

Micra

AI-Powered Microbial Intelligence for a Regenerative Future

Vision

Micra empowers global innovation in microbiome-based agriculture, food systems, and health through a secure, AI-driven, and decentralized bio-innovation network.

The Challenge

Microbiome science holds the key to soil health, plant productivity, gut resilience, and food transformation-but development is siloed, IP is fragile, and applications lack personalization.

The Solution

A quantum-safe, AI-powered platform for microbiome optimization and decentralized co-discovery.

Micra integrates:

- AI-powered Microbiome OS for precision consortia design
- Blockchain/IPFS layer for protected, traceable innovation
- Quantum-safe encryption for future-proof security
- Tokenized reward & governance system (optional DAO)

Use Cases

- AI-designed microbial blends for climate-resilient crops
- Tailored fermentation cultures for food & wellness
- Custom probiotic solutions based on health & geography
- Global open innovation via a secure bio-IP network

Tech Stack Overview

- AI models (genomic + environmental pattern recognition)
- Blockchain smart contracts (ownership, licensing)
- Federated learning for privacy-safe model training
- Quantum-safe cryptography for data protection
- IPFS for decentralized molecular data storage

Impact

- Boost food system resilience
- Accelerate equitable bio-innovation
- Regenerate soil & biodiversity
- Empower decentralized biotech collaboration

Fundability

Micra

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Aligned with Horizon Europe, Digital Europe, EIC Pathfinder, Mission Soil, and Bio-Based Industries Joint Undertaking (BBI-JU).