

CV of Dr. Ralf Möller

Curriculum Vitae

Dr. Ralf Möller

German Aerospace Center (DLR e.V.)
Institute of Aerospace Medicine
Radiation Biology Department
Research Group 'Astrobiology'
Linder Hoehe
D - 51147 Cologne (Köln)
Germany



Education

- 1997-1998 Study of Biology at the University of Osnabrück, Germany
- 1997-2002 Study of Biology (Microbiology, Biochemistry, Biotechnology, Ecological Chemistry) at the Braunschweig University of Technology, Braunschweig, Germany
- 2002-2003 Diploma at biology with the best grade ("*very good*") [Diploma thesis - Title: "Investigations to the effectiveness of endogenous and exogenous protective pigments on the UV sensitivity of bacterial spores"] in cooperation with the German Aerospace Center (DLR e.V.), Institute of Aerospace Medicine, Radiation Biology Department, Research Group 'Astrobiology', Cologne (Koeln), Germany
- 2003-2007 PhD thesis ("*magna cum laude*") [Title: "Characterization of different types of radiation- and pressure-induced DNA damage in *Bacillus subtilis* spores and their global transcriptional response during spore germination"] in cooperation of the German Collection of Microorganisms and Cell Cultures (DSMZ), Braunschweig, Germany with the German Aerospace Center (DLR e.V.), Institute of Aerospace Medicine, Radiation Biology Department, Research Group 'Astrobiology', Cologne (Köln), Germany

Research exchange

- 2003- Max-Planck-Institute for Infection Biology (MPI-IB), Microarray Core Facility, Berlin, Germany (Visiting scientist)

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- 2003-2007 German Collection of Microorganisms and Cell Cultures (DSMZ), Braunschweig, Germany (Visiting scientist)
- 2003 Ernst-Moritz-Arndt-University to Greifswald, Institute for Microbiology, Department of Microbial Physiology, Greifswald, Germany (Visiting scientist)
- 2004, 08, 10, 11 University of Florida, Gainesville, Florida, USA and Department of Microbiology and Cell Science, Kennedy Space Center (NASA), Florida, USA (Visiting scientist)
- 2005- International Space Radiation Laboratory, National Institute of Radiological Sciences (NIRS), Chiba, Japan (Visiting scientist in framework of the HIMAC project 17B463, 20463)

Research projects

- 2002-2003 Participation on Experiment Verification Tests (EVT) for the European Space Agency (ESA) project "SPORES" as part of ROSE consortium (Student assistant)
- 2003-2005 German Research Foundation (DFG) research project HO 1508/3-1 "Meteorite ejection and life (1)" (Co-investigator (Co-I))
- 2005-2007 DFG research project RA 1049/1-2 "Meteorite ejection and microbial life (2)" (Co-I)
- 2005-2007 HIMAC (Heavy Ion Medical Accelerator at National Institute of Radiological Sciences at Chiba, Japan) research project 17B463 "Gene activation of heavy ion treated *Bacillus subtilis* 168 (DSM 402) endospores during germination involved DNA-repair" (Principal investigator (PI))
- 2005- ESA-DLR project "Molecular adaptation strategies of microorganisms (ADAPT)" on National Aeronautics and Space Administration (NASA) mission STS-122 (Co-I)
- 2005- ESA-DLR project "Resistance of spacecraft isolates to outer space for planetary protection purposes (PROTECT)" on NASA mission STS-122 (Co-I)
- 2008- HIMAC research project 20B463 "Characterization of heavy ion-induced damage in *Bacillus subtilis* spores and their global transcriptional response during spore germination (REBAS)" (PI)
- 2009- North Atlantic Treaty Organization (NATO) Science for Peace Program – research project CBP.EAP.CLG.983747: "Destruction of bacterial spores by solar UV radiation (DEBACS)" (PI/Project coordinator)
- 2010- ESA-DLR project "Biology and Mars-Experiment "BIOMEX" (Co-I)

Meeting organization

- 2006 DFG Astro-/Exobiology-Workshop "Viability in Space" May 5th - 6th, 2006 at DLR, Cologne (Köln), Germany (Main Scientific Organizer (MSO))
- 2011 11th European Workshop on Astrobiology on "Planets and life: evolution and distribution" (European Astrobiology Network Association (EANA)) July 11th - 14th, 2011 in Cologne (Köln), Germany, (Students Contest Main Organizer (SCMO))

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Awards

- 2003 Travel grant (3rd European Workshop on Exo-/Astrobiology (EANA) in Madrid, Spain)
- 2008 ESA Award "Contribution to Columbus Increment 17"
- 2009 NATO Science for Peace: Collaborative linkage grant (CLG)
- 2011 Selection for participation (as nominated young researcher) at 61st Lindau Meeting of Nobel Laureates (Physiology/Medicine) June 25th - July 1st, 2011, Lindau, Germany

Ad Hoc Reviewer (peer-reviewed journals and research grant agencies)

- 2005- *Current Microbiology* (peer-reviewed journal)
- 2006- *Archives of Microbiology* (peer-reviewed journal)
- 2007- *Canadian Journal of Microbiology* (peer-reviewed journal)
- 2007- *Chemical Reviews* (peer-reviewed journal)
- 2008- *Drug News and Perspectives* (peer-reviewed journal)
- 2008 *Research evaluation for the German Aerospace Center, German-Swedish BEXUS program: Bexus-7 balloon flight research campaign* (research grant agency)
- 2008- *Research grant evaluation for the Netherlands Organization for Scientific Research (NWO), Council for Earth and Life Sciences (ALW)* (research grant agency)
- 2009- *Advances in Space Research* (peer-reviewed journal)
- 2009- *Research grant evaluation for the NASA Astrobiology Institute (NAI)* (research grant agency)
- 2009- *Nucleic Acids Research* (peer-reviewed journal)
- 2009- *FEMS Microbiology Letters* (peer-reviewed journal)
- 2009- *Astrobiology* (peer-reviewed journal)
- 2009- *Applied and Environmental Microbiology* (peer-reviewed journal)
- 2010- *Journal of Photochemistry and Photobiology B: Biology* (peer-reviewed journal)
- 2010- *Photochemistry and Photobiology* (peer-reviewed journal)
- 2010- *Molecular Microbiology* (peer-reviewed journal)
- 2010- *Applied Microbiology and Biotechnology* (peer-reviewed journal)
- 2011- *Clinical Microbiology and Infection* (peer-reviewed journal)
- 2011- *PLoS ONE* (peer-reviewed journal)
- 2011- *International Journal of Radiation Biology* (peer-reviewed journal)

Membership

- 2008- *Association for General and Applied Microbiology (VAAM)*
- 2011- *European Astrobiology Network Association (EANA)*