

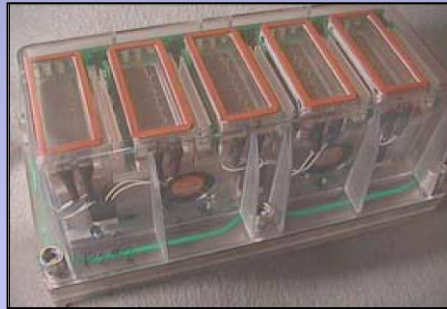
**N-USOC**

Norwegian User Support and Operations Centre



[www.n-usoc.no](http://www.n-usoc.no)

**TROPI**  
**Analysis of a Novel Sensory**  
**Mechanism in Root**  
**Phototropism**



## **TROPI**

### **Analysis of a Novel Sensory Mechanism in Root Phototropism**

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**N-USOC:** The mission of the Norwegian User Support and Operation Centre (N-USOC) is to provide qualified support to International Space Station (ISS) related life science activities in general and the EMCS in specific.

**EMCS:** The European Modular Cultivation System (EMCS) is an ESA gravitational biology payload to be operated on board the U.S. "Destiny" Laboratory on the ISS.

**TROPI:** The TROPI experiments include investigation of cellular mechanisms of phototropism in plants and determination of effects and influences of gravity on light perception in plants. The goal of the project is threefold:

The first goal is to characterize the novel red light-dependent positive phototropic system and the blue light-dependent phototropic system in roots and hypocotyls in the absence of the complicating negative effects of gravity. The second goal is to investigate the role of specific photoreceptors in the phototropic response. Finally, a secondary objective and technical goal is to optimize growth and developmental conditions for Arabidopsis in spaceflight hardware.

The TROPI experimental hardware has been developed by NASA, Ames Research Center.

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