IMAGE: WHAT DOES ANTARCTICA HAVE TO DO WITH OUTER SPACE?



© © Sarah preparing samples

Antarctica is probably the best place in the world to study space travel

Background

Life in Antarctica is similar to that which astronauts face in outer space. In both cases, you have people in good physical condition of a comparable age range who live together under a challenging situation: extreme isolation and confinement, interactions with the same people day in and day out and very little fresh food.

The IMAGE project

These are the main motives behind Belgian Professor Sarah Baatout's IMAGE project at Princess Elisabeth this season.

Back in Belgium, Sarah and her SCK•CEN group at the Belgian Nuclear Research Centre have been following astronauts who spend 6 months or more at the International Space Station. Immunity becomes weaker in extreme environments and is therefore one of the main obstacles to overcome during space travel. As part of its research on immunity, SCK•CEN takes blood and other samples from astronauts before, during and after their space flights.

As with the astronauts she follows, Sarah is now collecting samples from the scientists and crew at Princess Elisabeth to study immune responses to extreme conditions in Antarctica. She's also testing the stability of 20 different medicines inside and outside the station to be potentially used in the medical kits of the astronauts of tomorrow.

Part of Sarah's curiosity is finding out how spirulina may affect health by feeding it to the scientists and crew at the station. Spirulina is a bacterium used as an antioxidant and vitamin rich nutritional supplement. It's a good candidate for long-term space flight because it can be easily grown in outer space and so could be used to enhance and sustain the immunity of astronauts.

Never sitting still at Princess Elisabeth, Sarah is also regularly in touch with schools in Belgium and abroad via internet to share her energy and enthusiasm for science. This is completely in harmony with IPF's motto of bridging science and society.

Meet Dr. Sarah Baatout

Sarah is the Head of the Radiobiology Unit at the Belgian Nuclear Research Centre (SCK•CEN) and Guest Professor in bio-engineering at Gent University. SCK•CEN is one of the largest research centers in Belgium. They specialize in peaceful applications of radioactivity, including safety of nuclear installations and management of radioactive waste, but also the safety of astronauts during space travel. She not only loves to inspire students to become excited about science, but is also involved in numerous non-profit organisations, namely in the European Radiation Research Society, the Belgian Space Science Society and Youspace.

Keep on top of Sarah's scientific mission to Princess Elisabeth Antarctica here: Facebook / Blog

Interview with Sarah just before her journey

Author: Lisa Benedetti