

ALCHEME

BIO

Making Sustainable Foods

delicious
by design



Detailed Deck
October 2023

World class team with deep domain expertise

FOUNDERS



Vanessa Small, PhD, MBA

Founder, CEO, CSO

Biochemistry, Analytical Diagnostics and Product Development

Head of Biologics, [Cue Health](#)

Scientific Advisor, [Digital Dx Ventures](#)



Clair Purcell

Founder, COO

Chief Venture Builder, [Newlab](#)

Principal (Interim CEO of NewCos),

[Boston Consulting Group X](#)

Founder, HAU (exit 2013)



TEAM



Shruti Jha

Research Associate
MS, Biotechnology (Q2 2024)
BS, Biotechnology



Joanna Florez

Research Associate

B.S., Biomanufacturing (Q2 2024)

Production Associate, Cue Health



Xavier Martinez

Lead Data Engineer

BS, Computer Science with Research in
Computational Biochemistry

Senior Data Engineer, and Software
Developer, CoStar



Heather Zupin

Marketing

Juris Doctor, Environmental Law

Director of Marketing, NewBlue

World class team with deep domain expertise

ADVISORS



Mathys Boeren
Flavor Advisor

CEO, Sustainable Food and Complementary Proteins Specialist, Temasek Holdings. President Flavors, Symrise



Lejly Gafour
CellAg Advisor

CEO, CULT Food Science
YC21 Founder, Board Member New Harvest Canada; Founder- Cell Ag Institut



Jeff Jennings
Patent Advisor

Inventor, Founder & CEO, Equilibar
Senior Engineer, Dow Chemicals



Betsy Read, PhD
Scientific Advisor

Emeritus Professor CSUSM
Director/ Founder of the Biotechnology program
Specializing in Molecular Biology and Lipidomics



Karl Schmieder
Erum Azeez Khan

Premium biotechnology branding and communication agency

Did you know...
that cultivated foods and
ingredients straight from a
bioreactor don't taste like
the traditional food?



Today, Cultivated and Precision Fermenters add flavors after harvesting.

This is *inefficient and doesn't work.*

Additive Flavoring



Adds ingredients and complicates labels



'Masks' off flavors and can't replicate robust flavors



Is expensive - we are scaling the 'wrong' product

Cell Development



Growth in Bioreactor



Harvest & Process



Structuring



Packaging



is pioneering

**Cellular
Flavoring™**



**Growth/
Expression in
Bioreactor**

Cell
Development

Harvest &
Process

Structuring

Packaging

Why this is revolutionary

1. It **reduces R&D costs**



2. **Less ingredients** in the final product



3. **Accelerates time** to cultivated foods on plate



Who loves it

Cultivated Food
Producers



Consumers
Regulators



Planet



Alchemie Bio's
precise adjusting of
media formulations
to cause cells to
express their own
flavor



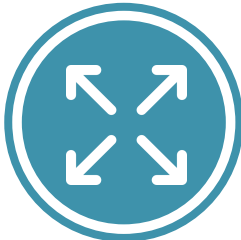
How it works

Cellular Flavoring™ is how we adjust the media formulation to mimic the environment that cells grow in to replicate the natural and robust flavors found in traditionally grown foods

BASAL
MEDIA



GROWTH
SUPPLEMENTS



FLAVOR
SUPPLEMENTS



We are mapping the connections between cultured media ingredients, food composition and consumer flavor preferences.



2 million+ data points
and growing

Products

Our database is the foundation of two product lines; **analytical standards** to measure flavor and **media supplements** to create it.



FLAVOR TARGET

MVP in pilot



PATENT PENDING



FLAVOR MEDIA SUPPLEMENTS

MVP in development



PATENT PENDING

Full Service Platform for Cellular Flavoring

Our products combine with our database and knowledge to provide a full service platform for Cellular Flavoring

