

A rhino got pregnant from embryo transfer, in a success that may help nearly extinct subspecies

January 28 2024, by Tom Odula



In this photograph released by the Leibniz Institute for Zoo and Wildlife Research, Dr. Thomas Hildbrandt, head of projects, holds a white rhinoceros embryo that was created in a lab from an egg and sperm that had been previously collected from other rhinos and later transferred into a southern white rhino surrogate mother, in Kenya Nov. 29, 2023. A rhinoceros is pregnant through embryo transfer in the first successful use of a method that conservationists said

could be used to try to save the nearly extinct northern white rhino subspecies.
Credit: Jon Juarez/IZW via AP

Researchers say a rhinoceros was impregnated through embryo transfer in the first successful use of a method that they say might later make it possible to save the nearly extinct northern white rhino subspecies.

The experiment was conducted with the less endangered southern white rhino subspecies. Researchers created an embryo in a lab from an egg and sperm collected from rhinos and transferred into a southern white rhino surrogate mother at the Ol-Pejeta Conservancy in Kenya.

"The successful [embryo transfer](#) and pregnancy are a proof of concept and allow (researchers) to now safely move to the transfer of [northern white rhino](#) embryos—a cornerstone in the mission to save the northern white rhino from extinction," the group said in a statement Wednesday.

However, the team learned of the pregnancy only after the surrogate mother died of a bacterial infection in November 2023. The rhino was infected when spores from the clostridium strain were released from the soil by floodwater, and the embryo was discovered during a post-mortem examination.

Still, the scientists were optimistic about their finding, though some conservationists are skeptical that the breakthrough has come in time to save the northern white rhino.

"Now we have the clear evidence that an embryo that is frozen, thawed, produced in a test tube can produce new life and that is what we want for the northern white rhino," said Thomas Hildebrandt, the lead researcher and head of the Department of Reproduction at BioRescue.



This photograph released by the Leibniz Institute for Zoo and Wildlife Research shows a white rhinoceros embryo that was created in a lab from an egg and sperm that had been previously collected from other rhinos and later transferred into a southern white rhino surrogate mother, in Kenya Nov. 29, 2023. A rhinoceros is pregnant through embryo transfer in the first successful use of a method that conservationists said could be used to try to save the nearly extinct northern white rhino subspecies. Credit: Jon Juarez/IZW via AP

Roughly 20,000 southern white rhinos remain in Africa. That subspecies as well as another species, the black rhino, are bouncing back from significant reduction in their populations due to poaching for their horns.

However, the northern white rhinoceros subspecies has only two known

members left in the world.

Najin, a 34-year-old, and her 23-year-old offspring, Fatu, are both incapable of natural reproduction, according to the Ol-Pejeta Conservancy where they live.

The last male white rhino, Sudan, was 45 when he was euthanized in 2018 due to age-related complications. He was Najin's sire.

Scientists stored his semen and that of four other dead rhinos, hoping to use them in in vitro fertilization with eggs harvested from female northern white rhinos to produce embryos that eventually will be carried by southern white rhino surrogate mothers.



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Some [conservation groups](#) have argued that it is probably too late to save the northern white rhino with in vitro fertilization, as the species' natural habitat in Chad, Sudan, Uganda, Congo and Central African Republic has been ravaged by human conflict.

Skeptics say the efforts should focus on other critically [endangered species](#) with a better chance at survival.

"News of the first successful embryo transfer in a rhino is an exciting step, however it sadly comes too late to recreate a viable population of northern white rhinos," said Dr. Jo Shaw, CEO of Save the Rhino International.

Shaw said her group's focus remains on addressing the two main threats to the five species of rhino around the world—poaching of rhinos for their horns and their loss of habitat to development.

"Our best hope remains to work with the range of partners involved to give [rhinos](#) the space and security they need to thrive naturally," she said.



