## Closed bio-ecosystems in extraterrestrial environments - Research progress and prospects

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Researchers have been studying about useful life-support systems in closed bio-ecosystems since 2011. The final purpose of our study is to enable inhabitation in extraterrestrial environments. The study of the biological and technical aspects of closed systems encompasses a wide range of research fields. We are interested in discussing our study with researchers from different generations, because our findings need to be communicated to the next generation. I shall outline the content of our session and presentation. This year, we have added content regarding ground research, symbiosis, materials, and environments. The results obtained after analyzing these parameters would contribute in achieving our goal.

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