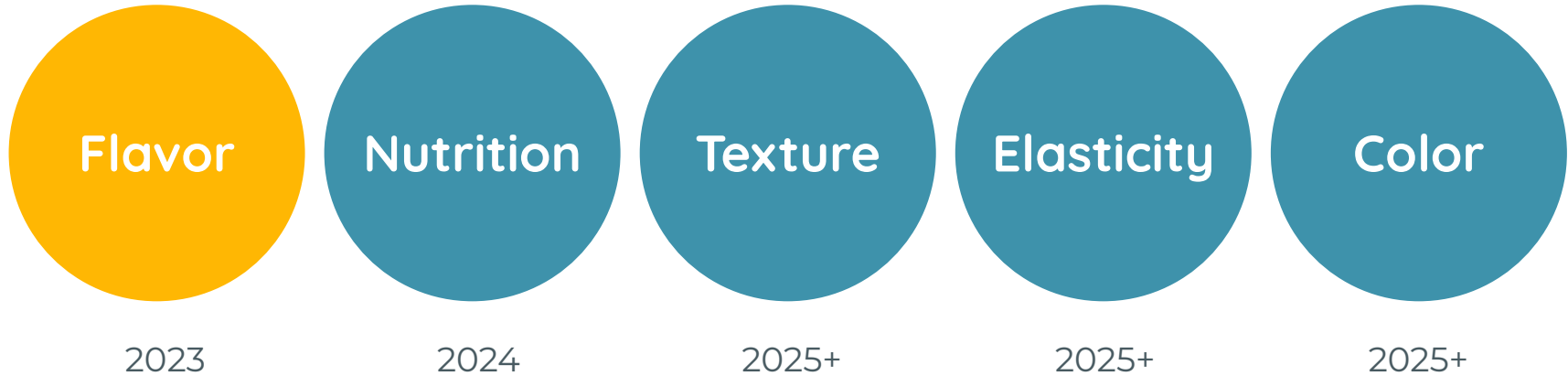


Services

- Gap analysis
- Media formulation recommendations
- Custom media supplements
- Custom flavor targeting
- Flavor impact analysis (of growth media)
- QA/QC benchmarks
- Custom targets for QA/QC

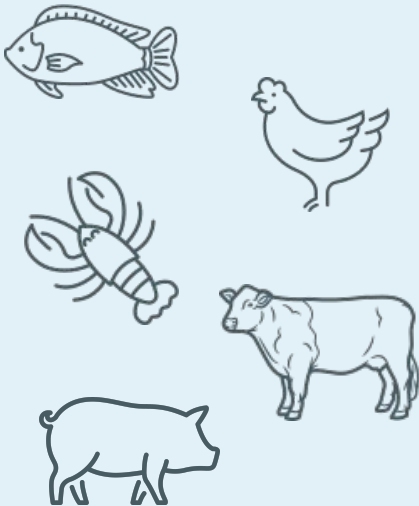
Future Applications

Alchemie will start with flavor and then expand into other attributes.



