

# Bringing endangered species back from the brink

March 26 2019

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Credit: AI-generated image ([disclaimer](#))

A technique to produce eggs from ovarian tissue in the lab may offer hope for critically endangered species like the Northern White Rhino that have passed what is currently considered the point of no return.

A research team at the University of Oxford has begun work to find a

new way of saving the Northern White Rhino by using tissue taken from animal ovaries to produce potentially large numbers of eggs in a laboratory setting.

Led by Dr. Suzannah Williams, researchers working on the Rhino Fertility Project will refine the method that she has successfully demonstrated in mice. Rhino tissue is scarce and precious—however, [ovarian tissue](#) has been obtained by Dr. Williams from a euthanased Southern White Rhino which provides the foundation for the work.

The research is being funded by Mr André Hoffmann, via Fondation Hoffmann.

The desperate plight of the Northern White Rhino has highlighted the precarious situation of many [endangered species](#) around the world. Previous breeding programmes had been successful in raising their numbers but the animals were destroyed by poachers. The world's last remaining male died in 2018 leaving just two female [rhinos](#), Najin and her daughter Fatu, neither of which are capable of producing offspring naturally.

Although sperm has been saved by conservationists from male Northern White Rhinos, any successfully fertilised eggs would have to be raised in a surrogate mother – most likely a Southern White Rhino, one of their closest living relatives.

Dr. Suzannah Williams of Oxford's Nuffield Department of Women's & Reproductive Health, said: "With the death of the last male, Sudan, the Northern White Rhino has passed the point where it can be saved naturally and is a shade away from extinction. This will add yet another [species](#) to the list of those wiped out by humans.

"What is exciting about this research is that it could enable us to pull

critically endangered species back from the brink by utilising ovarian [tissue](#) from old or injured animals to produce offspring.

"Once genetic variation within a population has been lost, it is lost forever. This makes it important for us to be able to maintain as many breeding individuals as possible in any conservation programme, to maximise genetic diversity of future populations. This will be a huge buffer against disease and ill health in the long-term, and give the new herds better genetic ability to adapt to changing environments in the future."

Dr. Suzannah Williams added: "Some researchers are exploring the possibility of using the remaining Northern White Rhino sperm to cross-breed with Southern White Rhinos to create a hybrid population, but I think we should focus on preserving the Northern White Rhino as the unique species it is, and this project enables us to move directly towards this goal.

"If successful, this technique would be a powerful tool in the global effort to conserve endangered species."

Provided by University of Oxford

Citation: Bringing endangered species back from the brink (2019, March 26) retrieved 26 April 2024 from <https://phys.org/news/2019-03-endangered-species-brink.html>

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