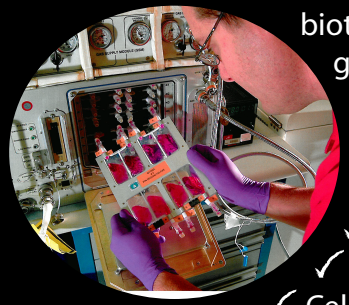
Who will...?

- ✓ **Evolve your research concepts to viable on-orbit experiments quickly and cost effectively**
- ✓ **Assist in design of experiments within the logistical and performance constraints of the spacecraft**
- ✓ **Create the documents required for space flight certification**
- ✓ **Ensure adherence to each step in the flight hardware certification process**
- ✓ **Test research equipment to specific standards required by the harsh, constrained environment of space travel**
- ✓ **Manage preflight, in-flight, and post-flight data to ensure the highest quality research**

...Wyle will!

When your science needs to leave Earth to reveal extraordinary insights to the human system, launch your journey with the scientists, engineers and mission planners responsible for designing and implementing research apparatus aboard spacecraft for the last 25 years. Since 1984, Wyle has been the premier provider of science management and integration services, benefiting scientists with the knowledge, experience, and tools needed to conduct world-class research.



ISS-based research equipment provides the ability to study emerging biotechnology issues relevant to the advancement of ground-based medicine and human performance. These research topics include:

- ✓ Genomics
- ✓ Proteomics
- ✓ Signal Transduction
- ✓ Mechanotransduction
- ✓ Cellular tensegrity

Space-based biotechnology research equipment have demonstrated an unprecedented ability to conduct cellular biotechnology investigations on two space shuttle, and three space station missions, ISS Expeditions 3, 4, & 5. Current space station capabilities include:

Biotechnology Specimen Temperature Controller

- ✓ Thermal and gas-controlled stationary bioreactor providing cell culture incubation
- ✓ Accommodation of up to 32 tissue cultures via "Cell Culture Flasks"
- ✓ CO_2 concentration monitoring

Quad Tissue Culture Modules Assemblies

- ✓ Supports multiple experiments as well as replicate experiments
- ✓ Supports experiment operations via cell fixation and the feeding of cell cultures

Gas Supply Module

- ✓ CO_2 enriched-gas purge capability
- ✓ Independent $O_2/CO_2/N_2$ gas mixture capability

Rotating Wall Perfused System

- ✓ Grows three-dimensional tissue cultures
- ✓ Supports long-term cell growth up to 120 days

Experiment Control Computer

- ✓ Data acquisition and resource control required for long-duration cell science and tissue engineering investigations

For more information on Wyle science implementation services, please contact our V.P. of Business Development, Vernon McDonald, Ph.D., at (281) 212-1200, or at VMcDonald@wylehou.com.

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