



INTER-AMERICAN NETWORK OF ACADEMIES OF SCIENCES

*Science Academies working together to promote science and technology
for development, prosperity and equity in the Americas*

IANAS Webinar Program for 2022 on Water and Health

General Coordinators

Dr Ricardo Izurieta (IANAS USF, USA)

Dr Fernando Spilki (IANAS FEEVALE, Brazil)

Dr. Ángel Alarcón (Universidad Indoamérica, Ecuador)

Dr. Enrique Terán (Universidad San Francisco de Quito, Ecuador)

Organizing Institution:

Water Program of the Inter-American Network of Academic of Sciences (IANAS), www.ianas.org

Sponsor Institutions:

Universidade de FEEVALE (FEEVALE) www.feevale.br , Brazil

Universidad San Francisco de Quito (USFQ) <https://www.usfq.edu.ec/en> , Ecuador

University of South Florida (USF) www.usf.edu, USA

The topics of the Webinars on Water and Health will be addressed under the “Bradley Classification” conceptual framework which classifies the pathogens based on their route of transmission, not traditional epidemiology, providing a useful framework for understanding the relationship between infectious disease transmission and water. Therefore, initially, four webinars will be carried out:

GENERAL OBJECTIVE

To address the importance of sanitation, hygiene, and adequate access to clean water for preventing and containing water-borne, water-washed, vector-borne/water-related, and water-related diseases.



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Webinar I - THURSDAY - March 17th 4pm ET

Link to join: <https://us02web.zoom.us/j/84833456547?pwd=Q3ZlaG93WkRYdWg3ZHNIQmtCZWlFQT09>

Meeting ID: 848 3345 6547

Access code: 368854

Sponsor Institution: Universidad Indoamérica (UIA) <https://uti.edu.ec/~utiweb/> , Ecuador

Representative: Dr. Ángel Alarcón (Universidad Indoamérica, Ecuador)

Moderator: Dr Martin Forde (IANAS, St George's University, Grenada)

Water-washed pathogens and diseases: Infections caused by pathogens that are transmitted through contact due to poor sanitation and hygiene resulting from inadequate water availability. In contrast to waterborne diseases, the role of water for the water-washed diseases is in prevention of disease transmission rather than as a vehicle for transmitting pathogens. Control of water-washed diseases is through providing accessible water and education to improve personal and domestic hygiene. Trachoma, conjunctivitis, scabies

SPECIFIC OBJECTIVE

To address the importance of hygiene and adequate access to water for preventing and containing water washed-diseases.

- 1.- Water-washed viral diseases: Martin Forde (IANAS St George's University, Grenada) 20min
- 2.- Water-washed bacterial diseases: Sharad Malavade (Alabama Infectious Diseases Center, USA) 20min
- 3.- Water-washed parasitic diseases: Dr Pedro Legua Universidad Peruana Cayetano Heredia de Perú (UPCH) 20min
- 4.- Q&A 30min

Webinar II - WEDNESDAY April 6th 6pm ET/8am Osaka Time

Link to join: <https://us02web.zoom.us/j/84814134372?pwd=RWYzMHBWYWFTbW5YTnc5VldoWlZKZz09>

Meeting ID: 848 1413 4372

Access code: 840985

Sponsor Institution: Universidad San Francisco de Quito (USFQ) <https://www.usfq.edu.ec/en> ,

Ecuador Representative: Dr. Enrique Terán (Universidad San Francisco de Quito, Ecuador)

Moderator: Dr Fernando Spilki (FEEVALE University, Brazil)

Water-borne pathogens and diseases: Infections caused by pathogens that originate in feces and are transmitted predominantly through the ingestion of fecal contaminated water. This class



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of diseases is closely related to water quality and safety. Control of waterborne diseases is generally through water treatment and source protection to improve microbial water quality. Cholera, typhoid fever, dysentery are the iconic diseases, all fecal-oral pathogens can be water-borne.

SPECIFIC OBJECTIVES

To address the importance of clean water for preventing and containing water-borne diseases.

To address the importance of sanitation for preventing and containing water-borne diseases.

To address emerging contaminants, case of antibiotics in waterbodies.

- 1.- Water-borne viral diseases: Fernando Spilki (FEEVALE University, Brazil) 20min
- 2.- Water-borne bacterial diseases: Yoshimasa Yamamoto (Osaka University, Japan) 20min
- 3.- Presence of Antibiotics in water resources and developing human resistance: Katherine Vammen (IANAS, Water Program) 20 min
- 4.- Q&A 20min

Webinar III - THURSDAY April 21nd 4pm ET

Link to join: <https://us02web.zoom.us/j/87664780061?pwd=KzVEM2ptdk5XQVpVTXYreUk1RHN2dz09>

Meeting ID: 876 6478 0061

Access code: 105032

Sponsor Institution: Universidad San Francisco de Quito (USFQ) <https://www.usfq.edu.ec/en> , Ecuador.

Representative: Dr. Enrique Terán (Universidad San Francisco de Quito, Ecuador)

Moderator: Dr. Katherine Vammen (Co-Chair Water Program, IANAS, Nicaragua)

Water-based pathogens and diseases: Infections caused by pathogens that originate in the water or spend part of their life cycle in the water and another part as parasites of aquatic animals as intermediate hosts. Water-based diseases can be controlled through protection of water sources, limiting skin contact with contaminated water and eradication of intermediate hosts. Dracunculiasis (caused by the guinea worm *Dracunculus medinensis*), schistosomiasis.

SPECIFIC OBJECTIVES

To address the importance of clean water for preventing and containing water-based diseases

To address the importance of sanitation for preventing and containing water-based diseases

- 1.- Water-based diseases transmitted by snails: Manuel Calvopina (Universidad de las Americas,



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- Ecuador) 20min
- 2.- Water-based diseases transmitted by copepods: Ricardo Izurieta (IANAS and University of South Florida, USA) 20min
- 3.- Monitoring of Water and waste-water for infectious diseases: Paula Rahal, UNESP, Brazil 20min
- 4.- Q&A 30min

Webinar IV - THURSDAY May 5th 4pm ET

Link to join: <https://us02web.zoom.us/j/82708505400?pwd=bjYxMzB5R2t2WEVPQINxRi80akdpUT09>

Meeting ID: 827 0850 5400

Access code: 220545

Sponsor Institution: Universidad Indoamérica (UIA) <https://uti.edu.ec/~utiweb/> , Ecuador
Representative: Dr. Ángel Alarcón (Universidad Indoamérica, Ecuador)
Moderator: Dr Jeremy McNeil- Co-Chair of IANAS.

Water-related vector borne pathogens and diseases: Infections caused by pathogens with life cycles associated with insect vectors e.g., mosquitoes that live or breed in or near stagnant water. Several strategies to control this category of diseases include destruction of vector breeding grounds, securing continuity of potable water in households and construction of drainage system to reduce human exposure to insects. Yellow fever, Zika, chikungunya, dengue, malaria, filariasis, onchocerciasis, sleeping sickness.

SPECIFIC OBJECTIVES

To address the importance of clean water for preventing and containing water related vector-borne diseases.

To address the importance of sanitation for preventing and containing water related vector-borne diseases.

- 1.- Water-related arboviral diseases: Fiona Hunter at Brock University
20 min
- 2.- Water-related vector-borne bacterial diseases: Dr Ciro Maguiña (Universidad Peruana Cayetano Heredia, Perú)
- 3.- Water-related vector-borne parasitic diseases: Dr Benjamin Jacob (University of South Florida, USA) 20min.
- 4.- Q&A 30min