

A short history of space biology

Each of the 44 expeditions to the International Space Station so far has taken biological experiments. Here's a taster of what's been done

EXPEDITION 3: August 2001

Cardiovascular conditioning

This study, led by the European Space Agency, studied cardiac regulation and the balance between the parasympathetic (rest-and-digest) and sympathetic (fight-or-flight) nervous responses in weightless conditions. It tested ways of counteracting some of the physiological symptoms and measuring their effects.

EXPEDITION 8: October 2003

Microbes

This study, led by the European Space Agency, looked at how we carry microbes into space, how they survive, adapt and multiply on the ISS, and where they grow most easily.

EXPEDITION 9: April 2004

Seeds in space

This international experiment looked at the influence of gravity and light on germination and growth of plants. In space, plants in the dark grew in all directions, while those in the light all grew toward the light.

EXPEDITION 17: April 2008

HIV/AIDS vaccine

This study, led by the Russian Federal Space Agency, investigated a vaccine for HIV/AIDS. It grew crystals of a protein 'candidate' for the vaccine under microgravity conditions.

EXPEDITION 35: March 2013

Radiation and reproduction

This experiment, led by the Japanese Space Agency, took freeze-dried mouse sperm to the ISS and exposed it to cosmic radiation, then returned it to Earth to fertilise eggs.

ABOUT THIS RESOURCE

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