

Newsletter

Copyright © HRWM 2007

SPECIAL ISSUE - July 2009

Summary of WaterMicro 2009

Dear HRWM colleagues and friends,

Highlights

Governance/Voting Results
(page 2)

WaterMicro 2009 Featured Topics
(pages 3 and 4)

Call for WaterMicro 2013 Proposals
(page 4)

We are pleased to report that the 15th Health Related Water Microbiology Symposium held in Naxos, Greece was an extreme success. It recruited 370 participants from 52 countries around the world. Some of the participants attended specifically for a session in Greek concerning national issues.

This remarkably multinational conference explored diverse issues related to the field. Microbial source tracking and recreational waters were very popular. A discussion on the forthcoming new version of the European Directive for drinking water raised scientific points on improvements. Sessions held by participants from developing countries were particularly interesting and are surely a welcome development for the Symposium's future agenda. On June 5th, a session was dedicated to International Environment Day with invited lectures on the vital issue of water reuse.

Naxos is located in the heart of the Cyclades in the Aegean Sea and participants had the opportunity not only to swim at its fine beaches and explore its fascinating and beautiful interior, but also to visit important archeological sites showing the astonishingly advanced technological level of the ancient Greeks in areas such as transportation and distribution of water, particularly from the 6th century BC onwards.

Sincerely,
Athena Mavridou, Professor, TEI Athens
Apostolos Vantarakis, Associate Professor,
University of Patras
Symposium organizers



Important Dates

September 19-24, 2010
IWA Meeting, Montreal Canada

MEDIA SPONSOR:



SUPPORTERS:



GRAND SPONSOR:



ORGANISERS:



SPONSORING:



International
Water Association

Governance/Voting Results

New Board Members

Congratulations are due to Gertjan Medema and Hiroyuki Katayama, the new HRWM Vice Chair and Secretary, respectively! Voting took place via email prior to WaterMicro 2009 Meeting and at the 2009 HRWM business meeting, held in Naxos, Greece, on June 4th. Gertjan Medema will serve as Vice Chair for 2 years, then will become HRWM Chair for 2 years, followed by 2 years as Post Chair (serving 6 years total). Hiro Katayama will serve for 4 years as Secretary. Both terms are effective as of the announcement at the Gala Dinner held on the evening of June 4th.

We also would like to thank the outgoing Secretary, Marion Savill, for her hard work and dedication to HRWM over the past 4 years.



Gertjan Medema
Vice Chair



Hiroyuki Katayama
Secretary

WaterMicro 2011 Destination Announced

New Zealand won the vote to host WaterMicro 2011. It was a very close vote between New Zealand and Brazil and congratulations are due to both committees who put a great deal of time and effort into their proposals.

**Rotorua,
New Zealand**

Proposed Venue:
Kingsgate Hotel

Dates:
September or October, 2011

Topics:
Water pollution and diseases; Microbial source tracking; Catchment protection; Biofilm studies; Water and sanitation in developing country; Climate change and water quality; Recreational water and health; Epidemiology of waterborne diseases; Microbial risk assessment; Microbial quality of shellfish growing areas, Applications of nanotechnology; Water and energy; Zoonoses.

Organization:

Institute of Environmental Science (ESR), National Institute of Water and Atmospheric Research (NIWA), Agricultural Research (AgResearch), Ministry for the Environment (MfE), Ministry of Agriculture and Forestry (MAF), and Agriculture Research

Bursary Awards

We were pleased to have 10 bursary awardees join us at WaterMicro 2009 to share their work. These students and scientists were elected from a pool of thirty-one (31) eligible bursary applications, representing seventeen (17) different countries.

The awardees whom joined us in Naxos are:

Regina Keller (Brazil)
Nicholas Kiulia (Kenya)
Thammarat Kootatep (Thailand)
Pinpin Lu (China)
Janet Mans (South Africa)
Neelima Afroz Molla (Bangladesh)
Douglas Mushi (Tanzania)
Vusi Ntema (South Africa)
Aline Daiane Schlindwein (Brazil)
Masoud Yavarmanesh (Iran)

We would like to commend them on their fine work and dedication to HRWM.



WaterMicro 2009 Featured Topics

Methods

Contributing author: Marc P. Verhougstraete

Some of the issues that resonated throughout WaterMicro 2009 included: drinking water treatment processes not only in developing nations but also in the developed world; the limitations of traditional fecal indicators; limitations of emerging indicators; means to increase method sensitivity; and how to differentiate between viable and non-viable micro-organisms using DNA methods. The traditional fecal indicator issues were further discussed outside of the conference and "veteran" scientists said the same issues were discussed 25 years ago.

While *E. coli* and enterococci continue to be used as fecal indicators, there has been little advancement when it comes to identifying an indicator that is suitable for all types of water and equally or better at protecting human health. Technology has improved for the detection of organisms, but making this technology (qPCR, sequencing, etc) applicable and affordable for local governments and non-research oriented organizations is slow. Technology is moving towards the use of PCR and qPCR of multiple gene targets (multiplex) in one step. The targets include *E. coli*, enterococci, *Bacteroides*, *Vibrio*, aeromonas, and mutant genes of similar bacteria. In other instances, the detection of chemicals, antibiotic resistant bacteria, toxin producing bacteria, viruses, fungi and macroinvertebrates were employed to characterize the quality of waters. A few talks focused on the use of "toolboxes" to assess water quality. A toolbox approach will be most beneficial when

1. trying to identify pollution and pollution sources and
2. protecting human health whether for drinking water or surface/recreational water. Because no one organism has been shown to adequately protect and indicate pollution in all waters, there is the need to use many methods and organisms. Each assay will show a only small picture of what is occurring, but combined they all provide the big picture.

