NeuraBio — Personalized Longevity Intelligence Platform

The Bloomberg Terminal for Human Healthspan

"Your biology, decoded. Your lifespan, optimized."

Executive Summary

NeuraBio is an AI-powered longevity intelligence platform that transforms multi-omics data into actionable, personalized healthspan optimization strategies. We're building the definitive operating system for human longevity—combining genomics, proteomics, metabolomics, and continuous biomarker monitoring with cutting-edge AI to give every individual a science-backed roadmap to live longer, healthier lives.

The Pitch: What if you could see your biological age in real-time, understand exactly which interventions work for YOUR unique biology, and have an AI continuously optimizing your healthspan like a trading algorithm optimizes a portfolio?

The Problem

The $4.2 Trillion Healthcare System Is Reactive, Not Proactive

1. **Medicine treats sickness, not aging** — 90% of healthcare spend goes to managing chronic diseases that could have been prevented
2. **One-size-fits-all doesn't work** — The same supplement that extends one person's life can harm another
3. **Data silos everywhere** — Your 23andMe, bloodwork, wearables, and medical records never talk to each other
4. **Information overload** — 10,000+ longevity studies published yearly; impossible for individuals to parse
5. **No feedback loops** — People try interventions with no way to measure if they're actually working

The Longevity Gold Rush Has No Infrastructure

The longevity market is exploding: - **$600B+ market by 2027** (growing 8.5% CAGR) - **Billions in VC** flowing to longevity biotech (Altos Labs: $3B, Calico: $2.5B) - **Wealthy early adopters** spending $50K-$500K/year on optimization - **Life insurance companies** desperate for better mortality prediction

Yet there's no unified platform connecting the dots.

The Solution

NeuraBio: Your Personal Longevity Command Center

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                    NEURABIO PLATFORM


    DATA LAYER              INTELLIGENCE LAYER      ACTION LAYER


    • Genomics              • AI Biomarker          • Personalized
    • Proteomics              Analysis                Protocols
    • Metabolomics         • Biological Age        • Supplement
    • Wearable Streams       Calculation             Stacks
    • Lab Results          • Intervention          • Clinical
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- Medical Records   Simulation   Trial Match
- Lifestyle Data   • Risk Prediction   • Provider
                     • Literature Sync   Network

Core Features

1. Unified Biological Profile

- Import from 50+ data sources (23andMe, Ancestry, continuous glucose monitors, Oura, Whoop, Apple Health, lab providers)
- Proprietary data normalization engine
- Longitudinal tracking with beautiful visualizations

2. AI Biological Age Engine

- Multi-clock algorithm combining epigenetic, proteomic, and metabolic aging signals
- Real-time biological age score updated with new data
- Pace-of-aging velocity tracking (are you aging faster or slower than baseline?)

3. Personalized Intervention Simulator

- "What-if" modeling for any intervention
- Predict YOUR response to rapamycin, metformin, NAD+ precursors, fasting protocols
- Based on genetic variants, current biomarkers, and published literature
- Confidence intervals and risk warnings

4. Dynamic Protocol Generation

- AI generates personalized supplement stacks, diet frameworks, exercise protocols
- Adjusts recommendations based on new data
- Explains reasoning with citations to peer-reviewed research

5. Clinical Trial Matching

- Real-time database of 5,000+ longevity-related trials
- AI matches based on your profile, location, eligibility
- Direct application integration

6. Provider Network

- Vetted longevity clinics and physicians
- Telemedicine consultations
- Prescription facilitation where appropriate

Market Opportunity

TAM/SAM/SOM

Segment	Size	Notes
TAM	$600B	Global longevity/anti-aging market (2027)
SAM	$50B	Digital health + personalized medicine intersection
SOM	$2B	Premium longevity optimization platforms (Year 5)

Customer Segments

B2C: The Longevity Enthusiasts

- **Ultra-High Net Worth** ($500K+/year budget) — Full concierge service
- **High Net Worth** ($50K-$100K/year) — Premium subscription
- **Health Optimizers** ($2K-$5K/year) — Core platform access
- **Curious Beginners** (Free tier) — Basic biological age + upsell funnel

B2B: Enterprise & Institutional

- **Longevity Clinics** — White-label platform, $50K-$500K/year
- **Life Insurance** — Mortality risk modeling, $1M+ enterprise deals
- **Employers** — Executive health programs, per-seat licensing
- **Pharma/Biotech** — Clinical trial recruitment + real-world evidence

Revenue Model

Tier	Price	Features
Free	$0	Basic biological age estimate, limited insights
Optimize	$199/mo	Full platform, AI protocols, unlimited analysis
Premium	$999/mo	+ Quarterly bloodwork kits, longevity coaching
Concierge	$5,000/mo	+ Dedicated longevity physician, advanced testing
Enterprise	Custom	White-label, API access, custom integrations

Target Metrics (Year 3): - 500K free users - 50K paid subscribers ($199 tier) - 5K premium/concierge users - 50 enterprise clients - **ARR: $150M**

Competitive Landscape

Existing Players

Company	What They Do	Our Advantage
InsideTracker	Blood biomarker analysis	We integrate ALL omics + AI simulation
Levels	CGM + metabolic health	Single data source; we're multi-modal
Function Health	Comprehensive testing	Testing only; no AI intelligence layer
Lifeforce	Hormone optimization	Narrow focus; we're holistic
Humanity	Biological age app	Consumer app only; no clinical depth

