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## A step towards the molecular detection of life on Mars

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## *Curriculum vitae*

Maria Susana Oliveira Lebre Direito was born in Beja, Portugal, on July 19<sup>th</sup> 1980 at 16.55 pm. While living in Ferreira do Alentejo, she finished high school in 1998 at Escola Secundária Diogo de Gouveia, Beja. Having a strong interest in chemistry and biological sciences, she later got her graduation in 2005 on Applied Chemistry (branch Biotechnology) at Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Lisbon, Portugal. After graduating, she won a scholarship grant awarded by Fundação para a Ciência e a Tecnologia (FCT, Portugal) for the project MAGIC (Mars Atmospheric Geophysical and Exobiological Characterisation) within the scope of ESA's Mars Express Mission and with Recognised Cooperating Laboratory status for the Mars Express mission (from 2005 till 2007). In 2008, she started her PhD on the subject "Molecular detection of life on Mars" at the department of Molecular Cell Physiology, Faculty of Earth and Life Sciences, VU University Amsterdam, The Netherlands with a funding grant from the Netherlands Organization for Scientific Research. Four years of research have resulted in this thesis. Subjects relating to astrobiology, the origin of life, early life evolution, chemical evolution, life in extreme environments, microbial ecology and environmental microbiology and the possible existence of life beyond Earth have always fascinated her.

## Publications

**Direito SOL**, Marees A, & Röling WFM (2012) Sensitive life detection strategies for low-biomass environments: optimizing extraction of nucleic acids adsorbing to terrestrial and Mars analogue minerals. *FEMS Microbiology Ecology* 81(1):111-123.

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field campaign to an acidic Martian Earth analogue with astrobiological interest: Rio Tinto.  
*Int. J. Astrobiol.* 10, 291–305.

### ***In Preparation***

**Direito SOL**, Zaura E, Westerhoff HV, & Röling WFM (*in preparation*) Minerals and microbial communities: an *in situ* microcosm experiment in an iron reducing aquifer.

**Direito SOL**, Zaura E, Little M, Ehrenfreund P, Westerhoff HV, & Röling WFM (*in preparation*) Systematic evaluation of bias in microbial community profiles induced by whole genome amplification.



