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Chinese researchers use gene editing to remove small bones from carp

11 February 2023 | News

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The fish was created by gene editing and, according to the institute and a report from China Daily, settles a 50-year-old debate over whether intermuscular bones can be regenerated. The researchers focused on the carp, a bony freshwater fish farmed throughout Eastern Europe and Asia. Although this species is a popular aquaculture product, the bones between its small muscles make it difficult to eat and process on a large scale. Leveraging gene editing to remove bone between muscles could make fish more competitive and offer more commercial opportunities, according to an analysis in *China Daily* .

A team at the Heilongjiang Fisheries Research Institute embarked on the project in 2009 and identified a key gene that regulates the development of the backbone between the muscles of the carp - bmp6. The biologists were able to successfully knock out this gene without seeing a negative impact on fish reproduction and growth levels.

"In 2020, we have successfully raised the first generation of carp without intercalated carp with a success rate of 12.96%. The second generation in 2021 has a success rate of 19%." Kuang Youyi, a researcher in the group said. "In early 2022, we stocked about 20,000 third-generation fish at our test facility in Harbin, the capital of Heilongjiang province, and started large-scale breeding.