



Alternative Proteins



WHAT'S INSIDE!

The month of March saw multiple developments in the **Alternative Protein trend:**

- **COVID-19** doesn't seem to be slowing the alternative meat startups such as **Impossible Food**, **Nature's Fynd**, **Starfield Food and Science Technology Limited**, and **Prolupin** who raised **funding** which will allow them to grow financially during the pandemic.
- Ireland-based company **CyberColloids** brings high shear spinning system in the market which can transform **plant-proteins** into meat-like fibers.

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Impact of COVID-19 on global food industry- Alternative Protein Focus

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Nature's Fynd's raises USD 80 Million in series B funding

Impacts of COVID-19 on the global food industry – Alternative Protein Focus

#AnalystViewpoint

- Since the **Coronavirus** has only been on the world stage for a few months, we don't yet have any cold, hard data on how it's affecting sales of **animal vs. non-animal foods**.
- Everything that follows is from **FutureBridge's** point-of-view, based off of talks we've had with other **industry insiders** and analysis of **market developments** to date.



Predictions of the alternative protein market...

The following analysis is FutureBridge's point-of-view based off of talks we've had with other industry insiders and analysis of market developments to date;

- **Some consumers wary of meat consumption** - While there's no evidence that food is a vector of disease spread for the coronavirus. There is evidence that the disease began in animals and those concerned consumers may become wary of consuming animal products – and perhaps more attracted to plant-based alternatives
- **Alternative dairy products have longer shelf life** – Consumers opt to picking up the alternative dairy products compared to traditional dairy. In several findings, we have noticed that US consumer are buying more oat milk.
- **Supply chain restrictions** – There has been many obstructions and challenges in ingredient sourcing across all markets due to country restrictions, and we expect to see some of these come to light in the coming week's for the sourcing of plant-protein ingredients

Could this drive Alternative Protein innovation in Asia?

- **COVID-19** is believed to affect the **consumer buying behavior** as the disease is originated from animals. Also, China **banned** the trade and consumption of **wild animals** last month.
- Perhaps this will **encourage** the **Chinese government** to push much more **aggressively** towards **plant-based food** and **plant-based innovation**
- We observed investment in plant-based meat startup **STARFIELD** (China). Could this bring china at the forefront in the **plant-based meat market**?

Wageningen University helps in developing coronavirus vaccine



The Danish company **Expres2ion Biotechnologies** will receive funding from the European Commission to develop a candidate **COVID-19** vaccine. The Laboratory of Virology in Wageningen will produce particular proteins that are to be used in the **COVID-19 vaccine**.

SPOTLIGHT

Irish researchers develops high shear spinning system to produce meat-like fibers

13 March 2020, Friday

#Research

- CyberColloids' development on the **high shear spinning system** has the potential to overcome the existing **challenges** associated with **plant-based meat** which includes **cost and scalability**.
- The novel **clean label** technology is in the early phase of development and still has to cross the **sensory hurdles**.
- The company's high shear spinning system requires **less capital expenditure** and produces **high yield** compared to the extrusion.



About: CyberColloids is a unique organization devoted to bringing hydrocolloid innovation to industry with a view to enable companies to cost effectively add value through research and development.

Year of Incorporation: 2002

Headquarter: Carrigaline, Cork (Ireland)

Regional Presence: CyberColloids has a global client base that reaches across Europe, USA, South America, India and South East Asia.

High shear spinning system for plant-based protein texturization

- Researchers of CyberColloids has came up with novel “**high shear spinning**” system which will be used to **produce meat-like texture** from plant-based protein source.
- This **clean-label** processing technology is **cost-effective** compared to extrusion and has the potential to **produce large quantities** of **meat analogue** which **reduce** the **scalability challenge**.
- The company has not conducted the **sensory analysis** on the **protein fibers** which is being produced by this novel technology.
- CyberColloids is welcoming other companies to try the technology through its LinkedIn page. Ross Campbell, Business Director at CyberColloids explained the phases through which **alternative protein** companies will be able to use this technology.

Phase 1
Interested companies can send their proteins to the cybercolloids for lab-scale optimization.

Phase 2
Scaling up the product, so that the client company can give it to the customers.

Phase 3
Final payment and IP disclosure.

Read this story

Corporates and investors strengthen their position in the alternative protein market through investment

#Funding

- Surprisingly, **COVID-19** doesn't seem to be slowing the startup activity in the **alternative meat** segment.
- The corporates and investors are actively **investing** in the **alternative protein** segment that will allow them to take maximum advantage financially during the COVID-19 outbreak.



12 March 2020, Thursday **STARFIELD**
星期零 STARTER

New Crop Capital and Dao Foods invests in china-based startup Starfield Food and Science Technology Limited

Read this story [→](#)

16 March 2020, Monday **IMPOSSIBLE™**

Impossible Foods gains USD 500 Million funding in series F round

Read this story [→](#)

17 March 2020, Tuesday **PROLUPIN**
Lebensmittelzutaten aus Blauer Süßlupine

Prolupin closes growth financing round led by Capricorn Partners and Novax

Read this story [→](#)

24 March 2020, Tuesday **NATURE'S Fynd**

Nature's Fynd's raises USD 80 Million in series B funding

Read this story [→](#)

New Crop Capital and Dao Foods invests in China-based startup Starfield Food and Science Technology Limited

#Funding #STARFIELD

- STARFIELD, which develops next-generation **plant-based meat** is headquartered in Shenzhen, a city of nearly 13 million people and a leading international technology hub neighboring Hong Kong providing a **strong consumer base** for the company.
- The company is collaborating with **restaurant chains** to bring its product to the Chinese millennials.
- So far the company has collaborated with 20 restaurants including **Papa Johns, Nayuki's Tea, and Element Fresh**.
- Through this investment venture capitalist, **New Crop Capital** and **Dao Foods** are targeting the **400 million millennial** population of China.

