

Name of research institute or organization:

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

Title of project:

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

Project leader and team:

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

Project description:

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 Both devices are designed so that they can be easily installed and withdrawn after use.

**As in 2012 no Sahara storm was forecasted, no activities at the Jungfrauoch facilities were implemented.**

Key words:

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Microbiology, Sahara Storm, Wind Transmission, Aeolian, Firmicutes, Actinobacteria, Geodermatophilaceae, Nocardiodaceae, Solirubrobacteraceae, Proteobacteria, Oxalobacteraceae, Rhizobiales, Sphingomonadaceae, Bacteroidetes, Cytophagaceae, Ascomycota

Collaborating partners/networks:

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Freie Universität Berlin, Fachbereich Biologie, Chemie und Pharmazie & Geowissenschaften, Berlin, Germany, Prof. Anna Gorbushina, Prof. W. Broughton  
Université de Genève, Département de Biologie, végétale, Dr. Joceline Favet  
Bundesanstalt für Material-forschung, und -prüfung, Berlin, Germany, Prof. Anna Gorbushina

Scientific publications and public outreach 2012:

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**Refereed journal articles and their internet access**

Favet J., A. Lapanje, A. Giongo, S. Kennedy, Y.Y. Aung, A. Cattaneo, A.G. Davis-Richardson, C.T. Brown, R. Kort, H.J. Brumsack, B. Schnetger, A. Chapell, J. Kroijenga, A. Beck, K. Schwibbert, A.H. Mohamed, T. Kirchner, P.D. de Quadros, E.W. Triplett, W.J. Broughton, A.A. Gorbushina, Microbial hitchhikers on intercontinental dust: catching a lift in Chad, The ISME Journal, doi:10.1038/ismej.2012.152., 2012.  
<http://www.nature.com/ismej/journal/vaop/ncurrent/full/ismej2012152a.html>

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