Agenda

1. Welcome and Introduction
   - Fatima Tsiouris, MS
   - ICAP at Columbia University

2. Emerging Infectious Diseases: The Value of a One Health Approach
   - Woutrina Smith, DVM, MPVM, PhD
   - School of Veterinary Medicine, UC Davis
   - USAID One Health Workforce – Next Generation Project

3. Q&A and Discussion

Reminders:

For questions to the speakers, use Q&A box

Please use chat box to indicate your name and organization

The webinar recording and slides will be posted on www.icap.columbia.edu
Woutrina Smith, DVM, MPVM, PhD

*School of Veterinary Medicine, UC Davis*

*Project Director, USAID One Health Workforce – Next Generation Project*

Dr. Smith is a Professor of Infectious Disease Epidemiology in the School of Veterinary Medicine at the University of California, Davis, and co-leads the USAID One Health Workforce – Next Generation Project working with AFROHUN and SEAOHUN. She also co-leads the multi-campus Planetary Health Center of Expertise within the UC Global Health Institute, and is an Associate Director at the UC Davis One Health Institute. Dr. Smith has worked on One Health research projects across Africa, Asia, and in the Americas, where multidisciplinary teams innovate together to solve complex health problems. Dr. Smith has received funding from diverse sources including the National Institutes of Health, the US Agency for International Development, the US Department of Defense, and the Bill & Melinda Gates Foundation to support her research and training programs.
Emerging Infectious Diseases: The Value of a One Health Approach

Woutrina Smith, DVM, MPVM, PhD
Associate Dean for Global Programs
School of Veterinary Medicine, UC Davis
We are a globally connected society
A One Health approach considers connections between humans, animals, plants, and their shared environments.
One Health puts technical knowledge into social contexts
One Health Framework
One Health

Holistic

Collaborative and transdisciplinary

Focused on integrated solutions
One Health

The collaborative efforts of multiple disciplines working locally, nationally and globally to attain optimal health for people, animal and our environment

(FAO, OIE, WHO, WB...)

http://www.cdc.gov/onehealth

From theoretical to operational definition:

“One Health” can be defined as the added value in terms of lives of animals and humans saved, financial savings and improved ecosystem services from a closer cooperation of human and animal health as compared to single sector approaches (Zinsstag et al., 2012)
We start, and end, in communities...
What kind of wildlife do we live with?
DISEASE?

PATHOGEN

ENVIRONMENT
Land use change & population density drive viral spillover events...
Drivers in Emerging Infectious Diseases

- Globalization
- Changing Ecosystems
- Human Demographics & Behavior
- Markets & Trade
- Migration & Conflict
- Poverty & Social Inequality
- Microbial Adaptation
- and more...

Source: Author San Jose, 27 November 2006, based on the [Generic Mapping Tools](http://gmt.soest.hawaii.edu/)
One Health Economics

Examples of Economic Impact of Infectious Disease Outbreaks

- SARS
  - China, Hong Kong, Singapore, Canada
  - $30–50 bn
- H1N1
  - Worldwide
  - $15–55 bn
- H5N1
  - Avian Flu
  - Worldwide
  - $30 bn
- Ebola
  - West Africa
  - $10 bn

Figures are estimates and are presented as relative size. Based upon BioErz, World Bank, and UNDP data. Chart updated by EcoHealth Alliance.

Estimates represent medical and non-medical costs; icons depict highly affected industries.

COVID-19 Worldwide $3.9T
The Ministries of Health, Agriculture & Environment and Implementing University and NGO Partners in 35 Countries
One Health Interface

- Majority of emerging infectious diseases (EIDs) in people are of animal origin (zoonotic)
- 75% of emerging zoonoses have wildlife origins
- Human activities at the interface linked to EIDs (Nipah virus, SARS, Ebola)
- Annual population growth among highest in buffers to protected areas near wildlife
Targeted, Risk-based Surveillance

- Primates
- Bats
- Rodents
- Birds
- Suids
- Carnivores
- Ungulates
PREDICT Surveillance Strategy

Target = zoonotic viruses that causes disease in animals & people

- Early recognition of potentially zoonotic viruses in wildlife
- Viral shedding

Syndromic surveillance in people to detect potentially zoonotic viruses that cause disease & assess behavioral risk
High Risk Interfaces
Bat Guano Farms
Developed & Operationalized Diagnostic Platform
PREDICT OVERVIEW

**DEVELOPED** the One Health Workforce by training more than 6,000 people in over 30 countries.

**OPERATIONALIZED** One Health surveillance and sampled over 163K animals and people, helping minimize the spillover of zoonotic disease threats from animals into human populations.

