# NASA Space Apps Challenge 2025: Build a Space Biology Knowledge Engine bioscholar.study

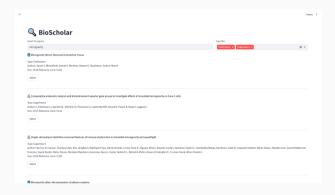
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Karlsruhe Institute of Technology

#### **Advanced Search**

- Search for topics in biology
- Get publications and experiments matching your query
- Results are ranked by relevance using OpenAI text-embedding-3-small



# Intelligent Q&A

- Ask questions about the paper
- Get answers by OpenAI's gpt-4o-mini with context (RAG)

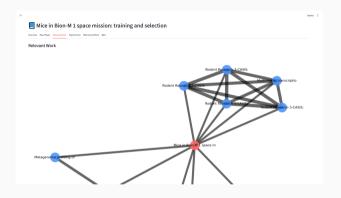




 Get supporting passages from the publication for more reliability

### **Semantic Graph View**

- Use of natural language processing allows for linking similar resources
- Allows to link arbitrary semantically related resources (like papers and experiments), making it more powerful than e.g.
- Get relevant similar resources with the use of an adapted version of Google's page rank algorithm



# **Cross-Referencing**

- BioScholar supports different types of resources, and connections between them
- Find publications referencing experiments. . .





...and experiments referencing publications

### **Integrated PDF Viewer**

- View publications directly on BioScholar
- Available for all publications with a known link to a .pdf

