SEED has won the international Mars One University Competition

January 7 2015

Raquel Almeida, a MIT Portugal Bioengineer Ph.D. candidate at 3B's Research Group is one of the two Ph.D. candidates of the team. Additionally, the Seed Team counts with four students of the Integrated Masters on Bioengineering at FEUP/Institute of Biomedical Sciences Abel Salazar from the University of Porto and another Ph.D. students Center of Biological Investigations, University of Madrid. Credit: SEED

Seed was selected by popular vote from an initial 35 university proposals. The aim of the project is to germinate the first seed on Mars and to prove the concept that it is possible to germinate and grow plants on Mars. Besides the social impact of growing the first life form on Mars, the possible scientific outcomes of this experiment could contribute to a better understanding of plant growth on Mars and possibly contribute for the development of life support systems.

The payload will consist of two containers: an external one that will provide protection from the outside environment; and another container holding several cassettes with seeds from the plant Arabidopsis thaliana. Upon landing, the seeds will receive the necessary inputs to germinate, the process will be recorded and the data send back to earth every two days.

Raquel Almeida, a MIT Portugal Bioengineer PhD candidate at 3B's Research Group is one of the 2 PhD candidates of the team. Additionally, the Seed Team counts with 4 students of the Integrated Masters on Bioengineering at Faculty of Engineering (FEUP)/Institute of Biomedical Sciences Abel Salazar (ICBAS) from the University of Porto and another PhD student from Center of Biological Investigations, University of Madrid. Dr. Maria Helena Carvalho, plant researcher at Institute of Molecular and Cell Biology (IBMC) and Dr. Jack van Loon, professor at VU Medical Center, University of Amsterdam and scientist at ESTEC-ESA, orienting the team. According to Raquel Almeida "the team is very excited with the news and is now starting to plan the next steps of the project, namely the development of the prototype. For this, we will need to find partners and to raise financial support".

An in-depth technical analysis of the winning proposal will be conducted to ensure that the winner has a feasible plan, that their payload can be integrated on the 2018 Mars lander, and that the experiment will be carried out in compliance with the current COSPAR planetary protection policy. Mars One and its advisers will contribute to the analysis by thoroughly and critically examining the Seed proposal. The seeds will fly to Mars on the Mars One's 2018 unmanned lander mission.

Provided by MIT Portugal Program

Citation: SEED has won the international Mars One University Competition (2015, January 7)