UNIVERSITY OF MINNESOTA
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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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