



## **Joined WHO Workshop: Are Coliphages and other Bacteriophages ready to be used as Virus Indicators in World Health Organization Guidelines?**

**Friday 20.09.2019, 08:30-12:40**

**Conference venue: Campus University Vienna (Hall C1)**

For more than 75 years, coliphages have been studied and considered as indicators of microbial quality of water. Standardized methods have been developed for different national and international standardization bodies that allow to address them for its application in directives and regulations. In the last years, they have been formally proposed as viral indicators of water quality in different guides for water safety and have also been incorporated into regional, national or international regulations for the management of water, bio-solids and shellfish.

This workshop is focused on a **ONE Water/ONE Health** framework. It will provide information for attendees to debate and propose decisions on the validity and usefulness of coliphages as faecal indicator viruses for the various WHO Guidelines. These WHO guidelines address drinking water, recreational water, reuse of human wastewater for agriculture and aquaculture, potable reuse for drinking water, performance validation of Household Water Treatment technologies and management of high risk faecal waste from community and regional infectious disease outbreaks. The workshop is designed to be interactive, with encouragement of participation by the attendees.

### **Organizers:**

Jennifer de France, Gertjan Medema, Mark Sobsey, Sharon Nappier and Anicet R. Blanch

### **Program**

- 08:30-09:00 Introduction and Goal: Historical, Policy, Guidelines and Regulatory Context.  
Jennifer de France (WHO)
- 09:00-09:15 Coliphage as a viral indicator in groundwater and drinking water (international context)  
Gertjan Medema (Tech. University-Delft)
- 09:15-09:30 Coliphages in raw and treated sewage and receiving surface waters for drinking water and recreational water.  
Juan Jofre (University Barcelona)
- 09:30-09:45 Coliphage as a viral indicator in reclaimed water used for various beneficial purposes, including drinking water, recreational waters, and agricultural/aquacultural waters.  
Mark Sobsey (University North Carolina)
- 09:45-10:00 Coliphage as a viral indicator in raw and treated sludge, biosolids and latrine wastes.  
Geeta Rijal (Chicago Met. Wat. Recl. Dist.)
- 10:00-10:15 Coliphage as a viral indicator in shellfish and shellfish growing/harvesting, relaying and controlled purification waters.  
Christophe Gantzer. (University Lorraine)
- 10:15-10:30 Bacteriophages as Microbial Source Tracking markers to identify and quantify faecal contamination sources.  
Maite Muniesa (University Barcelona)
- 10:30-11:00. Coffee-break
- 11:00-12:30 Final Panel Discussion. Validity and efficacy of coliphages for use in various WHO guidelines for the above media and water/waste uses
- 12:30-12:40 Conclusions, recommended actions. WHO Guidelines Development Group