

# Watch your Danube



## Core Team Profiles

### Stefan Jakwerth

Mr. Stefan Jakwerth (32 yrs) is a microbiologist at the Medical University of Vienna and Interuniversity Cooperation Centre Water and Health, Austria

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



I began to study Food Science and Biotechnology at the University of Natural Resources and Life Sciences, Vienna. Until now I have not finished my study but in the last years I gained a lot of experience in molecular biology and microbiology in several groups I worked. Since two and a half years I have been working at the Medical University of Vienna in the group of Dr. Alexander Kirschner, who is the coordinator for microbiology during the JDS3 and who sent me on board.

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

I will be replace Georg Reischer in Belgrade as one of two microbiologists on board. Together with my colleague Stojimir 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 the Danube and its tributaries

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

Our investigations cover broad range of relevant topics. The determination of faecal pollution in 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?

The main gain is the very close collaboration of scientists and also authorities and companies from all countries along the Danube. 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. The JDS3 also does a great job of raising public awareness on the protection of the Danube and the environment in general.



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Beyond that it also raises awareness with stakeholders such as authorities, water supply companies and research institutions.

The gained knowledge and scientific publications to be expected from the data will strengthen the national competence in the field of pollution microbiology and microbial ecology within the Danube River Basin but also on a world-wide scale.

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

I am very much looking forward to travelling down this large river, especially in the stretch from Belgrade to the Black Sea. In addition, I am very excited about working in close collaboration with other core-team members from countries ranging from Germany to Romania. Participating in JDS 3 as a core-team member 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 Centre for Water & Health (<http://www.waterandhealth.at>).