Science Teacher (Biology and Chemistry)

Khpal Kor Model School and College, Swat.

- Design and implement engaging lesson plans aligned with national and state standards for both Biology and Chemistry.
- Integrate hands-on experiments and real-world applications to enhance student understanding.
- Deliver effective instruction using a variety of teaching methods (lectures, labs, group work).
- Assess student performance through tests, quizzes, projects, and lab reports.
- Identify and assist students who may be struggling, offering additional resources and support.
- Foster a positive classroom environment that encourages curiosity and critical thinking.
- Work with other faculty members to coordinate interdisciplinary projects.
- Ensure that all lab activities are conducted safely, adhering to school policies and safety regulations.
- Maintain equipment and materials, ensuring they are used correctly and stored safely.
- Communicate regularly with parents regarding student progress and any concerns, fostering a supportive home-school partnership.
- Support or lead science clubs, competitions, or events to promote student interest in the sciences.

2019- 2023

Doctor of Philosophy (Ph. D)

ABDUL WALI KHAN UNIVERSITY –Mardan, Pakistan

- Worked as a researcher on vector and vector-borne diseases in molecular parasitology laboratory, Abdul Wali Khan University, Mardan, Pakistan.
- Research associate at the same Department performing project.

2016-2018

Master of Philosophy (M. Phil) in Zoology

QUAID-I-AZAM UNIVERSITY– Islamabad, Pakistan

- Worked as Research student in parasitology laboratory at Department of Animal Sciences, Quaid-i-Azam University, Islamabad, Pakistan.
- Voluntarily worked with research fellows and staff members on primates, rabbits and rats at animal house of the Animal Science Department, Quaid-

2011- 2015

Bachelor of Science (BS) in Zoology

UNIVERSITY OF SWAT– Swat, Pakistan

- Worked as part time teacher for Sheikh Milli Education Academy School, Pakistan from 01-08-2015 to 01-01-2016.

Job-related skills

- I have experience of insect collection, raising tick's colony and their management.
- I have good experience of laboratory and field work for sample and data collection.
- I have extensive experience of insect culture and their management.
- A good command in molecular techniques, such as DNA, RNA, Protein extraction and purification, PCR assay, sequences analysis, RFLP, Gel electrophoresis, gene cloning, protein expression, Western blotting, RT-PCR, ELISA, Bradford assay, Dot blot assay, and Inverted microscopy.
- Data analysis using GIS and statistical tools.
- I have good experience in teaching and guiding students
- Experience of antigen preparation, vaccination trials in rabbit and cattle host models against vector and vector-borne pathogens.
- Determination of clinical-epidemiology of infectious diseases.
- Seminar, trainings, and conferences arrangement.
- Communicating through media and social media outlets.
- etc.

PERSONAL SKILLS

Communication skills

- Good communication skills gained through my experience as a teacher and researcher in different organizations.

Mother tongue(s)

Pashto

Other language(s)

Pashto

Urdu

English

Portuguese

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Pashto	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user
Urdu	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user
English	Proficient user	Proficient user	Proficient user	Proficient user	Proficient user
Portuguese	Independent user	Independent user	Independent user	Independent user	Basic user

Other skills

- Animal rearing, insect colony raising, etc.
- Cooking, football.

Research Expertise and Future Perspectives

Research experience in masters includes field visits for sample collection, preservation, and processing for molecular characterization of Cutaneous Leishmaniasis (CL). Performed geospatial analysis and collected epidemiological data, correlating meteorological factors with CL cases. Molecular identification of *Leishmania* pathogens causing CL. In Ph. D, collection and morphologically identified ticks, followed by molecular characterization and screening of tick-borne pathogens. Characterized immunogenic sequences for partial protein expression and conducted vaccination trials. Extensive fieldwork and wet lab experience, including: Data/sample collection, in silico analysis, DNA/RNA/protein extraction, PCR, qPCR, sequencing, cloning. Protein expression techniques: SDS-PAGE, dot blot assay, western blot, ELISA assay, antigen preparation. Conducted vaccination trials and calculated protection efficacy. Project management and team coordination. Project writing, experimental design, scientific article preparation, and data analysis using GraphPad Prism and R. Spatio-temporal analysis and correlation of meteorological data with infectious diseases.

My future Research Objectives includes extending knowledge of ticks and tick-borne diseases, focusing on control and management through morpho-molecular characterization of novel tick fauna and associated microbial diversity (parasites, bacteria, viruses). To investigate tick-pathogen interactions

and the impact of tick diversity concerning climate and weather. Developmental strategies to combat tick populations and tick-borne pathogens affecting human health.

