‘Only hope left’: Is it too late for gene editing to rescue Australia’s endangered marsupial northern quoll?

In a laboratory in the University of Melbourne earlier this year, PhD student Pierre Ibri was running an experiment that could prove to be a critical step in an audacious plan to save Australia’s endangered northern quoll.

In plastic trays were groups of tissue cells of another Australian marsupial – the common and mouse-like fat-tailed dunnart – that he was subjecting to the toxin of the cane toad, an invasive amphibian that has cut a swathe through populations of native animals in Australia’s north.

Except some of these cells were different.

They had been genetically tweaked by a team of scientists at the University of Melbourne and Colossal Biosciences to have the same resistance to the toad’s bufotoxin that other mammals elsewhere in the world have managed to develop over millions of years of evolution.

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“We were trying to demonstrate the cells had this resistance,” says Dr Stephen Frankenberg, a synthetic biologist and Ibri’s supervisor. “They did – something in the order of 45 times more resistant.”

What happens next could, the team hopes, lead to a revolution for conservation – the creation of a mammal genetically modified to deal with a threat that is now helping send it towards extinction.

This is an excerpt. Read the original post here