



White Otter Biotech Co-Founders Publish Genomics Research Advancing Arctic Fish Monitoring

Winnipeg, MB, October 28, 2026 – White Otter Biotech is proud to highlight the publication of genomics research conducted by its Co-Founders which helped lay the foundation for establishing the company. The Stetefeld Group (University of Manitoba) published *Environmental DNA metabarcoding for identifying fish communities near established and developing mines in the Canadian Arctic* in the journal *Arctic Science*, demonstrating how environmental DNA (eDNA) technology can transform biodiversity monitoring across remote northern locations. The work was completed in collaboration with Agnico Eagle Mines and the Kivalliq Inuit Association.

In the Kivalliq region of Nunavut, freshwater fish communities are fundamental to traditional Inuit life, culture, and local food security. As mining and resource development accelerate in the North, understanding their potential effects on fish communities is especially important. Current fish monitoring methods can be costly, invasive, and may miss rare or endangered species. These challenges are even greater in the Canadian Arctic, where the field season is short and many locations are difficult to access.

In the study, eDNA, or genetic material left behind by fish in lake water, was used to identify fish species near Agnico Eagle Mines' Meadowbank and developing Amaruq mining operations in Kivalliq, Nunavut. Researchers collected environmental DNA from Third Portage Lake and used DNA sequencing to identify the fish species present. Over three years, at least five different fish species were identified each year, including pygmy whitefish, a fish not previously detected in Nunavut.

Researchers also collected samples from six lakes near the Amaruq site before and after its expansion, which temporarily connected several previously separate lakes. Using DNA sequencing, researchers found changes in the number of fish species detected in the affected lakes following the expansion.

Overall, this study demonstrates how eDNA metabarcoding can be used to monitor fish communities near operating and developing mines in the Canadian Arctic. The open-access publication is available directly on *Arctic Science*: doi.org/10.1139/as-2025-0094.

About White Otter Biotech

White Otter Biotech is a Winnipeg-based biotechnology company specializing in environmental genomics. The company develops innovative molecular tools to detect and track biodiversity, enabling efficient, accurate, and scalable assessment of wildlife and fish populations. White Otter Biotech collaborates with partners from industry, academia, and conservation organizations to deliver solutions that enable economic growth with strong environmental stewardship.

Contact information

info@whiteotterbiotech.com