genvor

OTCQB: GNVR

Peptides by Design

December 2025

Corporate Overview & Investor Presentation

Forward Looking Statements

This presentation contains "forward-looking statements." The statements contained in this presentation that are not purely historical are forward-looking statements. Forward-looking statements give the Company's current expectations or forecasts of future events. Such statements are subject to risks and uncertainties that are often difficult to predict and beyond the Company's control and could cause the Company's results to differ materially from those described. In some cases, forward-looking statements can be identified by terminology such as "may," "should," "potential," "continue," "expects," "anticipates," "intends," "plans," "believes," "estimates," and similar expressions. These statements include statements regarding moving forward with executing the Company's global growth strategy. The statements are based upon current beliefs, expectations and assumptions and are subject to a number of risks and uncertainties, many of which are difficult to predict. The Company is providing this information as of the date of this presentation and does not undertake any obligation to update any forward-looking statements contained in this presentation as a result of new information, future events or otherwise, except as required by law. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. Forward-looking statements should not be read as a guarantee of future performance or results and will not necessarily be accurate indications of the times at, or by, which such performance or results may be achieved.

Genvor is on a Mission to Transform Agriculture Through its AI-Accelerated Peptide Platform

Dr. Jesse Jaynes, Ph.D.

Dr. Clayton C. Yates, Ph.D.

The Founders' Vision

Dr. Jesse Jaynes and Dr. Clayton Yates, leading experts in therapeutic peptides, had a bold vision: If peptides could revolutionize human medicine by targeting diseases with precision and safety, why couldn't they transform agriculture?

Genvor was founded with the goal of engineering peptides that optimize agricultural outcomes with biological safety, using AI to accelerate peptide discovery and development beyond what traditional R&D could achieve alone.

Today, Genvor's AI-accelerated platform is yielding peptides that are designed to address agriculture's most critical needs: enhanced productivity, regulatory compliance, and consumer safety.

Agriculture Faces a $220 Billion Crisis

There's a significant opportunity to leverage peptides to defend against devastating plant pathogens while optimizing agricultural performance.

- Food production must double by 2050 to meet the food demand of the global population growth to 9.6 billion people[1].

- Annual global crop losses due to plant pathogens exceeds $220 billion[2].
  - These include fungi such as "Aspergillus flavus," which produce Aflatoxins – a toxic and carcinogenic compound known for liver cancer in humans and animals.
  - The annual cost of Aflatoxin contamination in the US alone is estimated to be ~$500 million[3].

Genvor's AI-accelerated platform yields peptides that address agriculture's most critical needs: enhanced productivity, regulatory compliance, and consumer safety.

1) Deepak, K.R. et al (2013) 'Yield trends are insufficient to Double Global Crop Production by 2050', PLoS ONE 2) Climate change fans spread of pests and threatens plants and crops, new FAO study 3) Biodegradable Spray Helps Battle Crop Pathogens, USDA 3) Vardon PJ, McLaughlin C, Nardinelli C. Potential economic costs of mycotoxins in the United States. Council of Agriculture, Science, and Technology; Ames(IA): 2003. Mycotoxins: Risks in plant, animal and human systems (Task force report). pp. 136–142. Chapter 10.

Agricultural Biologicals Market is Growing Rapidly with Regulatory Tailwinds

Traditional Ag chemical growth is peaking and faces regulatory headwinds, while **Biochemicals are in the beginning stages of a generational breakout**.

Peptide Regulatory Advantage

- ✓ Fast-track EPA registration (1 year vs 3 years)
- ✓ Simplified registration in many countries
- ✓ Increasing regulations favor biochemicals over synthetic chemicals
- ✓ Export exemptions from pesticide residue limits
- ✓ Compatible with organic certification requirements