ADDITIONAL INFORMATION

Total Number of Publications • 11
Total Number of Citations • 130
h-index • 07

Publications in impact factor Journals

11. Afzal, Muhammad, Hameedurahman, **Ismail Zeb**, Naveeda Akhtar Qureeshi 2024. "Efficacy of Melia azedarach leaf extract in different solvents against *Heterotermes indicola* Wasmann (Blattodea: Rhinotermitidae) using non-durable wooden blocks under laboratory and field conditions." South African Journal of Botany 174. 747-754. **(Co-author, I.F, 2.7, Q1, SCIE)**.
10. **Ismail Zeb**, Luis Fernandez Parizi, Israr Muhammad, Itabajara Da Ailva Vaz Vaz, Abid Ali, 2024. Cross-protective antigens (Subolesin, P0, Ferritin 2) provides protection against *Rhipicephalus sanguineus* Senu Lato. Parasites and Vectors. **(First author, I.F, 3.430, Q1, SCIE)**.
09. **Ismail Zeb**, Mashal M.Almutairi, Abdullah Aziz Alufi, Nabeela Islam, Luis Fernandez Parizi, Sher Zaman safi, Itabajara Da Ailva Vaz Vaz, Tetsuya Tanaka, and Abid Ali. 2022. Low genetic polymorphism in *Rhipicephalus microplus* Clade C. Vaccine, 10(11), 1909. **(First author, I.F, 4.169, Q1, SCIE, Citation 2)**. DOI: 10.3390/vaccines10111909.
08. Abid Ali, **Ismail Zeb**, Abdulaziz Alouffi, Hafsa Zahid, Masahl M.Almutairi, Fahdah Ayed Alshammari, Mohammad Alrouji, Carlos Termignoni, Itabajara Da Silva Vaz jr, and Tetsuya Tanaka. 2022. Host Immune Responses to Salivary Components-A Critical Facet of Tick-Host Interactions. Frontiers in Cellular and Infection Microbiology, 12, 171. **(Co-author, I.F, 5.7, Q1, SCIE, Citation 13)**. <https://doi.org/10.3389/fcimb.2022.809052>.
07. Abid Ali, Shehla Shehla, Hafsa Zahid, Farman Ullah, **Ismail Zeb**, Haroon Ahmed, and Tetsuya Tanaka. 2022. Molecular survey and spatial distribution of *Rickettsia* spp. in ticks infesting free-ranging wild animals in Pakistan (2017–2021). Pathogens, 11(2), 162. **(Co-author, I.F, 4.531, Q2, SCIE, Citation 11)**. DOI: 10.3390/pathogens11020162.
06. Abid Ali, Hafsa Zahid, **Ismail Zeb**, Muhammad Tufail, Suleiman Khan, Muhammad Haroon, & Marcelo B.Labruna. 2021. Risk factors associated with tick infestations on equids in Khyber Pakhtunkhwa, Pakistan, with notes on *Rickettsia massiliae* detection. Parasites & vectors, 14(1), 1-12. **(Co-author, I.F, 3.430, Q1, SCIE, Citation 16)**. DOI: 10.1186/s13071-021-04836-w.
05. Nargis Shaheen, Chaitenya verma, Thalia Pacheco-Fernandez, Greta Volpedo, Aneeqa Hamid, **Ismail Zeb**, Syed Aizaz Ali Shah, Shah Fahad, Attiya Iqbal, Asma Ashraf, Amjad Khan, Misbah Gul, Muhammad Ilyas Khan, Huma Fatima, Muhammad Afzal, Abhay R Satoskar, Naveeda Akhter Qureshi. 2021. Molecular characterization and genetic diversity of cutaneous leishmaniasis from North Eastern Pakistan. Acta Tropica, 221, 105964. **(Co-author, I.F, 2.7, Q1, SCIE, Citation 0)**. <https://doi.org/10.1016/j.actatropica.2021.105964>.
04. **Ismail Zeb**, Abid Ali., Atif Malik., Muhammad Qayash Khan, Javeed Nawab, Kun H-sein T-Sai. 2020. Cutaneous Leishmaniasis in Male Schoolchildren in the Upper and Lower Dir Districts of Khyber Pakhtunkhwa, and a Review of Previous Record in Pakistan. Acta Tropica, 209, 105578. **(First author, I.F, 2.7, Q1, SCIE, Citation 6)**. <https://doi.org/10.1016/j.actatropica.2020.105578>.
03. **Ismail Zeb**, Naveeda Akhtar Qureshi, Nargis Shaheen, Mazhar Iqbal Zafar, Abid Ali., Aneeqa Hamid, Syed Aizaz Ali Shah & Asma Ashraf. 2021. Spatiotemporal patterns of Cutaneous Leishmaniasis in the District Upper and Lower Dir, Khyber Pakhtunkhwa, Pakistan: A GIS-based Spatial Approaches. Acta Tropica, 217, 105861. **(First author, I.F, 2.7, Q1, SCIE, Citation 7)**. <https://pubmed.ncbi.nlm.nih.gov/33587943/>.
02. Naseem Rafiq, Sadaf Niaz, Ismail Zeb, Sultan Ayaz, Itabajara da Silva Vaz Jr, and Abid Ali. 2020. Molecular Characterization of *Paramphistomum cervi* in Buffaloes. Acta Scientiae Veterinariae, 48 (2020), 1755, 1-7. **(Co-author, I.F, 0.274, Q4, SCIE, Citation 4)**. <https://doi.org/10.22456/1679-9216.107107>.
01. Attaullah, **Ismail Zeb**, Nasir Iqbal, Nihaftha Bibi, Murad khan, Bashir Ahmad. 2020. An insight into the change in the doubling time of COVID-19 in Pakistan. Pure and Applied Biology (PAB), 10(1), 54-61. **(Co-author, Non I.F, Citation 0)**. DOI: 10.19045/bspab.2021.100007.

