FAUNA SYSTEMS

Chief Executive Officer

Leadership Opportunity

The Opportunity

In January 2020, a paper appeared in the *Proceedings of the National Academy of Sciences* that described something the world had never seen: the first living organisms designed entirely by computer and built from biological cells. Researchers Michael Levin and Joshua Bongard, working with collaborators at Tufts University and the University of Vermont, had taken skin and heart cells from frog embryos and assembled them into tiny, self-powered machines—less than a millimeter across—that could move through water, heal themselves when cut, and work together in groups. The *New York Times* called them "a new class of living robotics," with the potential to change science, medicine, and our understanding of life itself.

These organisms—dubbed Xenobots—are not traditional robots cobbled from steel, silicon, and rare earth metals. Their ingredients are water, amino acids, and growth hormone. They are autonomous, self-healing, biodegradable, and internally energized. They can sense their environment, follow chemical gradients, carry payloads, and amplify weak signals through swarm behavior. They operate in the "meso-scale"—larger than a single cell, smaller than an insect—a realm of biology that has been largely inaccessible to engineering until now.

Fauna Systems was founded to take this science out of the lab and into the world. The company holds exclusive licenses to the foundational intellectual property for xeno and other biobots and maintains deep, ongoing research collaborations with the Levin and Bongard laboratories. Its mission is to design and manufacture function-specific biobots that can address fundamental challenges in human health, environmental remediation, and bioengineering—problems where conventional approaches are technically insufficient or economically infeasible.

This is not an incremental improvement to an existing technology. It is the opening chapter of an entirely new field—agential engineering—in which the building blocks of technology are themselves alive, adaptive, and intelligent. The CEO who leads Fauna Systems through its next phase will be shaping not just a company, but a category.

Fauna Systems Today

Fauna is pre-product and pre-revenue, operating in the earliest stage of commercial development for a platform technology with very large potential. The founding team has assembled the core ingredients: exclusive IP, sponsored research agreements with leading academic labs, an $8 million Department of Defense grant to prototype the Anatomical Compiler (the AI-driven system for designing and producing biobots at scale), and an initial set of proof-of-concept applications in environmental sensing and medical diagnostics.

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Fauna is pursuing seed-stage collaborations with three or more industry partners to demonstrate core biobot capabilities—sensing, directed motility, signal amplification—in commercially relevant environments. The business model is Biobot-as-a-Service: Fauna designs and manufactures the biobots; customers integrate them into their own application environments.

Fauna's scientific founders have also originated the Institute for Computationally Designed Organisms (ICDO), a field-building initiative that will convene scientific, industrial, governmental, and media stakeholders to develop the broader ecosystem around agential materials.

The Role

Fauna's next CEO will inherit a remarkable scientific foundation and nearly blank commercial canvas. The immediate work is not about scaling a proven business. It is about listening, exploring, and figuring out—through direct engagement with potential customers and partners—where the intrinsic capabilities of biobots meet real commercially significant needs. The technology is genuinely novel, the applications are emergent, and the right commercial entry points are not yet obvious. The CEO's first job is to find them through substantive conversations with scientists, industry operators, and forward-thinking executives who recognize how biobots might drive non-incremental value in their domains.

Specifically, the CEO will:

- **Identify the highest-value commercial opportunities**. Evaluate which use cases are best matched to what biobots can do now and in the near future—distinguishing genuine commercial traction from scientific novelty.
- **Connect commercial learning to the experimental pipeline**. Translate what you learn from the market into priorities for the research program, including building a roadmap for the Anatomical Compiler ("MomBot") and the capabilities it needs to support higher-throughput experimentation and, eventually, production at scale.
- **Drive customer and partner engagement.** Initiate and lead conversations with potential collaborators across environmental remediation, precision agriculture, synthetic biology, and medical diagnostics. These conversations will be exploratory and substantive—the goal is mutual discovery, not a sales pitch.
- **Build the team.** Recruit a small, exceptional group of experimentalists and, as needed, engineers to accelerate the path from proof-of-concept to commercial prototype.

Who Thrives in This Role

The CEO role demands a rare combination: someone who can explain what a computationally designed organism is to potential partners with the clarity and conviction that comes from genuine understanding

of the science and its implications. Someone who thinks from first principles and is comfortable operating in ambiguity. Someone who has enough domain knowledge in biology and in AI to be a credible interlocutor with Fauna's scientific founders, and enough commercial instinct to recognize where real markets are forming.

The right person has the gravitas to attract world-class talent to a very early-stage venture and the humility to know that the answers are not yet written—that the CEO's role is to go find them. We imagine this person could come from several backgrounds:

- A founder or senior leader of a biotech or bioengineering startup who has navigated the early stages of building a company around novel science and wants to do it again with something even more extraordinary.
- A product leader from a biotech or bioengineering company who is ready to step into the top role and bring deep domain expertise to a broader mandate.
- A commercially oriented executive from a technology company serving customers in domains that overlap with Fauna's target markets—someone who understands how to build products for complex, technical end-users.

Why Now

Opportunities to lead a company at the very origin of a new technological category are vanishingly rare. Semiconductors had one. Recombinant DNA had one. The internet had one. Agential engineering is having one now.

The science is real, peer-reviewed, and protected by a growing portfolio of patents. The founding team is exceptional. The applications—from detecting PFAS contamination in water to isolating circulating tumor cells from a blood sample—are not speculative; they are the subject of active proof-of-concept work. And the broader implications of engineering with living, intelligent, adaptive materials are genuinely profound.

What Fauna needs now is a leader who can take all of this—the science, the IP, the relationships, the vision—and turn it into a company that the world will come to know. If you are the kind of person who is drawn to building something that has never existed before, we would like to hear from you.

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