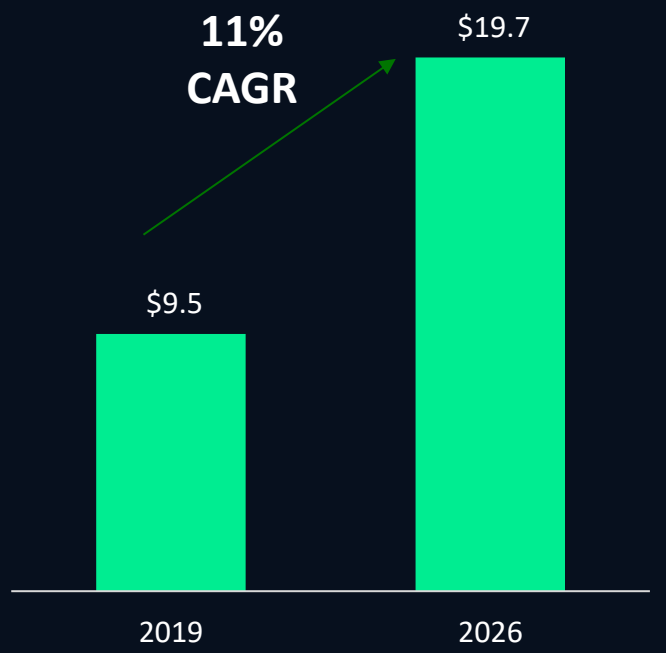
Strategic Opportunity

Genvor's peptide technology aligns well with market shift toward biological fungicide solutions

Agricultural Biologicals Market[1]

($ Billions)

Agricultural biologicals market projected to more than double from $9.5B to $19.7B with 11% CAGR



1 Agricultural Biologicals Market - Forecasts from 2021 to 2026, Research & Markets

Genvor Corporate Overview

Genvor is an agricultural biotechnology company that uses AI-accelerated peptide design to develop sustainable, residue-free agricultural solutions that optimize crop performance across row and specialty crops

Key Value Drivers

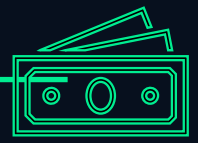
- ✓ AI-Accelerated platform
- ✓ Cross-crop scalability
- ✓ Compatible by design
- ✓ Flexible application methods

Strategic Adoption Model

- ✓ Scalability is accelerated through partnerships and licensing, enabling efficient market entry
- ✓ Actively engaged with multiple Tier 1 Ag majors for JVs & commercialization

Competitive Advantages

- ✓ Proprietary BioCypher Algorithm with 50,000+ designed peptides
- ✓ 5 issued U.S. patents, 2 pending U.S. patent applications, and 4 additional applications in preparation
- ✓ Backed by 7+ years of USDA collaboration and 40+ years of combined academic and commercial expertise.



Market Opportunity

- ✓ **$220 billion** in annual crop losses to plant pathogens globally

Genvor's Peptides are Designed for a Variety of Delivery Modes Across Row & Specialty Crops

Biological Sprays

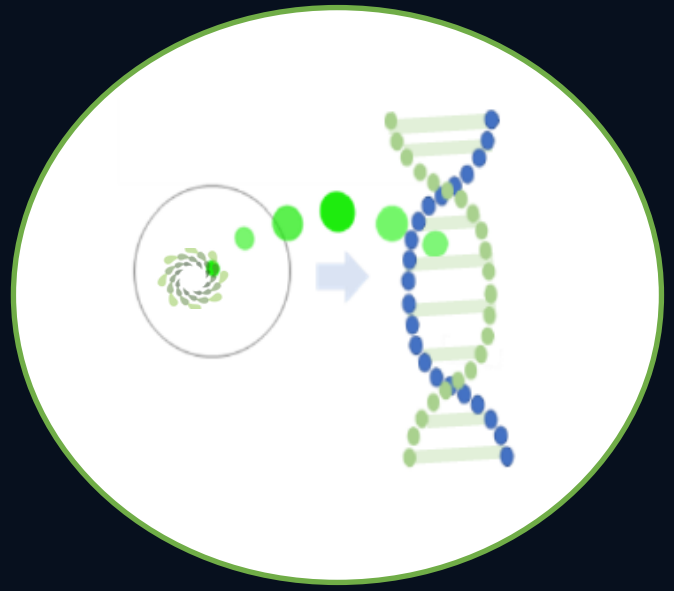
Used for greenhouse and specialty crops like berries, herbs, and vegetables.

