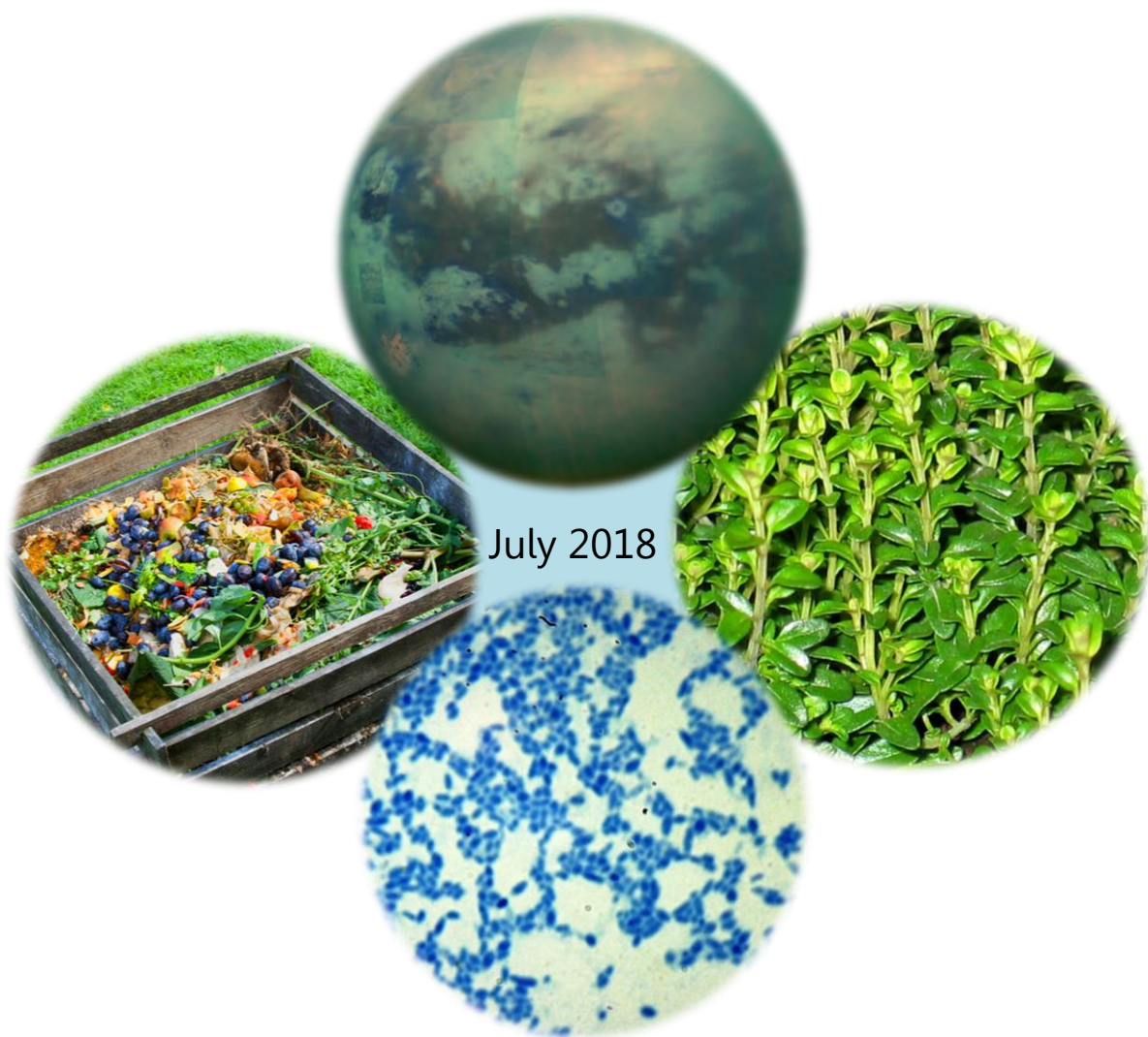


# High School Students for Agricultural Science Research

Volume 7



July 2018

Ciencia

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# High School Students for Agricultural Science Research

**Volume 7**

**June 2018**

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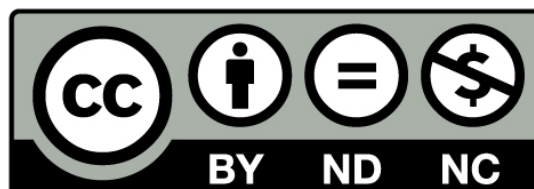
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## ***Exoplanets and the limits of life***

[1]

### **Introduction: The Astrobiology Project 2017-2018**

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In the 2017-2018 edition of Ciencia BaSe, we have initiated a joint project with an ambitious aim: designing experiments for high school students to learn about the limits of life as we know it, and how to find exoplanets that might hold life forms of similar characteristics to those on Earth. The methodology combined the exploration of online resources to identify exoplanets and check their physicochemical properties and “wet lab” experiments to test the survival of different microorganisms under a range of conditions. Students were divided in six groups and each group was responsible for searching in exoplanet databases, reading adequate bibliography and defining potential candidates to hold life similar to that on Earth. Each group was also assigned one particular bacterial species to investigate. Experiments were carried out at the high school laboratory and results were compiled, shared and discussed by all the students.

Given that each group decided to prepare an independent report, but the microbiology results make more sense if presented in a comparative way, we have opted for a somewhat unusual format: Each group’s report is presented with the Summary, Results and Discussion sections. Texts have been compiled as presented by the students (with some minor edition), but extracting the actual data, which are included in Figures and Tables following the six reports and a common Material and Methods section. The “my own ideas” section is then presented at the end.