

## Stratospheric Microorganisms Collection Using a Balloon

Sohsuke Ohno<sup>1\*</sup>, Ko Ishibashi<sup>1</sup>, Akihiko Yamagishi<sup>2</sup>, Yuko Kawaguchi<sup>2</sup>, Shota Nitahara<sup>2</sup>, Takahiro Segawa<sup>3</sup>, Gensuke Tokoro<sup>4</sup>, Kazuya Yamanouchi<sup>4</sup>, Yuko Ishikawa<sup>5</sup>, Norimune Miyake<sup>1</sup>, Masanori Kobayashi<sup>1</sup>, Takafumi Matsui<sup>1</sup>

<sup>1</sup>Planetary Exploration Research Center, Chiba Institute of Technology, <sup>2</sup>Tokyo University of Pharmacy and Life Sciences, <sup>3</sup>National Institute of Polar Research, <sup>4</sup>aRigen Pharmaceuticals, Inc., <sup>5</sup>Nippon Biologicals, Inc.

The subject of this study is focused on the stratospheric microorganisms, which are important for assessing the chances and flux of biological transfer escaping from and/or entering into the earth. Some previous studies reported the presence of microbes captured in the stratosphere by balloon, aircraft or rocket experiments. The presence of radiation- and desiccation resistant microbes, such as Bacillus and Deinococcus, have been accepted, although stratospheric environment is harsh against the microorganisms. However, it is difficult to discuss about the dynamic behavior of the stratospheric microorganisms, the mechanism of its vertical transportation, and its lifetime, because the time of observations and the number of detected microorganisms are not sufficient. In this talk, we introduce the plan of the balloon experiment to collect stratospheric microorganisms using a newly developed capturing system.

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