Book Chapter	Abid Ali, Ismail Zeb , and Hafsa Zahid, 2021. Pheromonal and microbial-symbiotic associated insect behavior. <i>Climate Change and Plants</i> , Edition 1st Edition, Imprint CRC Press. Pages 1-15. ISBN: 9781003108931, DOI: 10.1201/9781003108931-7-7. (Co-author).
Patents	2. Itabajara da Silva Vaz, Jr, Luis Fernando Parizi, Abid Ali, Ismail Zeb , and Muhammad Israr. COMPOSIÇÃO IMUNOGÊNICA COM PROTEÍNAS DE DIFERENTES ESPÉCIES DE CARRAPATOS E USO COMO VACINA CONTRA CARRAPATOS. BR 10 2023 003090 4. 1. Abid Ali, Ismail Zeb , Muhammad Israr, Luis Fernando Parizi, and Itabajara Da Silva Vaz Jr. High cross-immune protection established by selected antigens against ticks. Government of Pakistan Intellectual Property Organization. Application 581/2022.
Abstracts & Presentations	4. Oral and poster presentation in the International Conference on BPEDTIA – A policy Approach 2024. Presentation on Control of livestock ticks. 3. Abstract Presentation entitled Molecular characterization of antigenic sequences from <i>Rhipicephalus microplus</i> and <i>Hyalomma anatolicum</i> ticks in Pakistan in International Hybrid Mode Conference merging Innovative Research Trends in Biology organized by Biotechnology department of Kohat University (ERTB-2021). 2. Poster presentation on Molecular Characterization of Leishmaniasis in Malakand, KP, Pakistan. Presented at 11 th International Conference on Biomedical Engineering and Biotechnology (ICBEB, 2022), China. 1. Poster presentation on Molecular Characterization of Leishmaniasis in Malakand, KP, Pakistan. Presented at 10 th International Conference on Biomedical Engineering and Biotechnology (ICBEB, 2021), China.
Project	RA at Pakistan Science Foundation funded project entitled “Improvement in anti-tick vaccine against <i>Rhipicephalus microplus</i> Pakistani strain”, completed.
Online courses	1. Infectious Disease Transmission Models for Decision-Makers, Johns Hopkins University. Course era. Verify at: coursera.org/verify/MBSRZJDPTU LY .
Served as Reviewer	2. FUJAST Journal of Biology 1. Journal of infection in developing countries
Conferences, Seminars and Symposium	7. IPFP certificate of teaching methodologies. 6. Certificate of participation on International symposium on “Animal Health and Tick-borne Diseases” Organized by Pakistan Science Foundation, Islamabad. 5. Certificate of participation in the conference on Dengue control, International Conference and Workshop on Dengue Infection as emerging threat due to recent floods Emergency and Climate Change; Are we Prepared? Organized by Quaid-i-Azam University Islamabad. 4. Resource person in the seminar on “Geospatial approaches for Diseases analysis, Organized by Department of Botany and Zoology, BKUC. 3. Certificate of participation in International Parasitology Conference on Food Security Through Parasite Control, Organized by Pakistan Society of Parasitology, UVAS, Lahore. 2. Certificate of participation in One Health International Conference (OHC) 2017, UVAS, Lahore. 1. Certificate of participation in the seminar on Novel gene identification and neurodevelopment disorders, Biochemistry, AWKUM.
Workshops & Training and EXPO	6. Interim Placement of Fresh PhDs (IPFP) training Phase-II Batch-VI. 5. Five-days online training on Biorisk Management (BRM). 4. Resource person in the training on molecular biological techniques to BS, M. Phil and Ph. D students. 3. 2-Days Workshop on Dengue control, International Conference and Workshop on Dengue Infection as emerging threat due to recent floods Emergency and Climate Change; Are we Prepared? Organized by Quaid-i-Azam University Islamabad. 2. Main organizer as a faculty (Nominated) at the EXPO in Bacha Khan University Charsadda. 1. Main organizer as a student at the EXPO in University of Swat 2013.
References	Dr. Abid Ali Designation: Associate Professor Affiliation: Department of Zoology, Faculty of Chemical and Life Sciences Abdul Wali Khan University, Mardan. Email: uop_ali@yahoo.com / drabid@awkum.edu.pk Relation: Ph. D supervisor Professor Dr. Itabajara Da Silva Vaz Jr.

Designation: Professor
Affiliation: Center for Biotechnology
Federal University Gande do Sul, Brazil.
Relation: Ph. D co-supervisor.

Professor Dr. Naveeda Akhtar Qureeshi

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Quaid-i-Azam University Islamabad.
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Relation: M. Phil supervisor

Dr. Akhtar Rasool

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