

# Watch your Danube



## Georg Reischer

Mr. Georg Reischer (39 yrs) is a Microbiologist/Molecular Biologist at the Vienna University of Technology and Interuniversity Cooperation Centre Water and Health, Austria



### What did you study, when, where and most importantly: why?

I studied Technical Chemistry at the Vienna University of Technology and specialised in Biotechnology and Microbiology. During my masters and PhD studies I focused on developing and evaluating molecular biological methods for the investigation of microbiological water quality. Those methods are mainly based on the detection of specific pieces of DNA in the environment. These

topics were very interesting for me because they covered the broad range from fundamental biological sciences to in-field application with direct impact on public health.

### What will your role be on board of the JDS3 ships?

I will be one of the two microbiologists during the first half of the JDS3. Together with my colleague Stoimir Kolarevic from Belgrade it will be my task to take water samples, and prepare them for microbiological analysis on board. We will investigate the concentration of indicators for faecal pollution, the ecology of microorganisms in the Danube and collect samples for in-depth genetic fingerprinting of the bacterial communities in Danube.

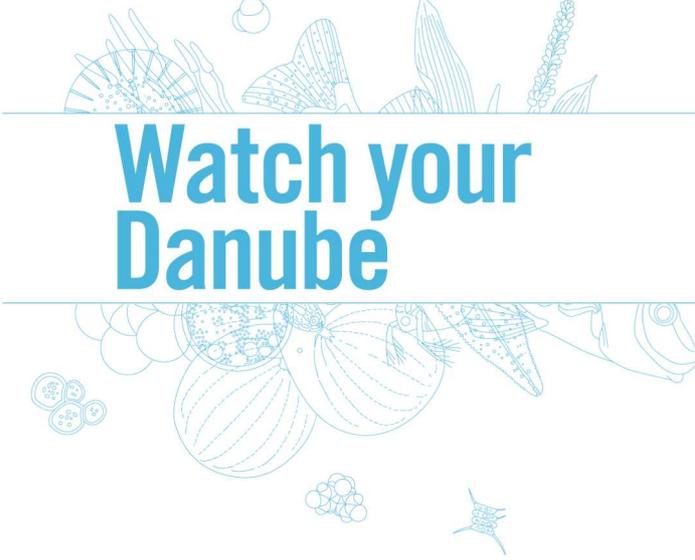
### Why is this important? What can we learn?

Our investigations cover a broad range of relevant topics. The determination of faecal pollution in the water is critical for assessing the health impact of using Danube water for drinking water production, recreation and irrigation. We will also be investigating the actual source of faecal pollution which can come from humans but also from animals. Our investigation of the microbial communities of the Danube puts a spotlight on this often neglected part of the ecology of this large river. Actually the microorganisms are the main drivers of degradation of nutrients and pollutants in a river and are therefore responsible for purification and regeneration processes in these important water resources.

### What is an important gain from JDS3 specifically for your country of origin?

I think the main gain is the very close collaboration of scientists and also authorities and companies from all countries along the Danube in this venture. Most of these people would never have met and discussed issues of water quality and ecological status of the Danube which are very different in the riparian countries. This alone is a very good reason to organize this survey.

The JDS3 also does a great job of raising public awareness on the protection of the Danube and the environment in general. Beyond that it also raises awareness with stakeholders such as authorities, water supply companies and research institutions.



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## What are you looking forward to regarding the JDS3?

To be honest I am very much looking forward to travel down this huge river. So far I have only seen small stretches in Austria and Slovakia. In addition to that I am very excited about working in close collaboration with the other core-team members from countries ranging from Germany via Austria, Slovakia and Hungary to Serbia, Romania and Bulgaria. It is a very rare opportunity that I would not want to miss.

## Anything else? Something important you think should be mentioned on your profile?

Yes, please mention that the Austrian team working on microbiology (coordinator: Alexander Kirschner (Medical University Vienna), core-team members Stefan Jakwerth (Medical University Vienna) and Georg Reischer (Vienna University of Technology) are all members of the recently formed Interuniversity Collaboration Center Water & Health (<http://www.waterandhealth.at>)