- ✓ Eco-friendly disease control
- ✓ Fast-track EPA registration
- ✓ Compatible with organic certification
- ✓ ~95% of plant diseases are caused by fungi & bacteria

Seed Traits

Peptides encoded directly into seeds of large-scale crops like corn, soybeans, and cotton.

- ✓ Long-term disease resistance
- ✓ Enhanced protein and nutrition
- ✓ Scalable through licensing partners

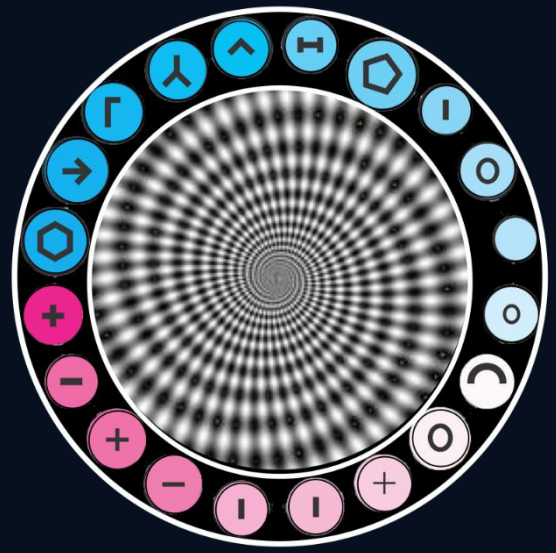


Genvor’s Competitive Advantage:The BioCypher™ Algorithm

Genvor’s digitized peptide library represents a breakthrough opportunity to efficiently develop peptides faster than anyone else

Proprietary Research Foundation
30+ years of peptide research creates the world's largest agricultural peptide dataset

Custom Algorithm Architecture
Genvor’s proprietary peptide language and classification system powers our AI advantage



Unmatched Library Scale
50,000+ designed peptides with proven efficacy data that competitors cannot replicate

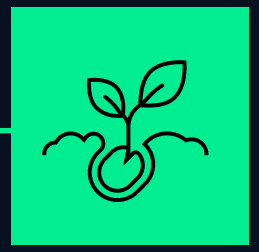
Real-World Validation
AI trained on actual field performance, not theoretical models or limited lab data

Our Four Core Peptide Technologies

At the heart of our innovation are four proprietary peptide classes that we engineer for high-impact applications in plant health, animal feed, and sustainable agriculture.

Antimicrobial Peptides (AMPs)

- ✓ **Purpose:** To prevent plant disease at the cellular level.
- ✓ **Mechanism:** AMPs work by inhibiting pathogens through targeted cellular interaction, replacing the need for chemical fungicides.
- ✓ **Benefits:** AMPs offer a residue-free alternative to traditional fungicides and are compatible with seed traits, seed treatments, and foliar applications.

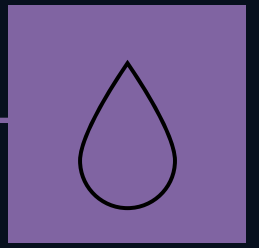


C-terminally Encoded Peptides (CEPs)

- ✓ **Purpose:** To regulate plant growth, nutrient uptake, and stress response.
- ✓ **Mechanism:** Trigger plant receptor pathways that regulate nutrient uptake, stress response, and growth efficiency.
- ✓ **Benefits:** CEPs improve nutrient use efficiency, enhance stress tolerance, and strengthen the plant's immune system.

Insecticidal Peptides

- ✓ **Purpose:** To neutralize and sterilize insect pests by disrupting core biological systems.
- ✓ **Mechanism:** Target insect ion channels and membranes, disrupting key functions to neutralize pests without harming beneficial species.
- ✓ **Benefits:** Targets pests with precision, protecting crops without harming pollinators or beneficial species.



Nutrient Enhancing Peptides (NEPs)

- ✓ **Purpose:** To boost nutrition and metabolism in crops and animal feed.
- ✓ **Mechanism:** Boost nutrient absorption and protein synthesis by enhancing plant metabolism and uptake efficiency.
- ✓ **Benefits:** NEPs increase protein quality, support micronutrient absorption, and improve overall metabolic performance in plants and animals.

