

FOR IMMEDIATE RELEASE

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NEWS RELEASE

Field Projects International to Play Key Role in New Initiative to Monitor Wildlife Health and Biodiversity in the Amazon Rainforest

Field Projects International will be a core partner in the new In Situ Lab (ISL) initiative, a collaborative project funded by the Gordon and Betty Moore Foundation aimed at establishing a global model for wildlife population surveillance and pathogen screening.

The Gordon and Betty Moore Foundation (GBMF) has funded an initiative focused on monitoring wildlife health and diversity in the Peruvian Amazon, which will be administered by San Diego Zoo Global (SDZG) and the Amazon Conservation Association. The 1.6 million dollar initiative, beginning in October 2020 and continuing for two years, will support the involvement of several academic and nonprofit organizations, including Field Projects International, Washington University in Saint Louis, and the LOEWE-Centre for Translational Biodiversity Genomics at the Senckenberg Museum.

Because this project's primary goal is to build capacity for analyzing samples near to their geographical origin, it has been dubbed the In Situ Lab initiative (ISL), and will develop a biosurveillance model that can be replicated on a global scale. As the first node of ISL, a state-of-the-art conservation technology lab will be installed at the Amazon Conservation's Los Amigos field station in the Peruvian Amazon.

This lab will have equipment and infrastructure for advanced wildlife tracking, safe pathogen screening, wildlife field genomics, and toxicological investigations. Through non-lethal sampling assessments of wild, peridomestic, and domestic animals in the region, the disease and health statuses of a range of taxa --from tapirs and monkeys to jaguars and giant river otters-- will be routinely monitored. Some of the specific aims will include: sample biobanking, expanding barcode of life reference libraries for the Amazon rainforest, field testing pathogens and environmental contaminants, and developing sequencing solutions for population monitoring of key species.

The lab will also contain a conservation technology “makerspace” for developing, deploying, and refining custom wildlife tracking devices. Among the first installations will be a long range (LoRa) forest mesh network capable of communicating with a variety of sensors that are stationary and carried by wildlife. Once established, development will then shift to lightweight, low-cost, and long-lasting GPS animal collars as an alternative to radio telemetry collars. In addition, passive animal microchip reading stations will be installed, with a focus on less-studied species.

“The goals of the first two-years of this initiative are ambitious, but the people tasked with this work are unafraid of failure. When you consider that there are virtually no resources or infrastructure, and consequently little know-how, to use modern biosurveillance research tools in this incredibly biodiverse area of the world, everything we are able to bring and impart to local partners is a huge step in the right direction. This is not the sort of project where you measure twice and cut once, you just have to do and then continuously refine”, remarked key research personnel Gideon Erkenwick.

An essential pillar of this initiative is assuring that it does not become simply a top-down effort, but rather one that engages and is adopted by local partners. To foster decentralization and replicability of this work, screening systems, wet lab protocols, and analyses will be developed with an emphasis on affordably and easy-of-use in any part of the world, then openly shared on protocols.io and Github. Data will also be shared in adherence to in-country regulations, and deposited in public online repositories, all coordinated via the In Situ Labs [project website](#). The initiative ambitiously aims to have a ready model for a decentralized, community-based One Health laboratory network within the first two years.

About the Moore Foundation

The Gordon and Betty Moore Foundation fosters path-breaking scientific discovery, environmental conservation, patient care improvements and preservation of the special character of the Bay Area. Visit Moore.org and follow @MooreFound on Instagram and Twitter.

About the Research Team

Key research personnel on the project include Gideon Erkenwick (Infectious Diseases Department, Washington University School of Medicine and Field Projects International), Mrinalini Watsa (Population Sustainability, San Diego Zoo Global), Caroline Moore (Disease Investigations, San Diego Zoo Global), Jenny Chen (Harvard Data Science Initiative and Department of Molecular and Cellular Biology, Harvard University), and Stefan Prost (LOEWE-Centre for Translational Biodiversity Genomics, Senckenberg, Frankfurt, Germany).

About Field Projects International (FPI)

FPI is a 501(c)(3) organization focused on research, education, and conservation. It began in 2009 with a research focus on primate reproductive biology in the Peruvian Amazon, and has expanded to topics surrounding primate communication, habitat use, social behavior, and population growth. It also maintains a Neotropical community

disease ecology project with a focus on primates, bats, small mammals, and birds. All ongoing projects form a platform for annual field training programs. FPI actively develops custom technology to more affordably monitor wildlife populations, and has assisted with the establishment of field-based conservation genomics laboratories on three continents.