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Melinda Rostal

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in/melinda-rostal

EXPERIENCE

One Health Research Consulting — Glen Rock, NJ
Owner/Principal Consultant — 2024-present
University of Pretoria — Pretoria, South Africa
Extraordinary Lecturer, Faculty of Veterinary Sciences — 2024
EcoHealth Alliance — New York, NY
Principal Research Scientist, Vector-Borne Diseases — 2019-2024
Rift Valley Fever Projects Manager and Co-PI — 2014-2024
Senior Research Scientist — 2012-2019
PREDICT-2 EHA Surveillance & Outbreak Coordinator — 2014-2019 & 2017-2019
PREDICT EHA Latin America Regional Coordinator — 2011-2014
Field Veterinarian — 2010-2012
Columbia University — New York, NY
Adjunct Research Scientist, E3B Department — 2010 - 2024

RESEARCH PROGRAMS

Rift Valley fever virus (RVFV) research: Co-PI on Understanding Rift Valley Fever in the Republic of South Africa, DTRA: HDTRA1-19-0033; Reducing the Threat of Rift Valley Fever: Ecology, Epidemiology and Socio-Economics, DTRA: HDTRA1-19-0033; & An Open-Source Framework for Rift Valley Fever Forecasting, Wellcome Trust projects. We 1) Evaluated the RVFV infection dynamics in longitudinal sheep & vector populations; 2) Evaluated population-level exposure to RVFV in people, livestock & wildlife, over time & space; 3) Conducted a One Health cost & benefit analysis of RVF outbreak prevention; 4) Developed an early warning system for RVF, sustainably supported by a government partner, & are expanding across Africa.

Crimean-Congo hemorrhagic fever virus (CCHFV) research: PI on Crimean-Congo Hemorrhagic Fever: Reducing an Emerging Health Threat in Tanzania project, DTRA: HDTRA1-20-1-0018. We 1) Conducted a baseline assessment of CCHFV seroprevalence in people, cattle and small mammals & CCHFV presence in ticks; 2) Built up capacity in Tanzania to increase CCHFV diagnosis & the morphological tick identification.

Viral emerging zoonotic disease research: USAID PREDICT & PREDICT 2 projects: 1) Build capacity for One Health surveillance for emerging viruses; 2) Discover and characterize new viruses; 3) Assess and predict the risk of viral spillover at different interfaces; 4) Respond to outbreaks of EIDs and unknown pathogens.

EDUCATION

University of Glasgow — Glasgow, UK
PhD Epidemiology — *October 2015 – June 2020*
University of Minnesota — St. Paul, MN
Doctor of Veterinary Medicine — *September 2004 - May 2008*
Master of Public Health — *May 2005 - November 2007*
Princeton, University — Princeton, NJ
A.B., Ecology and Evolutionary Biology Cum Laude — *September 1999 - May 2003*

PUBLICATIONS

40 peer-reviewed publications, see ORCID: 0000-0002-6563-5280.

SKILLS

One Health Leadership: Coalesced, coordinated and manage teams representing medicine and epidemiology (human and veterinary), environmental sciences, entomology, conservation & economics and with partners in Asia, Africa, Europe, and the Americas; coordinated with gov't partners.

Project Development and Management: Idea generation, Power analysis, Partner engagement, Grant writing & submission (NIH, NSF, USDA, USAID, DOD, USFW & foundations), Wrote SOPs, & questionnaires, Biosafety assessment, Managed IRB and IACUC protocols, Budgeting.

Research, analytic & data management: simulation-based power analyses; GLM & GLMMs; Bayesian statistical tools, mixture models, mathematical modeling; standard epidemiological analyses: risk factor analysis, incidence estimates, weighted seroprevalence, & developed reproducible techniques in R for data quality assurance and cleaning to integrate complex One Health data (r package: ohcleandat).

Training: Developed training materials and guides; trained over 317 people from more than 12 countries across Africa, Asia and Latin America; support analysis and manuscript writing for partners; topics: epidemiology, wildlife surveillance, field biosafety, One Health, project SOPs & ethics.