



# DESTINATION STARTUP

## Emergy Foods

**One-Sentence Summary of What You Do:** Emergy Foods has developed a proprietary process to produce food ingredients and finished goods made from fungal mycelium. The process is highly efficient and sustainable, using 2% of the land, water, and energy compared to traditional agriculture practices. The resulting ingredient is highly nutritious with > 55% complete protein.

**Affiliated Institution:** University of Colorado Boulder

**Have you formed a company yet?** Yes

**Funding/Financing:** Grant Funding, Direct/Indirect University Support, Venture Capital

**Please describe your company and the problem you are trying to solve:** Emergy is producing food ingredients that are derived from a new protein source that is scalable, equivalent protein content to meat, non-allergenic, mild flavor, and cost competitive. There are few options for a non-allergenic, plant-based protein; the most widely used is pea protein. However, demand far exceeds production with prices rapidly increasing. Additionally, pea protein has intense flavors making it off-putting to many consumers. Often pea needs to be combined with another, allergenic protein source such as soy or wheat to make a complete protein. Emergy offers a complete replacement to pea protein at lower price with no discernable flavor. Emergy's ingredients are also naturally textured, providing an enhanced experience for use in meat alternatives.

Emergy has produced beta prototypes of their finished meat alternative products. Products are set to launch into local restaurants in early 2020. Emergy has also been working with food manufacturers, supplying raw ingredients for formulation work.

Emergy has two patents and one PCT application pending on their technology.

**What is/was your go-to-market strategy?** The global and domestic market breakdown for conventional proteins totals \$928 billion in 2018 and expected to be \$1.5 trillion by 2022. The total global market for alternative proteins (non-animal-based) is \$42 billion with the key sources as soy, wheat, and pea. Soy proteins have seen a slowing to 4.8% CAGR, however pea has seen the increased demand of 9.9% CAGR. Pea protein is largely preferred over soy and wheat protein because it is non-allergenic, but increased demand has increased cost.

Sub-segmenting the market further, the market size for alternative proteins used as meat substitutes is around \$4 billion. The largest incumbents, Tofu and TVP, are both made from soy, yet still see large growths. Only two forms of proteins derived from fungal mycelium are on the market today. The first is the company Quorn out of the UK. The other mycoprotein is Tempeh; the large CAGR for Quorn and Tempeh shows that consumers are accepting fungal-based proteins.



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While the meat substitute market is primarily comprised of ‘ground meats,’ such as burgers and nuggets, Emergy is differentiated as offering the only ‘whole muscle’ meat substitute in the form of either chicken or steak.

**How will/do you generate revenue?** Emergy will generate revenue through sales of their meat alternative products. Sales of the product will commence in 2020 when the pilot-scale production system is operating. Pricing is anticipated to be at \$10/lb from discussions with early customers.

In 2021, production will take place at 3rd party manufacturers. Pricing is anticipated to be similar \$10/lb.

A demonstration plant will be completed by 2022 and pricing should drop to \$4/lb to supply large scale contracts. As Emergy has already engaged interested customers, revenues will hinge upon successful scaling of the technology.

**How will this showcase benefit your company or technology?** Emergy will begin raising their Series A round in early 2020. This showcase will offer a great kick-off to the fundraising efforts.

**Who are the members of your team and why is this the right team to get the job done?**

- Dr. Tyler Huggins is co-founder & CEO; he is currently in charge of fundraising, customer outreach, and relationships. He recently graduated from the CU with a PhD in environmental engineering. Tyler has founded two successful startup service companies and was the Director of Research and Development at an early stage technology company.
- Dr. Justin Whiteley is co-founder & CTO; he is currently in charge of R&D, prototyping, and scale-up. Justin has developed foundational technology for Solid Power, Inc. and Mallinda Inc, two companies that have raised significant follow-on investment.
- Dr. Behroze Mistry is Executive Vice President of Innovation; she is currently in charge of food development and commercialization. Dr. Mistry was previously VP of R&D and Marketing at Boulder Brands where she oversaw food product development and deployment over four different brands totaling more than \$100 million in revenue.
- Morgan Agho is Director of Marketing. She previously worked for Boulder Brands, Godiva, and Nutrasix.
- The R&D team is currently comprised of Director of Microbiology, Dr. Tracy Yates, Lead Scale-up Scientist, Dr. Arun Athmanathan, and Research Associate, Zach Kaiser.
- Food product development is led by food scientist and culinologist, Debbie Downing.