2025 Genes in Space

Detailed Scoring Criteria

I. Proposal relates to an open question or challenge relevant to space biology.
- Significance to humanity explained.
- Relevance to space exploration articulated.

II. Proposed experiment must have a clear rationale for conduct aboard the International Space Station.
- Experiments that could be conducted solely under Earth conditions will not be considered.

III. Selected space biology problem can be explored using molecular biology methods, and a specific molecular/genetic target has been identified for investigation.
- Specific molecular/genetic target for investigation is named.
- Target is relevant to the identified space biology problem.

IV. Hypothesis or research goal is clear and well-reasoned.
- Hypothesis or research goal demonstrates an understanding of prior work done in the field.
- Clearly explains how hypothesis or research goal will advance the field.

V. Experimental plan is clear and actionable.
- Experimental plan is appropriately detailed and specifies variables, samples, and controls.
- Experimental plan clearly conveys the nature of the data that will be collected.

VI. Experimental design makes sensible use of the Genes in Space Toolkit
- The experiment uses at least one of the toolkit options (miniPCR® thermal cycler, BioBits® cell-free protein expression system, P51™ Molecular Fluorescence Viewer).
- Rationale for using the selected tool(s) is accurate.
- Selected tool(s) will yield data addressing the identified space biology problem.

VII. Proposal communicates ideas clearly and convincingly.
- Writing is easy to follow.
- Arguments are engaging and persuasive.
- Writing is precise without significant logical leaps or the need for additional interpretation.