

# Sadia Almas, MSc, PhD

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## Environmental and Human Health

*Motivated scientist committed to leveraging in-depth knowledge of molecular biology and research best practices to enable the development of safe, environmentally conscious products and solutions.*

Adaptable individual who confidently navigates project requirements to achieve optimal results and meet ambitious goals. Known for possessing strong communication strengths, including ability to engage productively with high-level stakeholders and convey scientific information to non-scientific audiences. Dedicated leader capable of providing guidance, direction, and mentorship to colleagues.

## Areas of Expertise

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- Laboratory Research
- Health & Human Sciences
- Toxicology & Microbiology
- Molecular Biology
- Data Analysis & Reporting
- Cross-Team Collaboration
- Environmental Sustainability
- Creative Problem Solving
- Continuous Improvement
- Written Communication
- Standard Operating Procedures
- Urdu (Native); English (Fluent)

### Technical Skills:

Immunohistochemistry, Western Blot Analysis, PCR, Stem Cell Biology, Flow Cytometry, ELISA, HPLC  
Electrophoresis, RNA Isolation, Protein extraction, Cloning, In Vitro Cell Culture, Small Animal Handling, Molecular Techniques,  
Microbiology Techniques (Sterilization, Culture techniques, Bioburden and Endotoxin testing) Chromatography  
Microsoft Office Suite (Excel, Word, Outlook Express, PowerPoint), Adobe Photoshop

## Education

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### PhD, Environmental Toxicology

Texas Tech University, Lubbock, TX

### M.Phil., Microbiology

### MSc, Animal Sciences

Quaid-i-Azam University, Islamabad, Pakistan

## Career Experience

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### Advanta Analytical Laboratories Tyler, TX

Director of Microbiology Laboratory

Sep 2021- Present

### Texas Tech University – Health Sciences Center | Lubbock, TX

Jul 2021 – Sep 2021

Post-Doctoral Research Associate, Cell Biology & Biochemistry

### Science College, Kallar Kahar, Pakistan

June 2018-Dec 2020

Science Educator, General Biology

### Texas Tech University – Health Sciences Center | Lubbock, TX

Feb 2017 – Apr 2018

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Post-Doctoral Research Associate, Internal Medicine Department

Performed instrumental role in effort to transfer innovative new technology to Texas Tech University, which allowed investigators to study human cells in vivo.

### Key Contributions

- Studied the transplantation of human stem cells (SC) into fetal mice followed by postnatal administration of streptozotocin (STZ), and reinfusion of same donor SCs to render the murine endocrine pancreas human.

## The Institute of Environmental and Human Health | Lubbock, TX

Sept 2014 – Feb 2017

Post-Doctoral Research Associate, Vector Zoonoses Laboratory

Performed multiple detailed research studies across region, focused on transmission of pathogens among local fauna. Conducted surveillance of West Nile Virus (WNV) activity in Lubbock County. Researched epizootic hemorrhagic disease virus (EHDV) in white-tailed deer. Studied transmission dynamics of *Oxyspirura petrowi* (eyeworm) in quail. Researched prevalence of Arbovirus infectious and zoonotic pathogens in northern bobwhite quail. Discerned transmission dynamics and prevalence of zoonoses in feral swine. Executed quality control for all testing kits sent to the field for sample collection. Partnered with diverse team members to perform research. Expanded mastery over laboratory practices and investigative techniques.

### Key Achievements

- Executed all fieldwork in conformance with established methods for collecting samples to ensure accurate analysis.
- Streamlined efficiency of research efforts by authoring and updating standard reviewing operating procedures (SOPs).
- Assigned responsibilities to staff, and provided training to students required for authorization to work laboratory.
- Collected valuable data and conclusions that resulted in publication of findings within multiple scientific journals.
- Safeguarded optimal compliance with EHS requirements, and maintained aseptic conditions within the laboratory.

## Publications and Presentations

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- Peper ST, DE Dawson, N Dacko, K Athanasiou, J Hunter, F Loko, **S Almas**, GE Sorensen, KN Urban, AN Wilson-Fallon, KM Haydett, HS Greenberg, AG Gibson, SM Presley. [2018]. Predictive modeling for West Nile virus and mosquito surveillance in Lubbock, Texas, USA. *Journal of the American Mosquito Control Association* (manuscript number: JAMCA-17-6714).
- **Almas S**, AG Gibson, SM Presley. 2018. Molecular detection of *Oxyspirura* larvae in arthropod intermediate hosts. *Parasitology Research* (DOI 10.1007/s00436-018-5756-3).
- Bose, M., **Almas, S.** and Prabhakar, S., 2017. Wnt signaling and podocyte dysfunction in diabetic nephropathy. *Journal of Investigative Medicine*, pp.jim-2017
- Dunham, N. R., Bruno, A., **Almas, S.**, Rollins, D., Fedynich, A. M., Presley, S.M., Kendall, R.J. 2016. Eyeworms (*Oxyspirura petrowi*) in Northern Bobwhites (*Colinus virginianus*) from the Rolling Plains Ecoregion of Texas and Oklahoma, 2011-2013. *Journal of Wildlife Diseases*, 52(3): 123-128.
- Turaga, U., S.T. Peper, N.R. Dunham, N. Kumar, W. Kistler, **S. Almas**, S.M. Presley, R.J. Kendall. 2015. A survey of neonicotinoid use and potential exposure to Northern Bobwhite (*Colinus virginianus*) and Scaled quail (*Callipepla squamata*) in the Rolling Plains of Texas and Oklahoma. *Environmental Toxicology and Chemistry*. DOI: 10.1002/etc.3305

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- **Almas, S.**, Gibson, A., & Presley, S. (2014). PCR based molecular detection of *Oxyspirura petrowi* in different arthropods in Rolling Plains of Texas. Oral Presentation at Southwestern Association of Parasitologists, Lake Texoma OK 10-12 April 2014.
- Presley, S.M., K.N. Urban, **S. Almas**, A.G. Gibson. *Operation Idiopathic Decline: Prevalence of Arboviral, Infectious and Zoonotic Pathogens*. Rolling Plains Quail Research Ranch Field Day, Rolling Plains Quail Research Foundation, Roby, Texas (27 September 2013) Published proceedings.
- Presley, S.M., **S. Almas**. *Operation Idiopathic Decline: Determining Lifecycle and Transmission Dynamics of Oxyspirura petrowi in Rolling Plains Northern Bobwhite Quail*. Rolling Plains Quail Research Ranch Field Day, Rolling Plains Quail Research Foundation, Roby, Texas (27 September 2013) Published proceedings
- **Almas, S.**, Hameed, A., Shelly, D., & Mohan, P. (2009). *Purification and Characterization of a Novel Protease from Bacillus Strain SAL1*. African Journal of Biotechnology, 8 (15), 3603 – 3609.