**EcoHealth Alliance**

1. **Key Personnel:**

* **William Karesh, DVM**
* **Andrew Huff, PhD, MS**
* **Peter Daszak, PhD**
* **Jon Epstein, MPH, DVM**
* **Melinda Rostal, MPH, DVM**
* **Kevin Olival, PhD**
* **Parviez Hosseini, PhD**
* **Maureen Miller, PhD**
* **Carlos Zambrana-Torrelio, MS**
* **Allison White, MS**

1. **PROVISIONAL OPERATIONAL AND SECTORAL CAPABILITIES MATRICES**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **TABLE 1. TASK AREAS OF PRIORITY INTEREST** | | | | | | |
| **TASK 1**  **Program Management, Administration, and Coordination** | **TASK 2**  **Visiting Scientists and Scientific Mentors**  **[overseas based]** | **TASK 3**  **Qualified Trainers**  **[US-based]** | **TASK 4**  **Subject Matter Experts**  **[US-based]** | **TASK 5**  **Research Collaborators**  **[US-based]** | **TASK 6**  **disease outbreak detection / response operations** | **TASK 7**  **Small-scale research projects** |
| **LEIDOS** | **LEIDOS, ??** | **LEIDOS, EHA, ??** | **LEIDOS, EHA ??** | **EHA, ??** | **LEIDOS, EHA ??** | **LEIDOS, EHA ??** |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **TABLE 2. TRAINING TECHNICAL SECTOR CAPABILITIES (TASK 3)** | | | | | | | | | | | |
|  | **Laboratory** | | **Epidemiology** | | **GIS** | | **Outbreak Response** | | | **Public Health Preparedness** | **Grantsmanship** |
| **Biosafety & Biosecurity** | **Diagnostics** | **Human** | **Veterinary** | **Data Analysis**  **Database Mngmt** | **Field Data**  **Collection** | **Training** | **Logistics** | **Field Sampling, Field Diagnosis** |
| **EHA** |  | **X** | **X** | **X** | **X** | **X** | **X** |  | **X** | **X** | **X** |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **TABLE 3. SCIENTIFIC DISCIPLINE CAPABILITIES (Tasks 2, 4, 5, 7)** | | | | | | | | | | | | | | |
|  | **Diagnostics** | | **Veterinary Medicine** | | **Human Medicine** | | **One**  **Health** | **Epidemiology** | **Public Health** | **Microbiology** | | **Molecular Biology** | | **Biosurveillance** |
| **Analysis** | **R&D** | **Lab** | **Field** | **Lab** | **Clinical** | **Lab** | **Ecology** | **Genomics** | **Bioinformatics** |
| **EHA** | X | X | X | X |  |  | X | X | X | X | X | X | X | X |

TASK 2: Visiting Scientists and Scientific Mentors [6 - 12 month overseas residence positions]: to support development of capacity for performing Basic Research …. disciplines include, but are not limited to, veterinary medicine, human medicine, epidemiology, public health, microbiology, and molecular biology. VS/SMs may be required to live and work in CBEP partner countries for up to 12 months per year.

TASK 3: Qualified Trainers: Training support will cover a broad spectrum including, but not limited to, veterinary and clinical medicine techniques (i.e., laboratory, diagnostics, epidemiology, GIS, biosafety & biosecurity), emergent disease outbreak response activities as coordinated through the DTRA COR, disease outbreak response methodology, and public health preparedness; as well as specialized grantsmanship training with emphasis on formulating hypotheses, data analysis and presentation, and developing clear technical approaches.

TASK 4: Subject Matter Experts: The Contractor shall provide SMEs to provide technical support to CBEP partner nations... support will include, but not be limited to, reviewing products provided by contractors, assisting CBEP implementation efforts, consulting at various meetings and conferences, providing emergent response activities, and providing ongoing technical support and expertise to CBEP.

TASK 5: Research Collaborators [40% FTE faculty/research staff positions]: RCs will be senior scientists/faculty who can nominally devote approximately 20% of their academic year plus summer months to provide technical oversight of research activities in CBEP partner countries, and technical oversight and review of research reports and manuscripts for publication.

TASK 6 (Option): Surge Support [on-demand/ad hoc operations]: The Contractor shall leverage STEP team members and collaborator network relationships to provide science and technical support for emergent requirements for surge support activities that may include, but are not limited to, disease outbreak response activities associated with sample collection, surveillance, detection, diagnosis, and reporting.

TASK 7 (Option): small-scale basic research projects in relevant areas including but not limited to biosurveillance, genomic analyses, assay optimization, and microbial ecology.

