



Cultivate.

Growing the vision since 1969.



BIOMEDICAL & LIFE SCIENCES

Valued for **health-related** investigations during and after space-flight, USRA scientists seek **medical breakthroughs** that can benefit **astronaut well-being** and by extension the health of society as a whole.

PHYSIOLOGY & FLIGHT ANALOGS

USRA scientists use ground-based analogs to test possible countermeasures such as nutrition, pharmacotherapeutics, and exercise, as efficient and cost-effective trials prior to using techniques in space.

NEUROPHYSIOLOGY

Research is focused on developing field tests of sensorimotor functions and rehabilitative countermeasures that can be self-administered during exploration missions.

SPACE RADIATION

Current research focuses on the increased risk of cancers, changes in motor function and behavior or neurological disorders, and other degenerative tissue defects due to exposure to high-energy charged particles.

NUTRITIONAL BIOCHEMISTRY

USRA scientists are working to determine nutrition requirements to maintain astronaut health for extended-duration spaceflight and are developing nutritional countermeasures to prevent or minimize the negative effects of long-duration spaceflight on the human body.

PHARMACOLOGY

USRA scientists in pharmacology are conducting research to improve crew health and well-being by identifying safe and effective pharmaceutical preparations, therapeutic procedures, and countermeasure strategies. Current efforts include testing new medication combinations to treat motion sickness and investigating radiation effects on the enzymes that metabolize administered drugs.

WHO ARE WE?

USRA is an independent, nonprofit research corporation where the combined efforts of in-house talent and university-based expertise merge to advance space science and technology. USRA works across disciplines including **biomedicine**, **astrophysics**, and **engineering** and integrates those competencies into applications ranging from **fundamental research** to **facility management** and **operations**. USRA engages the creativity and authoritative expertise of the research community to develop and deliver sophisticated, **forward-looking solutions** to Federal agencies and other customers - on schedule and within budget.

