

Engineering Animal-Free Bioactive Milk Proteins for Preventive Health & Longevity

PRECISION FERMENTATION · BIOACTIVE PROTEINS · HEALTHY AGEING · B2B INGREDIENT PLATFORM · TRL 3/4
· INNOVATE UK FUNDED

INDUSTRY

- Precision fermentation biotechnology
- Recombinant human lactoferrin (hLF)
- B2B bioactive proteins ingredient platform

LEADERSHIP

Milena Hutchings

Founder & CEO — Vision, Strategy, capital formation

Chris Carter

CTO — 25+ years GMP bioprocess & fermentation scale-up

Edward Hutchings

CSO — PhD candidate, Cambridge Medical Research

Naz Bashir

Advisory — Executive & Director at Evolutia Venture Partners

David Hutchings

Advisory — Life sciences capital strategy

OPERATIONS

- Laboratory at Discovery Park, Kent
- Head office, London

KEY MILESTONES ACHIEVED

- ✓ Winning and executing a IUK funding round — only ~2% success rate
- ✓ Phase 1 complete — MVP, proof of concept, TRL 3/4
- ✓ Bench-scale precision fermentation demonstrated (3L bioreactor)
- ✓ Protein identity confirmed via MS/LC-MS/MS at King's College London
- ✓ IP programme initiated; AI/ML fermentation optimisation developed
- ✓ ~£500k non-dilutive and private funding secured to date

FUNDING

- £500k secured — pre-seed complete
- Entering £2m Seed funding stage — to support food-grade scale-up & regulatory initiation
- Planned follow-on Series A funding stage to support commercial scale-up and regulatory advancement

CONTACT DETAILS

Milena Hutchings - Founder | CEO

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EXECUTIVE SUMMARY

MilaK Bio Ltd is a UK-based precision fermentation biotechnology company engineering sustainable, animal-free bioactive milk proteins to support healthy ageing and metabolic resilience. Our lead programme develops **recombinant human lactoferrin (hLF)** — produced via precision fermentation with up to 90% lower CO₂ than conventional dairy — targeting applications supporting immunity, metabolic resilience, and healthy ageing.

90%	~0.5m	€36-60B
Lower CO ₂ vs conventional dairy lactoferrin	Innovate UK supported Pre-Seed round completed	Global TAM - precision fermented proteins

MARKET OPPORTUNITY & UNMET NEED

Immune capacity, iron homeostasis, metabolic resilience and lean muscle mass evolve progressively across adulthood - creating a vast, underserved clinical and nutritional need in ageing populations globally.

Bovine lactoferrin from traditional dairy production remains CO₂-intensive, supply-constrained, and dependent on dairy extraction. Critically, it is allergenic to humans and lacks the same biological activity as recombinant human lactoferrin.

No precision-fermented human lactoferrin platform currently exists engineered specifically for the immunity–iron–metabolic axis. MilaK is building it, meet Savii.

MILAK PIPELINE

CORE PLATFORM	INTERIM PRODUCT
Precision-fermented hLF multi-pathway system. B2B ingredient licensing to medical nutrition, longevity, and performance brands.	Functional nutrition products supporting early market entry and revenue generation. Savii aimed at the emerging GLP1 market – human studies scheduled in 2027.

SCIENTIFIC & STRATEGIC ECOSYSTEM

King's College London	Canterbury Christ Church University	Manchester Metropolitan University
Discovery Park, Kent	Isomerase (CRO)	CPI (planned)
ESSNA	BioSafe	Innovate UK

CURRENT STRATEGIC PRIORITIES

Food-Grade Scale-Up	Regulatory Pathway	Healthy Ageing
Transition to food-grade fermentation facility (200L bioreactor)	Novel Foods UK FSA / EU EFSA; US GRAS pathway; ASIA regulatory pathways	GLP-1 user support; medical nutrition, longevity, and functional foods
IP Development	International Collaboration	Seed Round
Multi-pathway synergistic system patent initiated	Asia collaborations; Manufacturing partnerships, R&D, ecosystem integration	Active VC, angel, and strategic investor pipeline

APAC — RELEVANT APPLICATIONS

Exploring future applications across **preventive health, longevity, GLP-1 user market, functional foods, premium wellness products** - aligned with the themes of the Hainan Free Trade Port Healthcare Forum and the Yangtze River Delta life sciences ecosystem. Seeking investment, long-term manufacturing, R&D, and commercial partnership opportunities in APAC.