



# Cryopreservation method for millimeter scale biological samples using Cryomesh

**A cryopreservation method that uses cryomesh and cryopreservation agents to preserve *Drosophila* embryos.**

**IP Status:** Provisional Patent Application Filed

## Applications

- Cryopreservation

## Overview

*Drosophila* stocks must be maintained through the frequent and repeated transfer of breeding *Drosophila*. This manual maintenance is time consuming and costly; it places the stocks at risk for genetic drift or the accumulation of mutations; and it threatens the loss of a line from poor reproductive capacity, accidental mixing of stocks, or contaminations. To address this issue, researchers at the University of Minnesota have developed a simple and robust cryopreservation protocol for *Drosophila melanogaster* embryos such that the embryos can be stored in liquid nitrogen without requiring costly maintenance. The protocol uses cryoprotectant agents (CPA) and a novel cryomesh that facilitates handling of large quantities of samples.

## Phase of Development

### TRL: 3

Approach currently being tested in several *drosophila* strains. In vitro testing for islets.

## Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

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## Researchers

- [Thomas Hays, PhD](#), Professor, Department of Genetics
- [John Bischof, PhD](#), Professor, Department of Mechanical Engineering

## References

1. Zhan, Li, Min-gang Li, Thomas Hays, and John Bischof. , <https://10.1038/s41467-021-22694-z>, Nature communications 12, no. 1 (2021): 1-10.

## Technology ID

2021-019

## Category

Engineering & Physical  
Sciences/Processes  
Life Sciences/Industrial Biotech  
Life Sciences/Research Tools  
Cryopreservation

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