Our Peptide Development Process

Together with Partners

Research & Development

Conceptualization
A product idea is conceptualized based on expected traits from Genvor's patented peptide library.

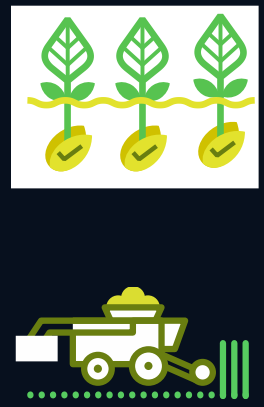
Trait Development

Initial Lab Testing
Standalone peptides are introduced into plant cells and tested by labs to determine the activity and efficacy of targeted traits.

Testing

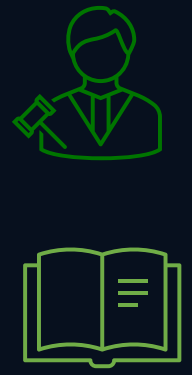
Trait Continuity
During testing, the traits are tested to ensure they are still expressed properly through several generations of seeds.

Trait Validation



Initial Field Trials
Plants are grown in a field or greenhouse setting to ensure they grow and yield as they should while still exhibiting the desired traits.

Regulatory Approval



The Final Stage
Regulatory approval is a back-and-forth process, where field trial data is presented and regulators request additional data to address any specific questions they may have.

Genvor Peptide Development Pipeline

Three AMP Families & One NEP Family in Active Development

Potential Strategic Partners Typically Begin to Express Interest in Transactions During These Stages

Crop		Peptide Family	R&D	Trait Development	Testing	Trait Validation	Regulatory Approval
Citrus	Anti-Pathogen	AGM-176 & AGM-179					
Corn	Anti-Pathogen	AGM-182 & GV-185/187					
	Enhanced Nutrition	GV-HNP-1 & 2					
Rice	Anti-Pathogen	GV-185 & GV-187					
Soybean	Anti-Pathogen	GV-185 & GV-187					
Flax	Anti-Pathogen	GV-185 & GV-187					
Potato	Anti-Pathogen	GV-185 & GV-187					
Cotton	Anti-Pathogen	GV-185 & GV-187					

Already Secured Post-Approval Citrus Licensing Deal for AGM-176/179 with Tier-1 Partner

First Corn AMP expected to be ready for licensing in 2025, enabled by USDA partnership

Legend

AMP

NEP

Third-Party Validation: Powering Progress Together

World-class partnerships accelerate technology development and de-risk commercialization

BAYER GOLDEN TICKET

Inaugural Recipient - 2024

First company selected for Bayer's Golden Ticket award:

- ✓ Year-long access to Bayer LifeHub California labs
- ✓ World-class mentorship resources
- ✓ Direct pathway to industry partnership

USDA CRADA

7+ year collaboration

Exclusive Cooperative R&D Agreement with USDA-ARS:

- ✓ Joint development of aflatoxin-resistant corn
- ✓ USDA co-assignment on key patents
- ✓ Fast-track regulatory pathway support

TUSKEGEE UNIVERSITY

Teaming Agreement - 2025

Strategic partnership with founding scientist institution:

- ✓ Access to world-class research laboratories
- ✓ Collaborative grant-supported development
- ✓ Next-generation scientific talent pipeline

USDA Partnership Validates Genvor's Technology Through Collaborative Research Agreement (CRADA)

- CRADA objectives include developing corn varieties resistant to pre-harvest aflatoxin contamination.
- Partnership develops corn inbred lines with nutritional enhancements for swine and poultry.
- Agreement includes commercialization of peptide technology, increasing chances of commercial adoption and market impact
- CRADA expands expertise and speeds development of technologies used by farmers or consumers.
- Partnership provides access to USDA regulatory team for registrations and processes.

USDA + genvor

Corn with Genvor seed traits growing in a USDA facility for study.

