

## Developing insecticides from arachnid venom

 **Country:** Argentina

 **Sector:** Technology

 **Amount:**

 **Province:** Ciudad de Buenos Aires

 **Subsector:**

 **Web:** <https://www.arakion.bio/>

### Entity Profile:

Arakion is a biotech startup that develops precision insecticides based on peptides inspired by arachnid venoms. Its approach combines computational discovery, AI, and experimental validation to generate new modes of action against resistant pests, with a superior safety profile for humans and beneficial organisms. At the core of the company is AraPred, its peptide discovery engine, positioning Arakion as a platform + product company, not just a developer of a single asset.

Its team is composed of:

- Santiago Maddaloni, CBO: commercial strategy, partnerships, fundraising, and go-to-market.
- Omar Piña Barraza, CEO: product vision and integration of the scientific pipeline.
- Gerardo Corzo, CSO: arachnid toxins, experimental validation, and biological scaling.
- Juan Manuel Hurtado, CTO: AI, computational infrastructure, and development of AraPred.

### Project description:

#### 1.- DESCRIPTION

Agriculture faces a structural problem: pests are developing resistance while the crop protection industry has a limited number of new modes of action. Arakion addresses this gap with fast-acting peptide-based insecticides designed to restore efficacy where legacy products are losing performance. The company starts from a highly differentiated biological source—spider venoms—and converts it into optimized candidates for potency, selectivity, stability, and industrial scalability. The target market sits within a global insecticide market of approximately USD 37 billion, with strong growth in the biological segment.

#### 2.- BUSINESS MODEL



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The model is B2B and partner-first. In the short term, the priority is to consolidate the technology, generate IP, validate leads, and secure agreements with crop protection companies through joint development agreements, before moving toward full commercial integration.

### 3. FUNDING

Arakion raised an initial investment of USD 200,000 from GridX, structured through a SAFE agreement based on a post-money valuation of USD 1 million. This capital enabled the team to be built, accelerate AraPred, design and express the first peptides, validate initial insecticidal activity, advance freedom-to-operate and patent analyses, and sign relevant collaboration and scale-up agreements. The company expects to complete the required milestones to raise a seed round in Q3 or Q4 of 2026.

Once these milestones are achieved, the company will seek a seed round to finance lead optimization, formulation development, greenhouse and field validation, production scaling, regulatory strategy, and IP development, with the goal of reaching paid pilots, joint development agreements, or a first product ready for launch in tier-0 geographies.

### 4. INVESTOR PROFILE

Arakion is seeking VC or corporate funds within the agrifoodtech sector. The entry vehicle is equity, with an exit strategy based on strategic acquisition, licensing transactions, or a subsequent growth round backed by commercial and regulatory validation. Non-dilutive grant funding is also considered.

### 5. EXECUTION PLAN

Arakion expects the following milestones starting in 2026:

- Within 6 months: functional validation of leads, provisional patent filing, and initial strategic partnerships.
- Within 12 months: scale-up to greenhouse trials and up to 5 advanced compounds.
- Within 18 months: early field validation and formulation for commercial application.
- Within 36 months: regulatory progress and initial commercial entry into tier-0 markets.

### 6. ADDITIONAL INFORMATION

Arakion was founded in 2025 and has already demonstrated initial technical traction: 8 designed molecules, 5 heterologously expressed, and 2 active hits. The company has also completed a



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freedom-to-operate analysis, signed an MTA with a key industry player, and established a collaboration with UNAM-IBT to scale compounds. The initial commercial focus is on berries—particularly strawberries—where high per-hectare costs and residue pressure make the adoption of a new biological mode of action especially attractive.