Our Moat

1. **Data Network Effects** — More users = better AI models = better predictions
2. **Multi-Omics Integration** — No one else combines genomics + proteomics + metabolomics + wearables
3. **Longitudinal Data** — Years of tracking creates irreplaceable individual health graphs

4. **Provider Network Lock-in** — Clinics using our platform create switching costs
5. **Regulatory Relationships** — Early work with FDA on aging biomarker validation

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Technology

AI/ML Stack

```python
# Simplified architecture
class NeuraBioEngine:
    def __init__(self):
        self.biological_age_model = MultiClockEnsemble()
        self.intervention_simulator = CausalInferenceEngine()
        self.protocol_generator = RetrievalAugmentedGenerator()
        self.risk_predictor = SurvivalAnalysisModel()

    def analyze_user(self, user_data: MultiOmicsProfile) -> LongevityReport:
        bio_age = self.biological_age_model.predict(user_data)
        risks = self.risk_predictor.assess(user_data)
        protocols = self.protocol_generator.generate(user_data, risks)
        simulations = self.intervention_simulator.simulate(user_data, protocols)
        return LongevityReport(bio_age, risks, protocols, simulations)
```

Key Technical Innovations

1. **Multi-Clock Ensemble** — Combines Horvath, PhenoAge, GrimAge, proteomic clocks with proprietary weighting
2. **Causal Intervention Modeling** — Goes beyond correlation to predict individual response
3. **RAG for Longevity Literature** — 500K+ papers indexed, continuously updated
4. **Federated Learning** — Train on distributed data without centralizing sensitive health info
5. **HIPAA-Compliant Infrastructure** — SOC2 Type II, HITRUST certified

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Go-to-Market Strategy

Phase 1: Enthusiast Community (Months 1-6)

- Launch free biological age calculator (viral hook)
- Partner with top longevity podcasters (Huberman, Attia, Sinclair ecosystem)
- Content marketing: "The Science of You" blog + YouTube
- Build waitlist for premium features

Phase 2: Premium Launch (Months 6-12)

- Launch paid tiers
- Partner with 10 flagship longevity clinics
- Executive health program pilots with 5 Fortune 500 companies
- Series A raise ($20M)

Phase 3: Enterprise Expansion (Months 12-24)

- Life insurance partnerships (2-3 major carriers)
- White-label platform for clinic networks
- International expansion (UAE, Singapore — longevity tourism hubs)
- Series B raise ($50M)

Phase 4: Platform Dominance (Months 24-36)

- Pharmaceutical partnerships for trial recruitment
- Launch NeuraBio Research (anonymized dataset licensing)
- Regulatory submissions for biological age as clinical endpoint
- Path to $100M+ ARR

Team Requirements

Founding Team (To Recruit)

Role	Profile
CEO	Serial health-tech founder, GTM expertise
CTO	ML/AI leader, experience with health data
Chief Science Officer	PhD in aging biology, publication record
Chief Medical Officer	MD with longevity clinic experience
VP Engineering	Built HIPAA-compliant platforms at scale

Advisory Board Targets

- Dr. David Sinclair (Harvard, longevity research)
- Dr. Peter Attia (Longevity podcast, clinical practice)
- Dr. Morgan Levine (Epigenetic clocks pioneer)
- Aubrey de Grey (SENS, longevity advocacy)

Financial Projections

5-Year Model

Year	Users	Paid Subs	ARR	Gross Margin
Y1	50K	2K	$5M	70%
Y2	250K	15K	$40M	75%
Y3	750K	50K	$150M	80%
Y4	2M	150K	$400M	82%
Y5	5M	400K	$1B	85%

Funding Roadmap

Round	Amount	Timing	Use of Funds
Pre-Seed	$2M	Now	MVP, founding team
Seed	$8M	+6 months	Launch, first 50K users
Series A	$25M	+12 months	Scale, enterprise pilots
Series B	$75M	+24 months	International, platform buildout
Series C	$150M	+36 months	Market dominance, R&D

Risks & Mitigations

Risk	Mitigation
Regulatory uncertainty	Partner with FDA on aging biomarker validation; pursue breakthrough device designation
Data privacy concerns	Best-in-class security, federated learning, user data ownership
Scientific validity	Advisory board of top researchers; peer-reviewed validation studies
Competition from big tech	Move fast, build data moat; they're slow in healthcare
Customer acquisition cost	Viral free tier, influencer partnerships, B2B subsidizes B2C

Why Now?

1. **Technology Convergence** — Multi-omics costs down 90% in 5 years; AI can finally synthesize
2. **Cultural Moment** — Longevity is mainstream (Bryan Johnson, Sinclair, Attia)
3. **Wealth Transfer** — Boomers spending on healthspan; millennials investing in prevention
4. **Regulatory Winds** — FDA exploring aging as indication; TAME trial precedent
5. **Post-COVID Awakening** — People prioritize health like never before

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The Vision

In 10 years, NeuraBio becomes the default health operating system for anyone who wants to live longer and better. We'll have the world's largest longitudinal healthspan dataset, powering discoveries that extend human life by decades.

We're not just building a company. We're building the infrastructure for humanity's longest, healthiest future.

Call to Action

We're raising a **$2M pre-seed round** to: - Build the founding team - Develop MVP (biological age calculator + basic insights) - Secure first 10 longevity clinic partnerships - Launch private beta with 1,000 health optimizers

Interested? Let's talk.

"The first person to live to 150 is probably already alive. We're building the platform that helps everyone else catch up."

— NeuraBio

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