1. **Summary of Relevant Expertise, Capabilities, and Experience (CBEP projects, USAID-EPT, etc)**

ECOHEALTH ALLIANCE (EHA): EHA scientists have been working on global surveillance, research, epidemiology, and

spatial modeling of zoonoses for over 15 years. Their work includes identifying the wildlife origin of SARS, the drivers of

Nipah and Hendra virus emergence, publishing the first map of global EID hotspots and the first scientifically-based

estimate of unknown viral diversity, analysis of behavioral risk factors for avian influenza and Nipah virus infection, and

acting as country lead in PREDICT-1 for Bangladesh, China, Malaysia, Thailand, Indonesia, and a number of Latin

American countries. EHA staff consists of epidemiologists, veterinarians, public health scientists, anthropologists,

economists, mathematicians, virologists, evolutionary biologists, and ecologists. This diverse team works collaboratively

with a global network of over 70 partners that provides exceptional leverage, including staff from intergovernmental

agencies (WHO, OIE, FAO, DIVERSITAS, IUCN); locally-based wildlife conservation organizations in Asia, Africa and

Latin America; infectious disease surveillance laboratories including BSL-3 and -4 laboratories; and scientific institutions.

EHA is the headquarters of the One Health Alliance of South Asia (OHASA); the Consortium for Conservation Medicine

(CCM); the journal EcoHealth; an NSF Research Coordination Network (EcoHealthNET); the IUCN SSC Wildlife Health

Specialist Group; and the OIE Working Group for Wildlife Diseases. EHA is a member of Columbia University’s Center for

Environmental Research and Conservation (CERC); all program staff members are thus adjuncts at Columbia University’s

E3B Department or in the Mailman School of Public Health.

DoD DTRA CBEP “Understanding Rift Valley Fever in South Africa”: $5M (May 2014 – April 2019)

Grant Number: 11441645

DTRA: $743,988 (Year 1 direct costs)

Leading study focused on elucidating the Rift Valley Fever transmission cycle between vectors, domestic animals, wildlife and humans, paired with rainfall and vegetation factors. The research involves surveillance, laboratory diagnostics and analysis components. Key partners are from South African government (National Institute for Communicable Diseases of the National Health Laboratory Service, Department of Defence, South African National Parks, and Free State Department of Economic Development, Tourism & Environmental Affairs).

DoD DTRA Biosurveillance Ecosystem (subaward via ARA)

2012 - 2013

~$400,000

Developed cloud-based platform for early detection of outbreaks. Technical lead, in collaboration with partners including Kitware, HealthMap, Sandia National Laboratories, ProMed Mail, Veracient, and Amazon Web Services.

DoD DTRA “Rapid Identification Tool (RIT) for Undiagnosed Emerging Infectious Disease (EID) Events”

01/2013 – 07/2014

$1,371,611, plus current cost extension

Developing a predictive tool for EID detection using network and cluster analysis in combination with digital surveillance data to detect reports of undiagnosed diseases and provide rapid, most probable diagnoses.

USAID “Emerging Pandemic Threats PREDICT”

10/01/09 - 09/30/2014

$17.5 million (subaward from UC Davis)

Oversaw and coordinated surveillance and modeling activities in twenty developing countries, provide leadership across the PREDICT program, and liaise with management teams of other EPT programs. The program has built a coalition of organizations, university scientists, foreign government agencies and laboratories to enhance capacity for surveillance of emerging human pathogens of wildlife origin, predictive modeling and information sharing for developing countries.

USAID “Emerging Pandemic Threats PREDICT-2”

10/01/2014 – 09/30/2019

$100 million total project award (sub-award amount from UC Davis pending)

Building capacity for pathogen surveillance, risk characterization, modeling, outbreak response and One Health activities in developing countries that are hotspots for disease emergence.

NIH “Understanding the Risk of Bat Coronavirus Emergence”

06/01/2014 – 5/31/2019

$3,086,735

Pathogen surveillance, molecular analysis, and risk characterization for Coronavirus in bats in China.

NSF “Modeling Anthropogenic Effects In the Spread of Infectious Diseases”

9/15/2011 – 6/30/2015

$280,206 (subaward from Arizona State University)

Economic analyses for EID threats and intervention scenarios.

Centers for Disease Control and Prevention: “Identifying public health risks associated with introduction of zoonoses through smuggled wildlife products09/2011 – 04/2014

$104,740

Viral pathogen discovery in confiscated bushmeat imported into the U.S.

Defense Threat Reduction Agency – “Global Rapid Identifications of Threats (GRITS)”

04/2015-04-2017

$4,600,000

Developed cloud-based platform for early detection of outbreaks. Technical lead, in collaboration with partners including Kitware, Sandia National Laboratories, ProMed Mail, Veracient, and Amazon Web Services.