Lead Peptides Demonstrate Broad-Spectrum Efficacy Against Major Agricultural Pathogens

Genvor’s synthetic peptide candidates demonstrated strong antifungal activity at low concentrations, de-risking the program for partnerships and commercial advancement

Design Generation			***3rd***		***2nd***		***1st***	
	****		**Synthetic Peptides**					
			GV185		**GV187**		AGM185		D4E1	
Fungal Pathogen			IC_{50} [a]	95% CI [b]	IC_{50}	95% CI	IC_{50}	95% CI	IC_{50}	95% CI
Rhizopus stolonifer			**8.7**	**(2, 15.4)**	**7.4**	**(3.2, 11.7)**	22.1	(-14.7, 58.9)	12.4	(0.2, 24.5)
Aspergillus flavus AF70			**3.9**	**(2.7, 5.1)**	**3.3**	**(2.2, 4.4)**	7.9	(4.3, 11.6)	11.2	(0.8, 21.5)
Aspergillus flavus Tox 4			**2.9**	**(2.3, 3.6)**	**2.4**	**(1.9, 3)**	7.1	(5.1, 9)	9.8	(4, 15.6)
Fusarium graminearum			**2.1**	**(1.7, 2.4)**	**2.2**	**(1.9, 2.5)**	4.6	(3.1, 6.2)	6.2	(2.3, 10.2)
Fusarium verticillioides			**2.1**	**(1.8, 2.4)**	**1.2**	**(1.1, 1.4)**	2	(1.8, 2.3)	2.5	(2, 3)
Fusarium oxysporum f.s. vasinfectum			**2.2**	**(1.8, 2.6)**	**1.5**	**(1.4, 1.7)**	1.7	(1.5, 1.9)	2	(1.6, 2.4)
Claviceps purpurea			**1.1**	**(1, 1.2)**	**1.1**	**(1, 1.2)**	1.3	(1.1, 1.4)	1.6	(1.3, 1.8)
Thielaviopsis basicola			**1.4**	**(1.3, 1.6)**	**1.3**	**(1.2, 1.3)**	1.3	(1.1, 1.4)	1.5	(1.2, 1.7)
Verticillium dahliae			**0.9**	**(0.8, 0.9)**	**0.8**	**(0.7, 0.9)**	0.9	(0.9, 1)	0.8	(0.7, 0.9)
Xanthomonas campestris p.v. campestris			**0.1**	**(0.1, 0.1)**	**0.1**	**(0.1, 0.1)**	0.2	(0.2, 0.3)	0.2	(0.2, 0.3)
Psuedomonas syringae p.v. tabaci			**0.1**	**(0.1, 0.1)**	**0.1**	**(0.1, 0.1)**	0.1	(0.1, 0.2)	0.2	(0.2, 0.2)

Inhibitory dose 50 (IC_{50}) values for fungal and bacterial plant pathogens challenged with synthetic peptides, GV185, GV187, D4E1 and AGM182. Genvor peptides were plated on medium and viable spores or colonies were counted. Dose-response curves were estimated using a generalized linear model with logit link and binomial distribution, i.e. logistic regression. *IC_{50} values are the predicted peptide dose (μM) that 50% of spores or bacteria were inhibited or killed from dose-response curves for each synthetic peptide and pathogen with 95% confidence interval*

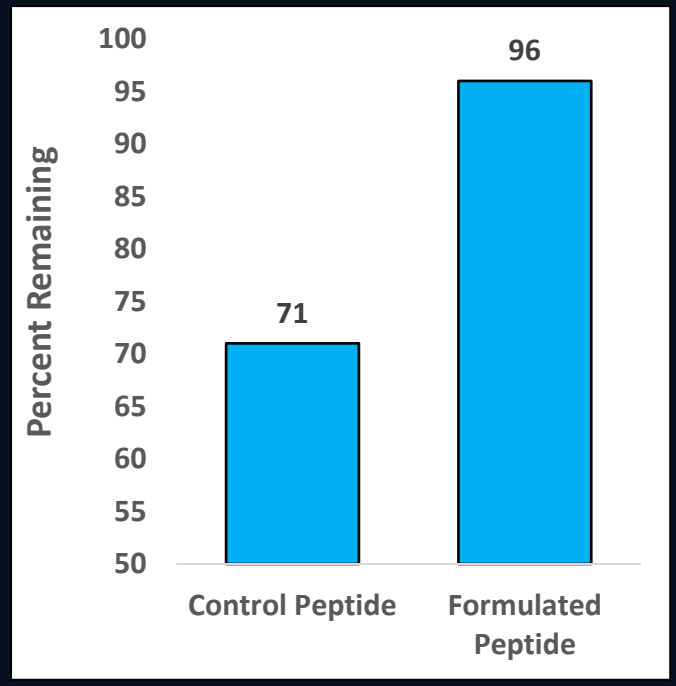
Genvor's Proprietary Formulations Achieve Commercial-Grade Peptide Stability

