The WEST Center Microbiology Group

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WEST CENTER

WATER & ENERGY SUSTAINABLE TECHNOLOGY

Previous International Work

- Mexico
- Panama
- Bolivia
- Chile
- Costa Rica
- Japan
- Israel
- Jordon
- Australia
- Kenya
- United Kingdom
- Spain
- Cambodia
- Antarctica

Guatemala
Columbia
Brazil
Argentina
Venezuela

- Sponsors
- NSF
- USAID
- BARD
- USDA
- EPA
- Tinker Foundation
- The Clorox Company
- Proctor and Gamble
- Konica (Japan based company)
- Atlantium (Israel based company)
- World Bank
- World Health Organization
- Pan American Health Organization

Current International Projects

- BARD – Israel –use of virome approaches for new viral indicators - Dr. Betancourt
- NSF-India – viral indicators of irrigation water quality - Dr. Betancourt
- Mexico - Dr. Gerba/Betancourt/Pepper
  - Wastewater based epidemiology/groundwater quality
- India/Middle East – Reckitt Benckiser - Dr. Gerba
  - Domestic and school hygiene/ microbial risk assessment
- Japan - Okogawa - Dr. Pepper/Betancourt/Gerba
  - Molecular methods for monitoring water and food

What we do

- State of the art methods for detecting water and foodborne pathogens (bacteria, viruses protozoa)
- Assessing water and food treatment processes for pathogen removal
- Wastewater based epidemiology (SARS, Infleunza, etc.)
- Assessment and control of disease spread in indoor environments (homes, hotels, hospitals, cruse ships)
- Quantitative microbial risk assessment (quantifying health impact of pathogens in the environment and cost/benefit of interventions

What we do

- Development and assessment of new and novel disinfectants (mostly against SARS-CoV-2 and norovirus)
- Development and assessment of state-of-the-art pathogen detection in the environment
- Occurrence and removal of microplastics in the environment

Where we can contribute

- Water reuse – control of pathogens and microplastics
- Control of the spread of SARS-CoV-2 or other infectious agents in indoor environments
- Application of molecular methods/genomics to identify and track the environment spread of pathogens and assess new technologies
- Control of water and food borne pathogens
- Microbial risk assessment

Additional Information

- Environmental Microbiology –Pepper, Gentry, Gerba – Academic Press (also in Chinese and Korean)
- Quantitative Microbial Risk Assessment – Haas, Rose, Gerba – Wiley (also in Japanese)
- Pollution Science – Elsevier – Brusseau, Pepper, Gerba