**STRENGTHENED** laboratory systems and zoonotic disease detection capabilities in over 60 labs around the world.

**DETECTED** over 1,100 unique viruses, including zoonotic diseases of public health concern such as Bombali ebolavirus, Zaire ebolavirus, Marburg virus, and MERS- and SARS-like coronaviruses.
Health professional colleagues around the world
SEAHOUN
SOUTHEAST ASIA ONE HEALTH UNIVERSITY NETWORK

OUR NETWORK

87 MEMBER UNIVERSITIES
28 ONE HEALTH STUDENT CLUBS*
8 COUNTRIES
200 INDIVIDUALS REACHED VIA COVID-19 RCCE ACTIVITIES
AFROHUN
AFRICA ONE HEALTH UNIVERSITY NETWORK

OUR NETWORK

18 MEMBER UNIVERSITIES
16 Student One Health Clubs
9 COUNTRIES
1,043 INDIVIDUALS REACHED VIA RCCE ACTIVITIES RELATED TO COVID-19
OHW-NG Goal

Empower One Health university networks to sustainably develop and deliver world-leading model programs for equipping professionals with transdisciplinary skills to address complex global health issues.
The USAID One Health Workforce - Next Generation Project Supports SEAOHUN, AFROHUN, and the Member Universities in:

**Workforce Management:**
- Establish systems and strategies to evaluate performance and track workforce placements.

**Knowledge Empowerment:**
- Develop and deliver trainings in alignment with prioritized One Health core competencies and technical skills.

**Organizational Sustainability:**
- Strengthen capacities of the regional One Health University networks for acquisition and management of direct donor funding.

**Gender:**
- Support gender integration as a core competency and include gender considerations as a cross-cutting theme.
46 Mentored Student One Health Clubs
9 AFROHUN Country Chapters
8 SEAOHUN Country Networks (OHUNs)
51 Activities Increasing Capacity to Respond to COVID-19
2 Secretariats
7 Global Team Partners
22,569 Individuals Trained
3 Global Objectives
12 Strategies
Building a Global Community of Practice

Interactive COVID-19 ECHO Online Sessions

Sharing experiences and best practices around the world
LIVE WEBINAR: SESSION 2

COVID-19 PANDEMIC

SEPTEMBER 12, 2020 (SATURDAY)
2:00PM - 4.30PM (GMT+8)

DR. HANA MAIZULIANA SOLEHAN
Internal Medicine Specialist and Neurologist, USIM

DR. PETRIK PERIYASAMY
Infectious Disease Physician, UKM

ASSOC. PROF. DR. MOHD DZULKHAIRI MOHD RANI
Public Health Physician and Occupational Health Doctor, USIM

Regional Webinars

FREE ONLINE SEMINAR
IMPLEMENTING ONE HEALTH IN THE CURRICULUM TO FACE AIDS FUTURE THREATS

Wednesday, September 2nd, 2020
13:00-15:00 (GMT+7), Jakarta

• e-Certificate available


Prof. dr. Hida S. Adasmin, M.Sc., Ph.D., Coordinator of Indonesia One Health University Network (INDOHUN)

Prof. Gentes R. Rahayu, M.Med., Ph.D., Vice Dean of Academic Affairs, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada

Moderator: Prof. Dr. dr. Farid Abdul Rehman, Coordinator of One Health Collaborating Center (OHCC), Universitas Airlangga
Student One
Health COVID-19
Risk
Communication
Contests –
e-Posters & Videos
Training the Next Generation of One Health Leaders

APPLIED INNOVATIONS IN E-LEARNING TO EXTEND TRAINING OPPORTUNITIES IN THE CLASSROOM AND THE FIELD

• Teams used online platforms to continue teaching and training in the face of COVID-19
  – Platforms used for classroom instruction and field-based experiential learning
Training the Next Generation of One Health Leaders

STUDENTS OBTAINED HANDS-ON TRAINING ON THE FRONTLINES OF THE COVID-19 RESPONSE THROUGH STUDENT ONE HEALTH CLUBS

- Student One Health Clubs led COVID-19 risk communication and community engagement campaigns
Training the Next Generation of One Health Leaders

STUDENTS GAINED REAL-WORLD EXPERIENCE WORKING WITH COVID-19 RESPONSE TEAMS THROUGH FELLOWSHIPS AND INTERNSHIPS

- Uganda FAO, Amref Health Africa, Infectious Disease Institute, and Ministry of Health
- DRC Ministry of Health
- Gained experience in COVID-19 surveillance, contact tracing, and case investigation
- Put knowledge and skills in outbreak response, communication, and leadership into practice

5 One Health Fellows
6 One Health Interns
Training the Next Generation of One Health Leaders

Vietnamese lecturer Tuyen Ha Van received fellowship support, gaining hands-on experience with International Livestock Research Institute (ILRI).

SEAOHUN offered 6 scholarships to health professionals in pursuit of master’s degrees incorporating One Health.

Awarded small grants to 8 projects from 7 countries: Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, and Vietnam.
Q&A and Discussion
Join Our Upcoming Grand Rounds

Join Us for Our Upcoming Grand Rounds:
Tuesday, June 29, 2021 | 9-10 AM ET

Addressing Cancer in LMICs — Progress and Plans at the US National Cancer Institute

- **Satish Gopal**, MD, MPH, Director of the Center for Global Health, National Cancer Institute, National Institutes of Health, will discuss progress and plans addressing cancer in low- and middle-income countries at the National Cancer Institute.
Thank You