Advanced formulation technology solves industry-wide peptide stability challenges, enabling 2+ year shelf life required for commercial agricultural markets

Genvor's Formulations are Market Ready:

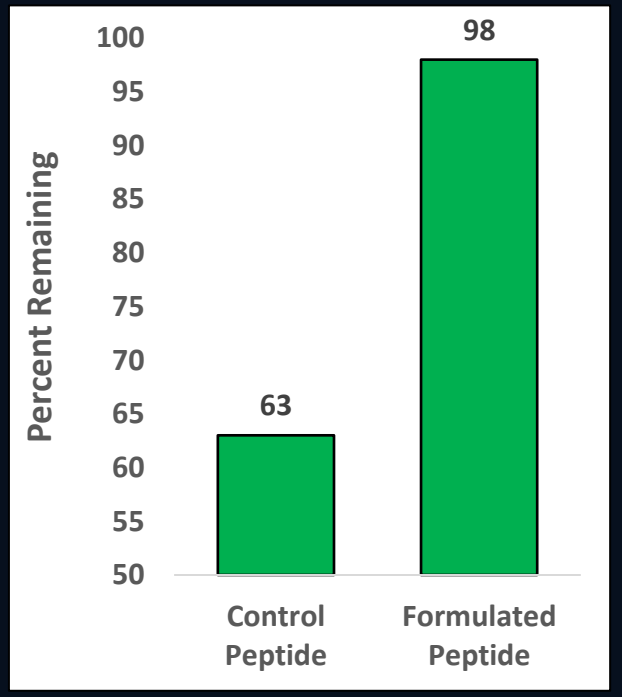
- ✓ Industry-leading stability across multiple peptide candidates
- ✓ Meets agricultural industry standard for 2+ year shelf life
- ✓ Enables global distribution through existing supply chains
- ✓ Reduces storage and handling costs for partners
- ✓ Positions peptides as viable alternative to traditional fungicides

