

# Scientists Propose Lunar Storage

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Scientists have **proposed** a new idea to protect **endangered** species: a **biorepository** on the moon. This vault would store **preserved** samples of animals and plants that are at risk of extinction. Climate change and habitat loss are making it difficult to save species in their natural habitats. A biorepository on the moon could help maintain **genetic diversity** or even bring back extinct species through **cloning**.

The **concept** is similar to the Svalbard seed vault in Norway, which preserves seeds to **safeguard** important crops. However, Svalbard has **experienced** flooding due to warmer temperatures, showing that even it is not completely safe.

Dr. Mary Hagedorn, the proposal's lead author, says the moon vault would be safe from climate change and wars. The moon's cold environment would keep the samples frozen without needing energy. This is **crucial** for preserving living cells needed for cloning.

While creating a lunar biorepository poses many challenges, scientists have already successfully used **cryopreservation** to store living cells. Dr. Hagedorn believes the project is **achievable**, though it may take decades. The next steps include developing space-resistant packaging for the samples and planning their transport to the moon. The scientists hope this proposal will **spark** new ideas and **partnerships** for protecting biodiversity.

## Vocabulary and Definitions (CEFR B1)

1. **Proposed:** Suggested a plan or idea.
2. **Endangered:** At risk of extinction.
3. **Biorepository:** A place where biological samples are stored.
4. **Preserved:** Kept in its original state; protected from decay.
5. **Genetic diversity:** The range of different genes within a species.
6. **Cloning:** Creating a genetically identical copy of an organism.
7. **Safeguard:** To protect from harm.
8. **Concept:** An idea or plan.
9. **Experienced:** Encountered or went through a particular event.

10. **Crucial:** Extremely important or necessary.
11. **Achievable:** Possible to accomplish.
12. **Cryopreservation:** Preserving cells or tissues by freezing them at very low temperatures.
13. **Spark:** To cause something to start or develop.
14. **Partnerships:** Cooperative relationships between individuals or groups.

## Simple Discussion Questions

1. Why do scientists want to build a biorepository on the moon?
2. What is the purpose of the Svalbard seed vault in Norway?
3. What are the main challenges scientists face in creating the lunar biorepository?

## True or False Questions

1. Scientists have proposed building a biorepository on the moon to protect endangered species. (True/False)
2. The moon vault would require a lot of energy to keep the samples frozen. (True/False)
3. The Svalbard seed vault is completely safe from all types of climate change. (True/False)
4. Dr. Hagedorn believes the lunar biorepository project is achievable. (True/False)
5. Cryopreservation involves preserving cells by heating them to high temperatures. (True/False)

## Cloze Quiz

Scientists have \_\_\_\_\_ a new idea to protect \_\_\_\_\_ species: a \_\_\_\_\_ on the moon. This vault would store \_\_\_\_\_ samples of animals and plants that are at risk of \_\_\_\_\_. Climate change and \_\_\_\_\_ are making it difficult to save species in their natural habitats. A biorepository on the moon could help maintain \_\_\_\_\_ or even bring back extinct species through \_\_\_\_\_.

The \_\_\_\_\_ is similar to the Svalbard seed vault in Norway, which preserves seeds to \_\_\_\_\_ important crops. However, Svalbard has \_\_\_\_\_ flooding due to warmer temperatures, showing that even it is not completely safe.

Dr. Mary Hagedorn, the proposal's lead author, says the moon vault would be safe from climate change and wars. The moon's cold environment would keep the samples frozen without needing energy. This is \_\_\_\_\_ for preserving living cells needed for cloning.

While creating a lunar biorepository poses many challenges, scientists have already successfully used \_\_\_\_\_ to store living cells. Dr. Hagedorn believes the project is \_\_\_\_\_, though it may take decades. The next steps include developing space-resistant packaging for the samples and planning their transport to the moon. The scientists hope this proposal will \_\_\_\_\_ new ideas and \_\_\_\_\_ for protecting biodiversity.

## Quiz Answers

1. Scientists have proposed building a biorepository on the moon to protect endangered species. True
2. The moon vault would require a lot of energy to keep the samples frozen. False
3. The Svalbard seed vault is completely safe from all types of climate change. False
4. Dr. Hagedorn believes the lunar biorepository project is achievable. True
5. Cryopreservation involves preserving cells by heating them to high temperatures. False