

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Biology in Space (8)

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DUAL CULTURE IN MICROGRAVITY CONDITIONS: POTENTIAL APPLICATION IN THE STUDY
OF SYMBIOTIC AND ANTAGONISTIC INTERACTIONS FOR PLANT GROWTH IN SPACE.**Abstract**

Symbiotic interactions and antagonism play a main role in nature's co-evolution and evolution laws. The analysis of such biotic interactions allows scientist to study ecological communities' full composition and functioning, including the source and digestion of nutrients. Therefore, its population needs to sustain life. Understanding how this associations may behave under microgravity conditions will allow us to improve plant and crop growth project designs for life sustainability in space. Giving us new tools to enrich the culture medium by adding living organisms such as plant growth promoting bacteria/fungi and/or biological control agents. This hypothesis can be studied under dual culture techniques reducing mission costs, and area of essay needs. In this paper we review the main biotic interactions that can help researchers to establish sustainable crop growth facilities; the pros and cons of some of the main in vitro techniques that can be use such as soil, liquid, paper, and gel culture medium. Also adding recommendations for its usage, carrier unit set up and main potential applications besides plant growth essays. All related to the knowledge acquired by our previous prototyping test experience due to the development of Musa Project for the study of the Panama Disease; the first dual culture to be flew into the ISS.