GV185



96% peptide retention after 2-year simulation

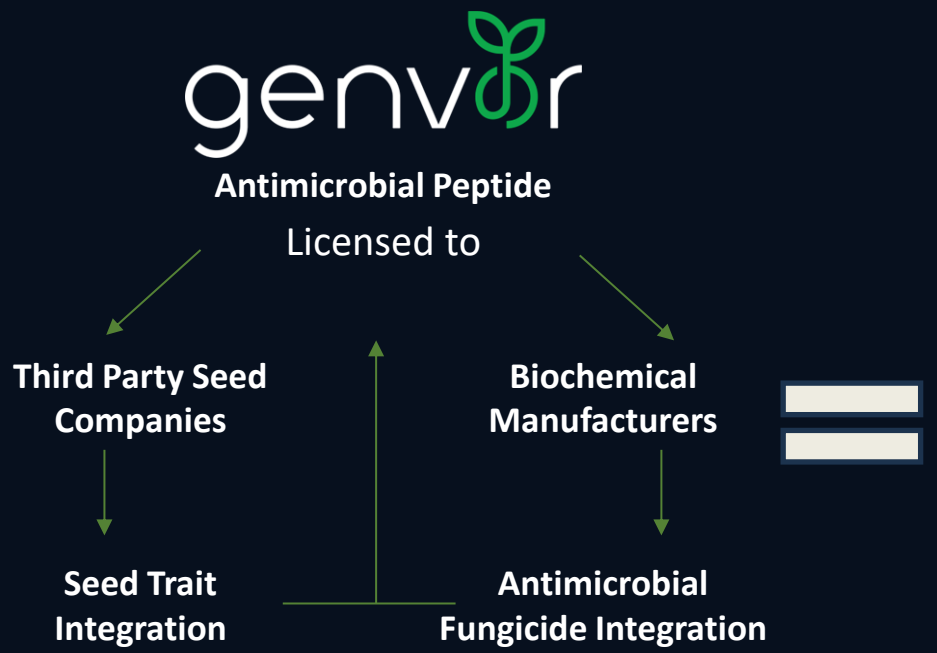
GV197



98% peptide retention after 2-year simulation

Licensing-First Business Model Enables Capital-Efficient Market Penetration

Genvor's model is to develop and license proprietary designed peptides in the form of **biological fungicides** or **seed traits** to downstream partners



De-Risked Innovation

Development process built around market readiness, proven efficacy, and grower-driven outcomes.

Strategic Adoption Model

Global scalability is accelerated through licensing, enabling efficient market entry & minimized overhead, allowing Genvor to focus on core R&D competency

Flexible Licensing Model

Licensing can take the form of reimbursement of R&D fees, milestone payments and royalty of future sales

Proven Performance And IP Protection Validate Commercial Potential

Patent Portfolio Strength
First U.S. patent issued in 2015 covering eight peptides, including all key pipeline peptides.

Transgenic Protection Secured
Second U.S. patent issued in 2021 for transgenic corn with anti-fungal peptide AGM-182.

Expanding IP Coverage
Today, Genvor has 5 issued U.S. patents, 2 pending U.S. patent applications, and 4 additional applications in preparation.

Commercial Validation Progress
Already secured post-approval citrus licensing deal for AGM-176/179 with Tier-1 partner.

US009163066B2

(12) **United States Patent**
Jaynes

(10) **Patent No.: US 9,163,066 B2**
(45) **Date of Patent: Oct. 20, 2015**

(54) **ANTIMICROBIAL LYTIC PEPTIDES**

(75) Inventor: **Jesse Michael Jaynes**, Auburn, AL (US)

(73) Assignee: **AGROMED LLC**, Anapolis, MD (US)

(*) Notice: Subject to any disclaimer, the term of this

USPC 514/2.4; 530/324, 326
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

(12) **United States Patent**
Jaynes et al.

(10) **Patent No.: US 11,083,775 B2**
(45) **Date of Patent: Aug. 10, 2021**

(54) **TRANSGENIC CORN WITH ANTIFUNGAL PEPTIDE AGM182 USDA (DN:0113.18)**

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(73) Assignees: **GENVOR INC.**, Dallas, TX (US); **The United States of America, as represented by the Secretary of Agriculture**, Washington, DC (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **16/134,336**

(22) Filed: **Sep. 18, 2018**

(65) **Prior Publication Data**

US 2020/0085911 A1 Mar. 19, 2020

(51) **Int. Cl.**
C12N 15/82 (2006.01)
A61K 38/17 (2006.01)

(52) **U.S. Cl.**
CPC ***A61K 38/1767*** (2013.01); ***C12N 15/8205*** (2013.01); ***C12N 15/8216*** (2013.01); ***C12N 15/8282*** (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

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(Continued)

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Experienced Team Brings Deep Industry Expertise

Agribusiness Leadership

Chad Pawlak Sr., MBA
Chief Executive Officer

Chad Pawlak brings 30 years of experience driving revenue growth across agribusiness and sustainability.

Scientific Innovation

Dr. Jesse Jaynes, Ph.D.
Co-Founder, Chairman & Director of Scientific Research & Development

Dr. Jesse Jaynes is a leading authority on therapeutic peptide design with extensive patents.

Scientific Innovation

Dr. Clayton C. Yates, Ph.D.
Co-Founder, Scientific Advisor

Dr. Clayton Yates' unique position at the intersection of human peptide therapeutics and agricultural peptide development has yielded innovations that address global challenges in both health and food security.

Research Expertise

Dr. Brianna Fochs, Ph.D.
Senior Scientist & Lab Manager

Dr. Fochs has spent the last several years investigating how plant- and human-pathogens interact with plants on a molecular level.

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