ROSLIN Technologies

UKRI Biotechnology and Biological Sciences Research Council

ROSLIN INNOVATION CENTRE

Developing Tomorrow's Salmon: Collaborative stem-cell engineering for sustainable aquaculture

Roslin Technologies

Roslin Technologies is a leading agri-biotech company developing advanced pluripotent animal stem cell lines to accelerate the global cultivated meat sector. By providing stable, scalable and high-performing cells, the company enables food manufacturers to produce sustainable, ethical protein with reduced environmental impact. Roslin Technologies combines deep expertise in animal science, genome engineering and cell biology to drive innovation in cellular agriculture.

Based at the Roslin Innovation Centre, the company benefits from world-class researchers, advanced laboratories and a collaborative agri-tech ecosystem, enabling rapid experimentation.

The global demand for salmon continues to rise as consumers seek healthy, high-quality protein sources. Cultivated salmon offers a sustainable and innovative approach to meeting this demand by producing rea salmon meat directly from cultured cells in a controlled, biosecure environment. This technology enables consistent, scalable production independent of ocean conditions, seasonal limitations, or coastal space constraints, knowledge exchange and commercial translation to scale its platform for future food systems.

By reducing reliance for the need for open-water farming, cultivated salmon significantly reduces environmental impact, including pressure on marine ecosystems, waste discharge, and reliance on wild fish for feed. It also allows for precise control over quality, nutrition, and food safety while supporting long-term food security. Overall, cultivated salmon represents a resilient, resource-efficient solution for delivering the taste and nutritional benefits of salmon with a smaller ecological footprint.

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The **Campus Innovation Award** funding was critical in enabling Roslin Technologies to initiate the development of a robust and scalable Atlantic salmon cell line, a foundational requirement for advancing cellular aquaculture. The award provided access to specialised facilities for the culture of early-stage embryonic material and expert guidance from leading marine species biologists at the Roslin Institute, resources that were previously unavailable to the company.

Through this collaboration, Roslin Technologies was able to isolate embryo-derived cells, supported by the Roslin team's expertise in salmon embryogenesis.

CIA funding significantly expanded the project's scientific scope, allowing systematic identification of the most promising developmental stages for isolating novel early embryonic cell lines. The project has generated valuable insights into salmon cell culture and set the stage for creating novel tools and cell lines with long-term applications in cultivated meat but also in aquaculture health, genetic research and Salmon derived health and beauty products.

The collaboration with Roslin Institute researchers has strengthened technical capability, accelerated progress and established a strong foundation for future joint R&D

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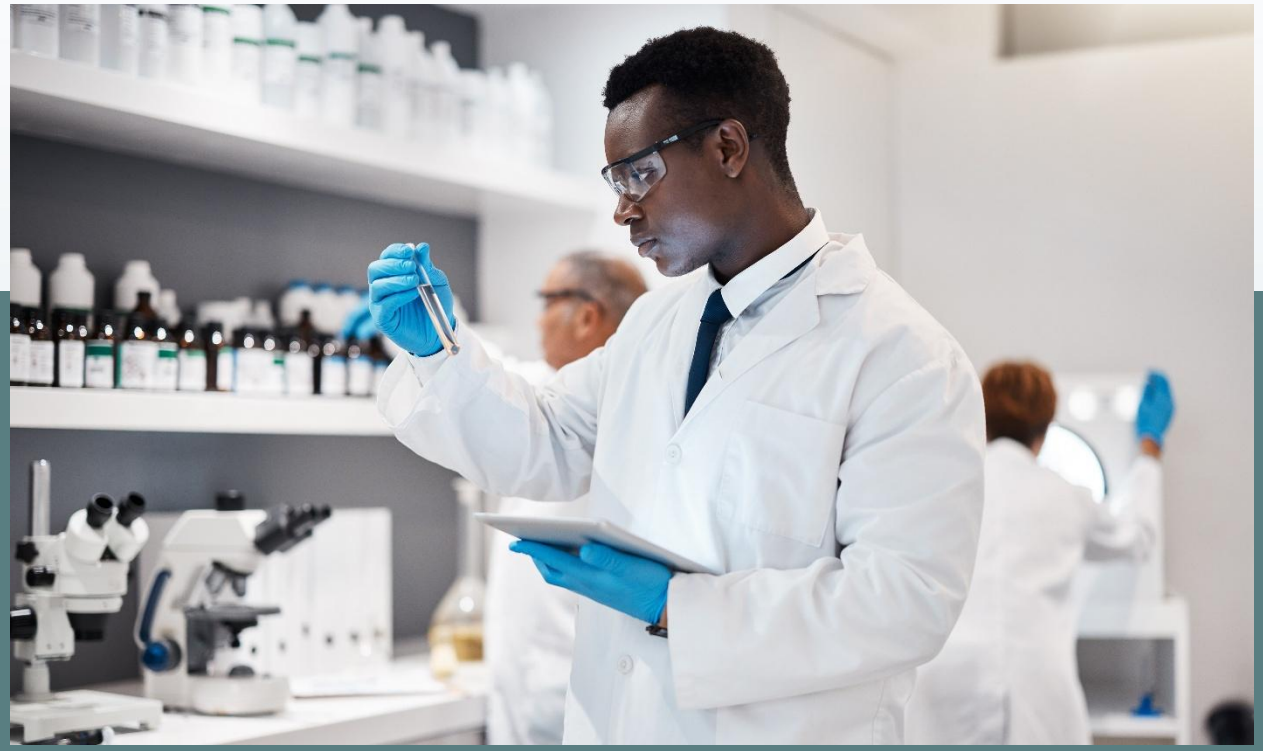

"CIA funding gave us access to essential expertise and facilities, enabling breakthrough progress in developing completely novel salmon cell lines and strengthening our collaboration with the Roslin Institute to drive future innovation"

Joe Mee, VP Cell Innovation of Roslin Technologies Ltd.