Cultivated and Precision Fermentation

Fats / Meat / Seafood



Precision Fermentation



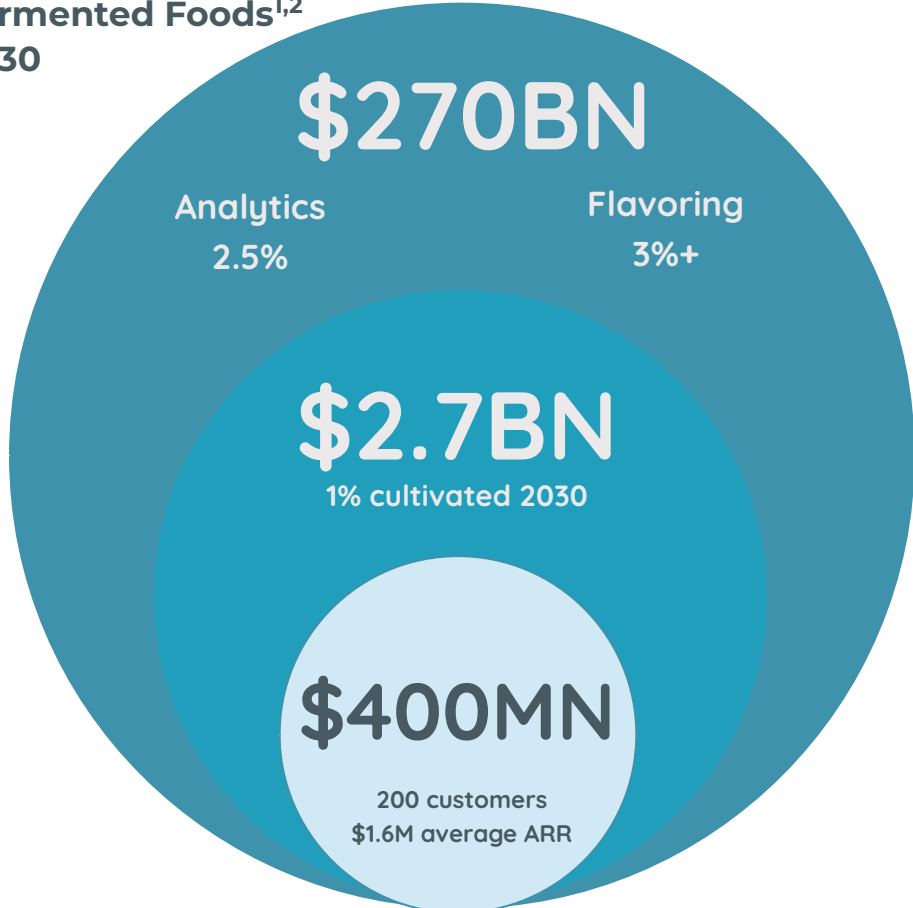
Other



+ nutraceuticals
+ plant-based

Market
Cultivated & Precision
Fermented Foods^{1,2}
2030

\$4.7T



\$270BN TAM

- + nutraceuticals
- + plant-based

1) Meat, dairy, seafood, animal proteins, honey, coffee, confectionary, fats & oils
2) Allied Market Research, Food Statista, Grand View Research, 2022

5

Engaged
customers

2 pilots
3 LOI's

17 'interested'
ongoing discussions

2 MILLION

Data points

> 1,500 samples tested
(HPLC, LC MS)

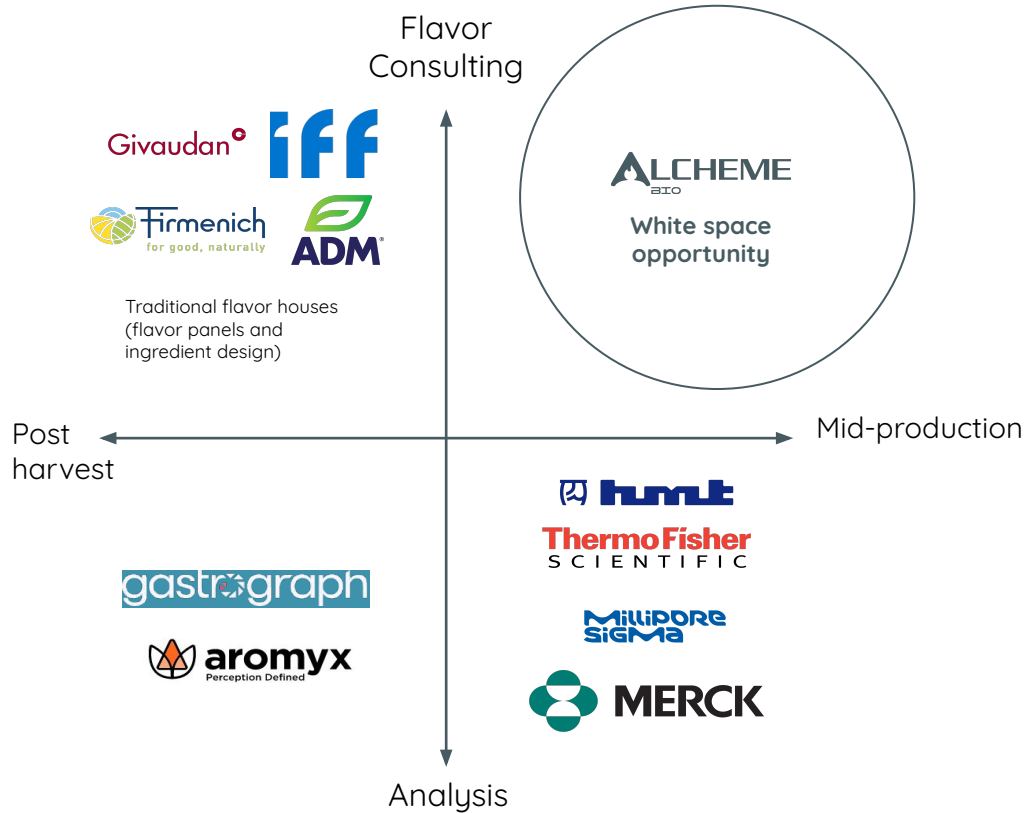
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Patents

Provisionals on Free
Fatty Acids product
portfolio (target and
supplement)

Competitive Landscape



All competitors today are *potential* competitors. No company is creating data or supplements that are specific to attributes other than growth.

