

**NASA  
INSTITUTIONAL  
SCIENTIFIC  
COLLECTION (ISC) AT  
AMES RESEARCH  
CENTER**

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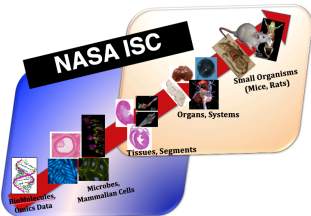
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**OVERVIEW:**

- The NASA Institutional Scientific Collection (ISC) is host to flight biospecimens (~30,000 samples) that are curated and managed by the Ames Life Sciences Data Archive (ALSDA).
- The biospecimens are collected and made available for request through NASA's ISC Biospecimen Sharing Program (BSP).
- Goals are to maximize the scientific return from biological spaceflight investigations and encourage broader participation of the research community in space biology-related research.

**WHAT TISSUES AND DATA?**

1. Specimens from organisms flown on COSMOS, Shuttle, International Space Station and also from ground spaceflight-model experiments.
2. Various specimens: bone, muscle, organ tissues, as well as extracted DNA and RNA, from mice, rats, bacteria, and quail.
3. Samples are stored at -80°C or +4°C, depending on fixative.
4. Detailed metadata are available for all samples.
5. These tissues have been used for a wide range of analyses, including histology, genomics, and transcriptomics.



# Non-Human Space Flown Biospecimens Available for Research



Take a picture to download the link for more information



**WHO CAN REQUEST TISSUES?**

- Tissues from the NASA ISC at Ames are available for request by **ALL researchers**, including those based outside the United States.
- Often requested by space biology researchers
- Are of interest to interdisciplinary researchers and those studying disease processes
  - Muscle Atrophy, Bone Demineralization, etc.
- Teachers at all levels are encouraged to apply for tissues (especially older mission tissues), for classroom demonstrations and student projects.

**HOW DO I REQUEST TISSUES?**

- Tissues can be requested at any time.
- The request is initiated by submitting an online Data Request.
  - <https://lsda.jsc.nasa.gov/Request/dataRequest>
- If the requestor currently has a NASA grant, it should be referenced in the request.
- ALSDA will confirm receipt of the request and answer any questions.
- If the requested tissues are available, the requestor will be sent instructions for submission of a short proposal.
- Proposals are assessed based on merit, taking into account the significance, approach, and innovation of the proposed research, the requestor's expertise and productivity, and the scientific environment in which the research will take place.
- Requestors are expected to have their own funding to analyze the biospecimens.

**WHERE CAN I LEARN MORE?**

- The full archive of tissues is searchable online using the Biospecimen Search function on the LSDA webpage to browse the tissue database. Click on the "Details" link for any specimen in search results to view detailed metadata.

[www.nasa.gov/ames/research/space-biosciences/isc-bsp](http://www.nasa.gov/ames/research/space-biosciences/isc-bsp)

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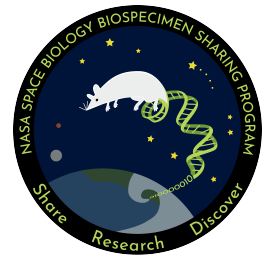


Photo Credits: Waxing Crescent Moon from ISS, ExS9, NASA (Top)  
InSight Images a Sunset on Mars, NASA/JPL-Caltech (Bottom)