EU Directive

Contributing authors: Asli Aslan-Yilmaz and Rebecca L. Ives

The methods suggested in the new European Union (EU) Bathing Water Quality Directive (2007) were a topic of interest at WaterMicro 2009 and were discussed at a special session. The results of a study by Figueras and Inza showed that the Enterolert method works equally well as membrane filtration method. However, the Colilert method has problems compared to conventional membrane filtration method due to high false positives. Therefore, reports based on *E. coli* concentrations might be biased if the new directive methodology is being used for beach monitoring. Additional adjustments are needed for better evaluation of recreational water quality in the new directive. The EU is moving towards modeling to predict recreational water quality, similar to movements toward predictive modeling in United States, and developing water safety plans.



Featured Topics Continued

Water in Developing Countries

Contributing authors: Kyle S. Enger, Rebecca L. Ives, and Marc P. Verhougstraete

Several studies presented at WaterMicro 2009 focused on disinfection and protection of water supplies in rural and developing countries and science to improve water quality and reduce disease burden. The science presented included the use of solar radiation in small bottles (SODIS), Biosand, Ceramic filters, and developing or testing methods to identify bacteria in water. A comment from Paul Yillia (of Sierra Leone) suggested that SODIS could be implemented at a community level rather than by individual families; this would allow better quality control of the water because a small number of individuals could be trained to disinfect the water for their village. One of the concerns with the filters was the microbial production of nitrite and nitrate above drinking water standards.

Detection methods included ways to make the use of established technology (Colilert and spectrophotometer) more available and affordable. Projects aimed at protecting waters in developing countries include the use of culture and non-culture based methods to detect *E. coli*, rotavirus, *Clostridium perfringens*, *Cryptosporidium*, cyanobacteria, Norovirus, and chemicals. Presentations were also made on strategies for increasing the identification/isolation of causative agents in outbreaks using sample collection kits to help fill in data gaps that exist in developing regions.

Willie Grabow Award

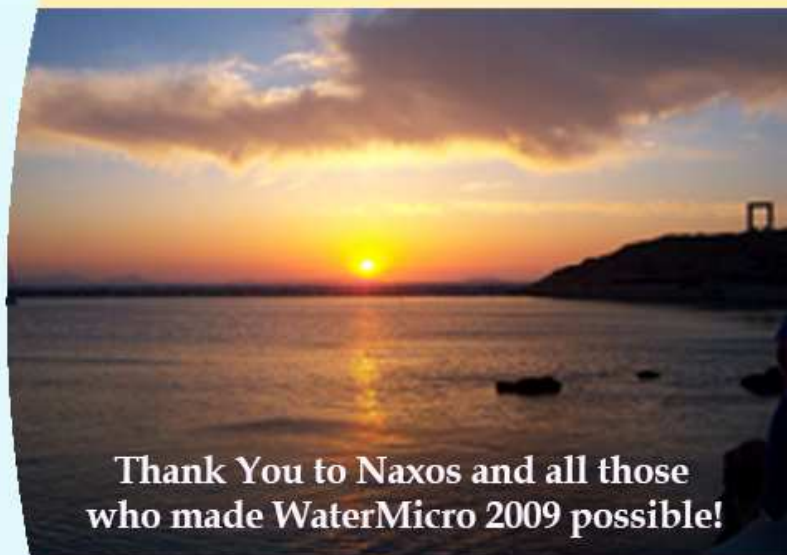
The inception of the IWA-HRWM Willie Grabow Young Investigator Award in honor of Dr. Willie Grabow was officially announced at the Gala Dinner at the WaterMicro 2009 Meeting in Naxos. Dr. Grabow was instrumental in implementing the IWA and specialist group concept and continues to inspire emerging scientists to date. As Dr. Grabow was unable to attend the meeting, he wrote a wonderful thank you letter which was read to the group by Walter Jakubowski. The objective of the award is to assist and encourage young scientists, especially those from developing countries, who are doing outstanding research in the field of health-related water microbiology. It should also be noted that IDEXX has agreed to sponsor the award indefinitely, which will fund a travel award for attendance at the WaterMicro meetings.

The first award will be presented at WaterMicro 2011, in New Zealand. Please look for details regarding the application process as it is made available in the coming year.

Call to Host WaterMicro 2013

Members, please begin to prepare an application to host WaterMicro 2013. Interested members should notify Joan Rose via email at hrwm@msu.edu and plan to present at our WaterMicro 2011 Meeting in New Zealand. Information to think about when planning includes:

- City/Country
- Venue Location
- Dates
- Topics
- Tours/Social Events
- Accommodations



Thank You to Naxos and all those who made WaterMicro 2009 possible!

HRWM Newsletter

Editors: Rachel M. McNinch and Joan B. Rose

Design: Audrey Tan

WaterMicro 2009 photos courtesy of Angie Coulliette, Kyle Enger, Marc Verhougstraete and Asli Aslan-Yilmaz

Look for the next HRWM Newsletter in November 2009

For further information regarding HRWM please visit the website: www.iwa-microbiology.org