



TZW

Technologiezentrum
Wasser

TZW | Technologiezentrum Wasser
Microbiology & Molecular Biology

Karlsruher Straße 84
76139 Karlsruhe, Germany

www.tzw.de

Prof. Dr. Andreas Tiehm

☎ +49(0)721 9678-137

✉ andreas.tiehm@tzw.de

Dr. Johannes Ho

☎ +49(0)721 9678-136

✉ johannes.ho@tzw.de

Claudia Stange

☎ +49(0)721 9678-134

✉ claudia.stange@tzw.de



CSIRO Land and Water
Environmental Contaminant
Mitigation & Technologies Program
Ecosystem and Human Health Microbiology
Ecosciences Precinct

41 Boggo Road, Dutton Park
4120 Brisbane, Australia

www.csiro.au

Dr. Simon Toze

☎ +61 7 3833 5572

✉ simon.toze@csiro.au

Dr. Jatinder Sidhu

☎ +61 7 3833 5576

✉ jatinder.sidhu@csiro.au

ACTIVITIES

- 🧬 Joint PCR reference lab
- 🧬 Workshops focussing on microbiological water quality
- 🧬 Pilot site studies
- 🧬 Students exchange

Layout: www.htm-karlsruhe.de



GERMAN
AUSTRALIAN
JOINT COOPERATION
FOR WATER MICRO-BIOLOGY



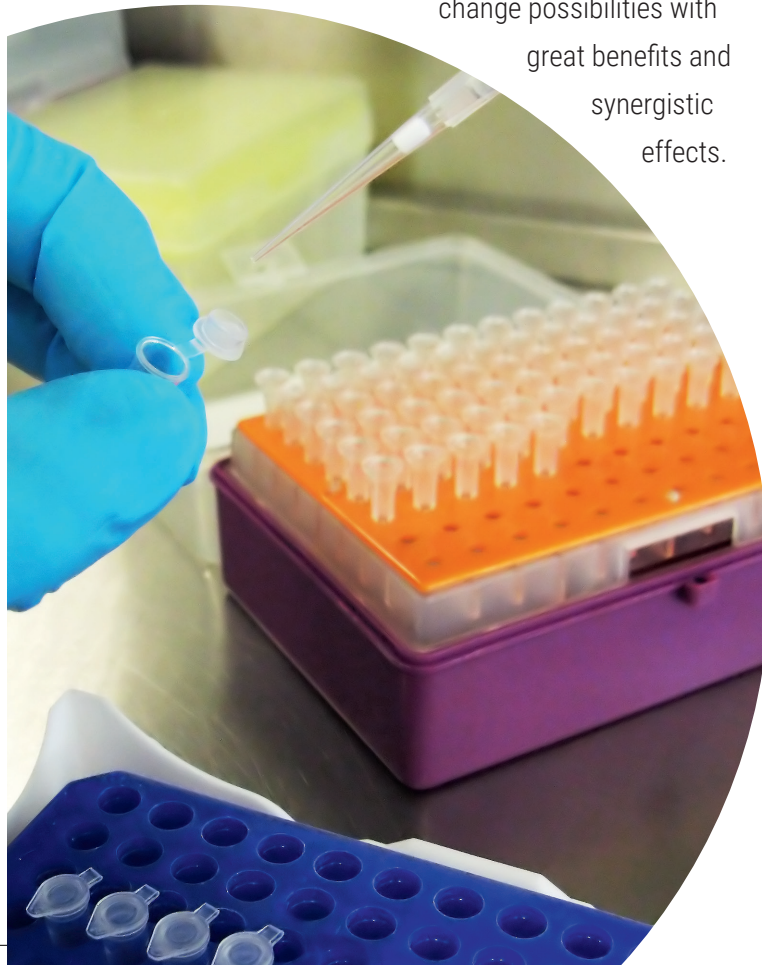
www.gabi-cooperation.org

BACKGROUND

Prompt water monitoring and quality control are essential for public health protection and risk regulation. Consequently, the rapid, specific and sensitive detection of microbial indicators and waterborne pathogens represent a key challenge in modern water quality monitoring.

In the last years the application of monitoring concepts and technologies was expedited at the TZW as well as at the CSIRO. Both the Australian and German collaborators have developed new methods in these specific areas,

which enables deep collaboration and exchange possibilities with great benefits and synergistic effects.



OBJECTIVE

Overarching objectives of the German-Australian collaboration are to optimize and extent monitoring methods of water quality:

- 🔬 PCR detection of hygienically relevant microorganisms in different waters
- 🔬 Microbial Source Tracking with culture-independent methods
- 🔬 Detection and elimination of antibiotic resistant bacteria and antibiotic resistance genes
- 🔬 Improved methodology for the concentration and detection of viruses from water environments
- 🔬 PCR-based live-dead differentiation
- 🔬 Application of microarray technology in water monitoring
- 🔬 Elimination of hygienic relevant microorganisms during ground water recharge and wastewater reuse

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<http://www.internationales-buero.de>



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PCR REFERENCE LAB

Quantitative
polymerase
chain reaction
(qPCR)



Ultrafiltration module
for large water
volumes

Microbial
Source
Tracking