Growth media supplement creators include:

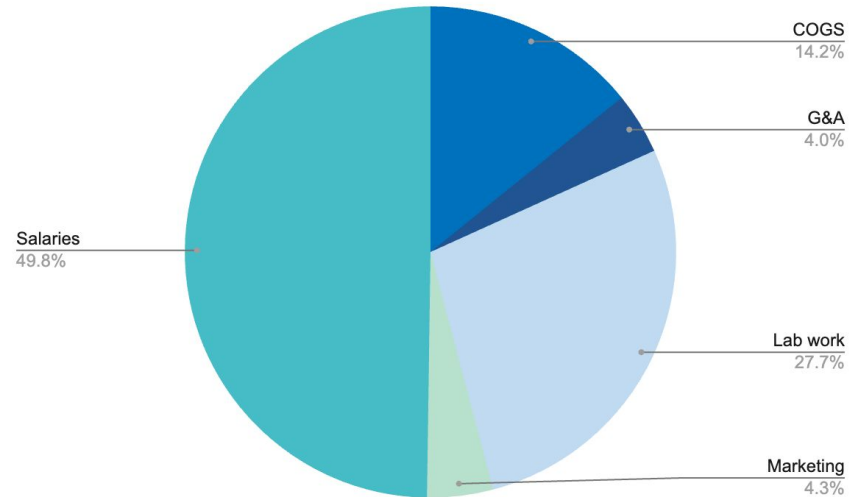
- Multus Media
- Millipore Sigma
- ThermoFisher
- Merck

Pre-Seed: \$350k

Stage: Seed
\$2M, 24-month runway

Key Milestones:

- **Largest cellular flavoring database** with 10 million data points from collaborations and in-house experiments
- **\$3M revenue** from 20 customers
- **3 Patents granted** and 2 additional provisional patents submitted





