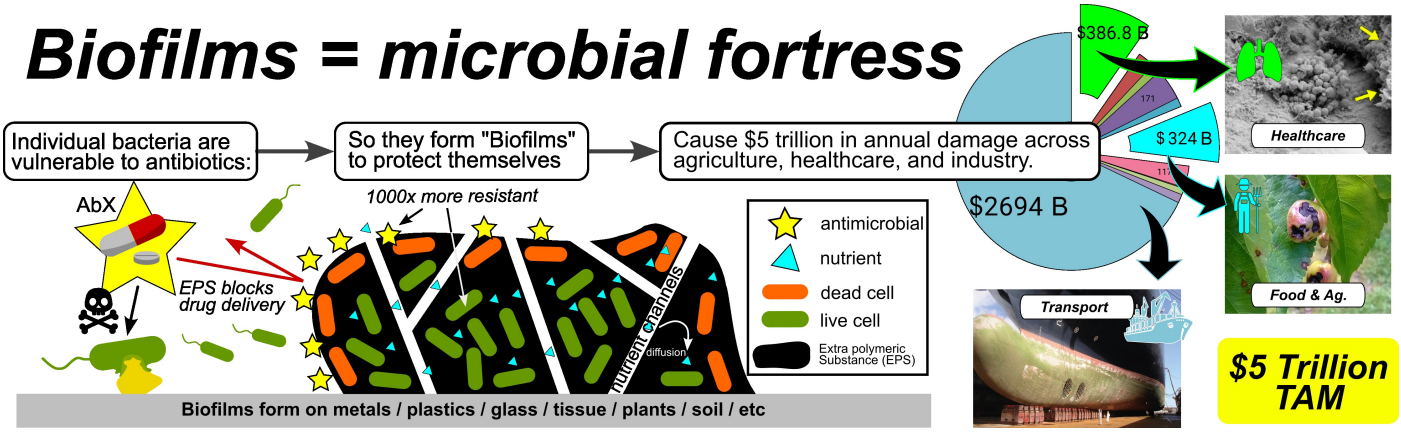
Marva Labs, Inc. Founded 2025, marva-labs.com,
Privately Held, HQ: Seattle, WA. Pre-seed stage. **Contact:** Devon McCornack, devon@marva-labs.com

Mission:

Our mission is to redefine infection control, not as a war to win but as a conversation to understand.
At Marva Labs, we're developing biologically intelligent therapies that engage the inner voice of bacteria, prompting self-destruction from within. By working with microbial systems instead of against them, we aim to end antimicrobial resistance and reshape how we treat infection—through cooperation, not escalation.

Problem

Antimicrobial resistance is accelerating worldwide, driven not only by drug-resistant pathogens but by the biofilms that shield them. These dense microbial communities block antibiotic penetration, increasing tolerance up to 1,000-fold and anchoring 80% of chronic infections. In wounds, polymicrobial biofilms stall healing, prolong care, and contribute to more than $390 B in annual healthcare costs. The core failure is delivery: current antibiotics cannot reach therapeutic levels inside the biofilm matrix, leaving persistent infection untouched and resistance entrenched.



Solution

Marva Labs is building a bioinspired alternative to conventional antimicrobials by engineering bacterial extracellular vesicles (bEVs) as targeted carriers for antibiotics. These bEVs are the same nanoscale shuttles bacteria use to move signals, enzymes, and DNA through the dense biofilm matrix—a barrier that blocks nearly all traditional drugs. By loading therapeutics into these naturally penetrating vesicles, our platform delivers concentrated payloads directly into the protected core of chronic, drug-resistant infections. This approach replaces brute-force eradication with a communication-based strategy that co-opts microbial systems instead of fighting them.

Technologies

Marva Labs has developed a preclinical-stage, patent-pending antimicrobial platform based on bioengineered bacterial extracellular vesicles. Our proprietary death-phase vesicles (D-EVs) disrupt biofilms and trigger targeted cell death in drug-resistant pathogens. Unlike antibiotics, our lead product **EndoVox™** mimics microbial communication to induce pathogen self-destruction without harming healthy cells. This platform has the potential to support multiple products across infection prevention, wound care, and systemic therapies.

- Effective against major resistant pathogens including *E. coli*, MRSA, *P. aeruginosa*, and *C. auris*
- Minimal toxicity to mammalian cells
- Biocompatible, targeted and anti-resistance mechanism of action
- Scalable manufacturing and formulation flexibility for topical delivery

Traction

- Preclinical efficacy: $>$ 4.8-log biofilm reduction in *MRSA* and *P. aeruginosa*, including mature biofilms.
- In vivo results: $>$ 3.5-log bacterial reduction and $>$ 30% wound healing improvement in murine model.
- Clinically relevant safety: No cytotoxicity in human stem cells; no detectable LPS.
- **Patent pending**; $160k+ non-dilutive funding raised; I-Corps backed.