

BIOGRAPHICAL SKETCH

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NAME: Valey Turcios, Mayra Alejandra

eRA COMMONS USER NAME (credential, e.g., agency login): mavaley

POSITION TITLE: Regional Laboratory Advisor, UVG-VIHCA

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)*

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Universidad del Valle de Guatemala	Bachelor on science	11/2016	Biochemistry and Microbiology
Universidad Francisco Marroquín, Guatemala	Master	10/2018	Business Administration
Universidad de Alcalá de Henares, España	Master	07/2022	Microbiology, Infectious diseases and Public Health
Abdul Latif Jameel Poverty Action Lab (J-PAL LAC) / Universidad del Valle de Guatemala	Diploma	11/2025	Community Researchers training program
Universidad del Valle de Guatemala	Diploma	06/2025	Diploma in data Analytics
Universidad del Valle de Guatemala	NA	11/2025	Community Researchers Training
CITI Program	NA	11/2024	GCP for Clinical Trials with Investigational Drugs and Biologics (ICH Focus)
SECOMISCA and CDC	NA	06/2024	HIV Care and Treatment Strategies Training
SECOMISCA and CDC	NA	03/2022	HIV Rapid Testing Continuous Quality Improvement

A. Personal Statement

I am a Biochemist and Microbiologist with specialized training in public health, infectious diseases, and extensive experience in strengthening HIV laboratory systems. I began my career as a Molecular Biology Advisor for a Thermo Fisher Scientific distributor in Central America, supporting the implementation of molecular diagnostic platforms and laboratory quality practices. I later joined VIHCA, a CDC/PEPFAR implementing partner, as a Regional Laboratory Advisor, where I provided operational support on HIV drug resistance to antiretroviral therapy (ART) and supported the implementation, quality assurance, and scale-up of rapid HIV testing services in VICITS clinics across the region.

I currently serve as an HIV Laboratory Advisor with a primary focus on advanced HIV disease (AHD) strategies, including the strengthening of CD4 testing networks and the integration of opportunistic infections (OIs) diagnostics within national laboratory systems. My work emphasizes laboratory-clinical integration to

ensure timely identification and management of patients with CD4 counts <200 cells/μL, facilitating access to essential diagnostics for opportunistic infections and informing appropriate clinical decision-making. A key component of my role involves capacity building and knowledge transfer to Ministries of Health, including technical guidance on laboratory algorithms, quality assurance, supply chain coordination, and the use of laboratory data to support programmatic decision-making.

In 2022, I was awarded a competitive scholarship from the Carolina Foundation to pursue a Master's degree in Microbiology, Infectious Diseases, and Public Health in Spain. As part of this program, I served as a research fellow at the HIV Biology and Variability Laboratory at the National Center for Microbiology, where I led the first study on the molecular epidemiology of HIV-1 among Central American patients residing in Spain. This research represents the first analysis of near full-length HIV-1 genomes of circulating variants from Central America, contributing critical evidence to inform regional HIV surveillance and response strategies.

My academic and professional experience directly supports the proposed project, "*Building capacity along the HIV continuum in the Central America (CA) region under the President's Emergency Plan for AIDS Relief (PEPFAR) Department of Health and Human Services*". I will contribute technical expertise to Ministries of Health to strengthen laboratory networks, expand access to CD4 and OIs diagnostics, and institutionalize sustainable strategies for advanced HIV disease management. These efforts will support progress toward the 95-95-95 targets and improve the quality and equity of HIV care and treatment services across the region.

B. Positions, Scientific Appointments, and Honors

Positions

- 2024 – Present Regional laboratory advisor and data analyst. VIHCA, Regional HIV Program. Center for Health Studies, Universidad del Valle de Guatemala CES/UVG
- 2024- Present Technical Consultant. American Society for Microbiology (ASM), Global Public Health Programs
- 2024 College professor. Universidad del Valle de Guatemala
- 2022-2023 HIV Research Fellowship. Carlos III Health Institute; National Center for Microbiology, Spain.
- 2021-2022 Regional laboratory advisor. VIHCA, Regional HIV Program. Center for Health Studies, Universidad del Valle de Guatemala CES/UVG
- 2017-2022 Molecular biology advisor. Biokim, S. A

Honors

- 2012-2016 Student Honor. Biochemistry and Microbiology. Universidad del Valle de Guatemala
- 2022-2023 Fellowship at Carlos III Health Institute; National Center for Microbiology, Spain. Carolina Foundation
- 2025 Acknowledgment of Excellence and Accomplishments in Scientific Research. Universidad del Valle de Guatemala

C. Contributions to Science

Publications

- **Valey Turcios, M;** Delgado, E; Donoso, A; Moreno, M; Benito, S; Thomson, MM; Grupo de estudio de nuevos diagnósticos de VIH en España. Epidemiología molecular del VIH-1 en pacientes Centroamericanos residentes en España. Enfermedades Infecciosas y Microbiología Clínica. 41-S1, pp.S1-S125