Making Cultivated Products
Delicious by Design



vanessa@alchemebio.com



www.alchemebio.com



858-291-9708

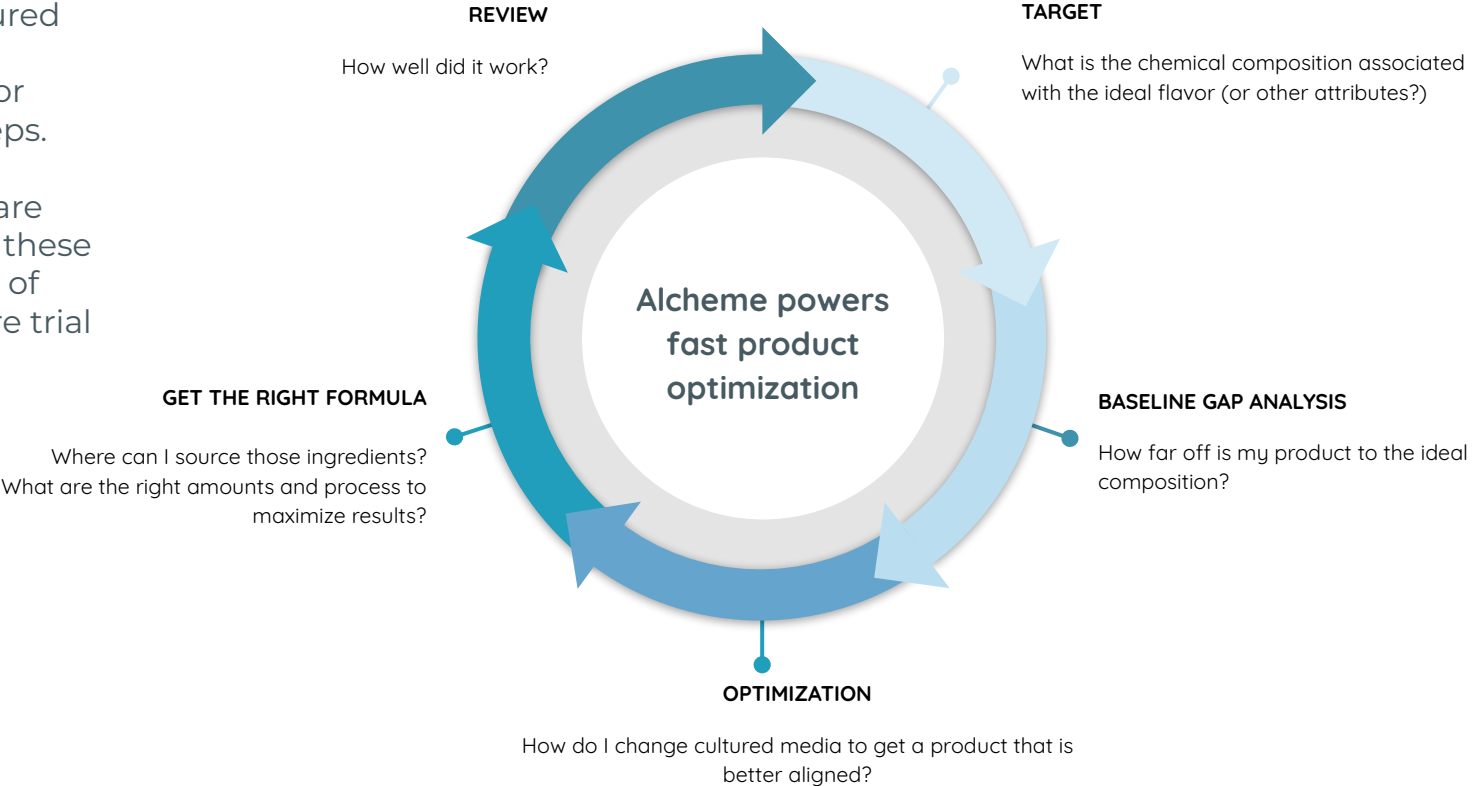
Thank you



Flavor Optimization Cycle

Getting the right cultured media formulation to produce the right flavor involves numerous steps.

Today, food scientists are attempting to answer these questions from a base of 'zero' and through pure trial and error.



Flavor Optimization Cycle

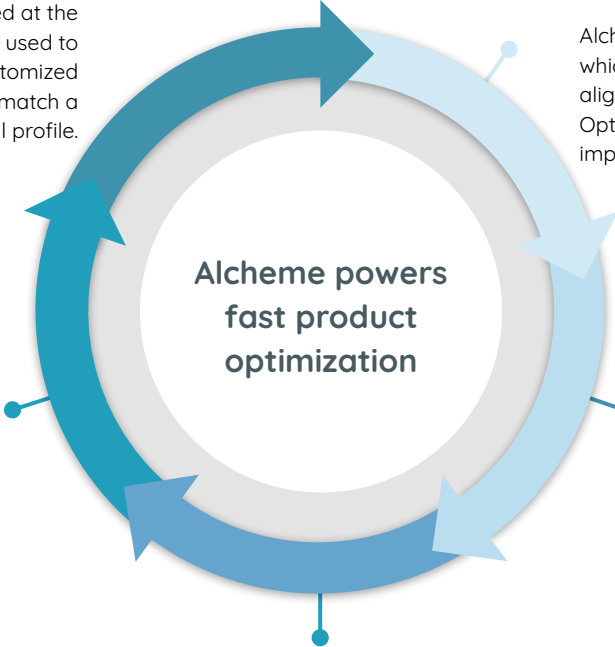
AlchemBio brings data-driven insights to dramatically accelerate the optimization cycle.

OPTIMARK - QA/QC

Once a product is optimized at the compositional level, the Optimark is used to QA/QC the scaled product. Customized standards can be developed to match a customer's preferred compositional profile.

TARGET: ALCHEME INSIGHTS

AlchemBio's database and algorithm identifies which compounds drive taste and nutrition aligned with customer preferences - the OptiMark - and how fortified media supplements impact compositional profile.



MEDIA FORMULA: ALCHEME SUPPLEMENT

Where there is a current gap for supplements available, AlchemBio is developing proprietary lines of supplements that can be customized to your needs.



GAP ANALYSIS: ALCHEME OPTIMARK

Analytics service / analytical standards compares your R&D product to the OptiMark providing a clear gap analysis and target for research experiments. We can do this for you, or if you have a HPLC machine, this can be done onsite.



RECOMMENDATION: ALCHEME INSIGHTS

Our AI driven database provides recommendations on how to bridge the compositional gap in media supplements and process adjustments.

Product and Services Suite

AlchemeBio provides a complete suite of products and services to significantly accelerate time and costs to a delicious product.

SERVICES

Optimization Cycle
Gap analysis and high level recommendations of how to adjust media formula to achieve target composition

Demo Report


BioBrew
Custom, owned formula designed and refined by Alcheme

PRODUCTS (SELF-SERVE)

Optimark
Target for flavor alignment & QA/QC



Engine
Software providing R&D optimization guidance



OptiMizer
Off the shelf Bioengineered supplement



CORE ASSET

AI-Database: Media Supplement → Composition → Flavor Preference