Introduction of the NASA Microgravity Research Library

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As opportunities for conducting experiments in space are rare, more studies have been published using ground-based analogs that simulate microgravity conditions. For example, when conducting a literature search in PubMed for peer-reviewed articles and studies that used simulated microgravity conditions, results will yield over 5,000 publications dating back to 1961.

The issue with this search technique and medium is that these articles are vast in quantity and spread out across multiple web-based databases, repositories, and libraries; some of which, are wholly inaccessible. For example, in PubMed for a single year, we found 1,000+ microgravity research articles among more than 12,000 general, space research articles; these, were within an overarching 350,000+ total, general medical research articles for just 2020.

The KSC Microgravity Simulation Support Facility (MSSF), with support from the KSC Information Technology (IT) Applications Development Team and the NASA Space Biology Program, took the initiative to develop a database that would serve as the central repository for existing microgravity research.

This repository site is open to the public and houses not only peer-reviewed publications relating to microgravity research, but also dissertations, technical publications such as white papers, NASA technical publications, and patent publications.

In this presentation, we will discuss some of our literature research findings as well as present a working prototype version of the Library. It is our goal that the future infrastructure of this database advance to become a fully-functional, NASA Space Life-Sciences Research Library.