

Name of research institute or organization:

**Institut für Veterinär Bakteriologie, Universität Bern
Freie Universität Berlin**

Title of project:

Transport and survival of desert soil- and rock surface inhabiting micro-organisms in atmospheric mineral dust

Project leader and team:

Prof. Joachim Frey, Institute of Veterinary Bacteriology, University of Bern
Prof. Dr. Anna Gorbushina, Freie Universität Berlin

Project description:

The part of the project at Jungfraujoch targets samplings of dust from the air after Sahara storms. For this purpose, 2 different sampling systems are prepared to be mounted temporarily at Jungfraujoch, i) a filter sampler that collects air on sterilized filters and ii) a Coriolis sample taking liquid samples of the sand storm, thus having the advantage of including also electrically charged particles that might be lost by the filter sampler. Both devices are designed in such a way that they can be easily installed and withdrawn after use.

In the year 2013 a few Sahara storms were forecasted. However, taking into account the long travel time to the Jungfraujoch research station, the necessary reaction time was too short to be able to take samples.

I will therefore discuss with Markus Leuenberger and the responsible persons at the research station novel strategies and novel sampling techniques that would allow us a rapid intervention upon a Saharan dust event notification.

Key words:

Microbiology, Sahara storm, wind transmission, Aeolian, Firmicutes, Actinobacteria, Geodermatophilaceae, Nocardioidaceae, Solirubrobacteraceae, Proteobacteria, Oxalobacteraceae, Rhizobiales, Sphingomonadaceae, Bacteroidetes, Cytophagaceae, Ascomycota

Collaborating partners/networks:

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