

New method to thaw frozen frog sperm produces better swimmers

May 17 2023



Dr Rose Upton in a University of Newcastle lab with a Littlejohn's tree frog.
Credit: Newcastle University

Scientists have uncovered a superior method of freezing and thawing frog sperm leading to improved sperm quality. Driven by mass declines

of frogs worldwide, research into cryopreservation of amphibian sperm has expanded for the purposes of conservation.

The finding drastically alters scientific understanding of amphibian sperm cryobiology and has significant implications for the application of sperm cryopreservation to the management of genetic diversity within both captive and [wild populations](#) of threatened frogs worldwide.

Led by University of Newcastle reproductive biologist, Dr. Rose Upton, the study finds using less sucrose—or sugar—in the freezing process facilitates much higher cell recovery resulting in more intact membranes and [sperm motility](#) to produce better swimmers. The research has been published in the journal *Reproduction*.

Sperm was tested from six [frog species](#), and in all cases the new preferred thawing method was found to be superior to the traditional cryopreservation method.

More information: Rose Upton et al, Paradigm shift in frog sperm cryopreservation: reduced role for non-penetrating cryoprotectants, *Reproduction* (2023). [DOI: 10.1530/REP-22-0486](https://doi.org/10.1530/REP-22-0486)

Provided by Newcastle University

Citation: New method to thaw frozen frog sperm produces better swimmers (2023, May 17) retrieved 5 May 2024 from

<https://phys.org/news/2023-05-method-frozen-frog-sperm-swimmers.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.