In this photograph released by the Leibniz Institute for Zoo and Wildlife Research, Dr. Thomas Hildbrandt, head of projects, right, holds a white rhinoceros embryo that was created in a lab from an egg and sperm that had been previously collected from other rhinos and later transferred into a southern white rhino surrogate mother, in Kenya Nov. 29, 2023. A rhinoceros is pregnant through embryo transfer in the first successful use of a method that conservationists said could be used to try to save the nearly extinct northern white rhino subspecies. Credit: Jon Juarez/IZW via AP



Keeper Zachariah Mutai attends to Fatu, one of only two northern white rhinos left in the world, in the pen at the Ol Pejeta Conservancy in Laikipia county in Kenya. Fatu is incapable of natural reproduction. The last male white rhino, Sudan, was 45 when he was euthanized in 2018 due to age-related complications. In testing with another subspecies, researchers created a southern white rhino embryo in a lab from an egg and sperm that had been previously collected from other rhinos and transferred it into a southern white rhino surrogate mother at the Ol-Pejeta Conservancy in Kenya. The team only learned of the pregnancy after the surrogate mother died of a bacterial infection in November 2023. Credit: AP Photo/Sunday Alamba, File



Female northern white rhinos Fatu, 19, right, and Najin, 30, left, the last two northern white rhinos on the planet, graze in their enclosure at Ol Pejeta Conservancy, Kenya, on Aug. 23, 2019. Both are incapable of natural reproduction. The last male white rhino, Sudan, was 45 when he was euthanized in 2018 due to age-related complications. In testing with another subspecies, researchers created a southern white rhino embryo in a lab from an egg and sperm that had been previously collected from other rhinos and transferred it into a southern white rhino surrogate mother at the Ol-Pejeta Conservancy in Kenya. The team only learned of the pregnancy after the surrogate mother died of a bacterial infection in November 2023. Credit: AP Photo/Ben Curtis, File



Female northern white rhinos Fatu, 19, left, and Najin, 30, right, the last two northern white rhinos on the planet, graze in their enclosure at Ol Pejeta Conservancy in Kenya on Aug. 23, 2019. Both are incapable of natural reproduction. The last male white rhino, Sudan, was 45 when he was euthanized in 2018 due to age-related complications. In testing with another subspecies, researchers created a southern white rhino embryo in a lab from an egg and sperm that had been previously collected from other rhinos and transferred it into a southern white rhino surrogate mother at the Ol-Pejeta Conservancy in Kenya. The team only learned of the pregnancy after the surrogate mother died of a bacterial infection in November 2023. Credit: AP Photo/Ben Curtis, File



A ranger reaches out towards female northern white rhino Najin, 30, one of the last two northern white rhinos on the planet, in her enclosure at Ol Pejeta Conservancy in Kenya on Aug. 23, 2019. Najin is incapable of natural reproduction. The last male white rhino, Sudan, was 45 when he was euthanized in 2018 due to age-related complications. In testing with another subspecies, researchers created a southern white rhino embryo in a lab from an egg and sperm that had been previously collected from other rhinos and transferred it into a southern white rhino surrogate mother at the Ol-Pejeta Conservancy in Kenya. The team only learned of the pregnancy after the surrogate mother died of a bacterial infection in November 2023. Credit: AP Photo/Ben Curtis, File



The last remaining two northern white rhinos Fatu, left, and Najin, above-center, feed on hay with southern white rhino Tauwo, right, at the Ol Pejeta conservancy in Kenya on May 1, 2020. Both northern white rhinos are incapable of natural reproduction. The last male white rhino, Sudan, was 45 when he was euthanized in 2018 due to age-related complications. In testing with another subspecies, researchers created a southern white rhino embryo in a lab from an egg and sperm that had been previously collected from other rhinos and transferred it into a southern white rhino surrogate mother at the Ol-Pejeta Conservancy in Kenya. The team only learned of the pregnancy after the surrogate mother died of a bacterial infection in November 2023. Credit: AP Photo/Khalil Senosi

Her group said it continues to encourage natural breeding to boost numbers. It cited the example of the Sumatran rhino, which has fewer than 80 animals left. Last year, [two calves were born](#) through natural

reproduction, the group said.

Correction note (1/28/2024): Corrects previous version of this story that said pregnant rhino is alive and expected to give birth by the end of next year.

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