About:

- STARFIELD is a **plant-based meat** company integrating research, production, supply, and service.
- The company uses **plant-proteins** as raw material and utilizes **molecular sensory technology** to extract **meat analogue** from plant source.
- The company has five meat production line and monthly output of approx. **1700 tons**.

Year of Incorporation: 2017

Headquarter: Shenzhen, Guangdong, China

Regional Presence: Asian market

Technology Description:

- STARFIELD plant meat uses **plant protein** as raw material and uses multi-enzyme compound technology to produce an enzymatic hydrolysate-sugar-like reaction model system capable of producing full-bodied flavour, extending **umami taste** and improving taste.
- A Maillard reaction with sugar, combined with **natural plant flavor** molecules screened out using molecular sensory technology, compound to form an aroma and taste comparable to meat.

Total Funding: Not disclosed

Investors:



Strength



- Holds strong position in Asian market
- Independent R & D capabilities and production bases in China
- The product contains no chemical flavor, which will help company to target the clean label trend as well

Weakness



- Scalability & Cost

Impossible Foods gains USD 500 Million funding in series F round

#Funding #ImpossibleFoods

- **Impossible Food** holds a strong position in **plant-based meat** space. Currently, the impossible burger is sold at more than 15,000 restaurants globally which signify its **strong market position**
- The company has recently expanded its product range with the launch of the **Impossible Pork and Impossible Sausage**.
- The new range fulfills all three criteria such as **taste, nutrition, and versatility**, which matters the most to the people who like to consume the meat-based product.
- The recent investment will be used to **expand the retail presence** and to **commercialize the Impossible Pork and Impossible Sausage**.

About:

- Impossible Foods is in the business of developing meat burgers without slaughtering animals. The company utilizes **plant-based protein alternatives** such as greens, seeds and grains to mimic the experience of meat.

Year of Incorporation: 2011

Headquarter: Redwood City, California (US)

Regional Presence: North America and Asia market

Manufacturing:

- The company has manufacturing facility at Oakland, California, which is smaller in size with capacity of **6000 ton per year**.
- The company's research & development laboratory is located in Silicon Valley, California.

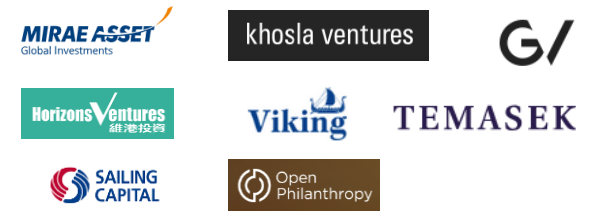
Positioning Claims:



Total Funding: USD 1.2 Billion



Investors:



Strength

- Impossible is unique among the competitors as the **patties bleed just like beef**
- The company has strategically build **sustainable buyer market** for itself through collaboration deal
- The company has adopted contract manufacturing strategy for commercial development

Weakness

- Scalability & Cost
- Use of GMO yeast to produce soy leghemoglobin
- The main protein is GMO soy which is considered allergen

Prolupin closes growth financing round led by Capricorn Partners and Novax

#Funding #Prolupin

- Prolupin with its **dairy-free protein isolate** is targeting vegan and lactose intolerant population who is looking for a **healthy and sustainable** alternative of **dairy protein**.
- The funding will **accelerate** the **growth of Prolupin** in **B2B** and **B2C** space. Also, allows the company to target the **market for global expansion**.



About:

- Prolupin GmbH is founded by the employees of the research institute, Fraunhofer Institute for **Process Engineering and Packaging (IVV)**.
- The company assists the whole value adding chain starting from planting lupines towards the process technologies and further product innovations.

Year of Incorporation: 2010

Headquarter: Grimmen, Mecklenburg-Vorpommern (Germany)

Regional Presence: European market

Product Snapshot:

- **Lupine Protein Isolate** (LPI)
- **Other Valuables from Lupine** (fiber, oil, and bowls)
- Lupine ice cream (Brand name- **MADE WITH LUVÉ**)

Positioning Claims: GMO-free, naturally gluten-free, naturally lactose-free, purely vegetable, and soy-free.

Total Funding: Not disclosed



Investors:



Strength



- Prolupin is unique among the competitors as its dairy-free protein isolate is extracted from lupine
- The company operates in both B2B and B2C space

Weakness



- Scalability & Cost
- Limited market presence

Nature's Fynd's raises USD 80 Million in series B funding

#Funding #Nature'sFynd

- **Nature's Fynd** which is formerly known as the **Sustainable Bioproducts** has developed a breakthrough fermentation technology to grow protein by using fraction of the land, water, and energy.
- The **funding** will be used to **introduce the product** in both meat and dairy categories.
- According to the **Karuna Rawal**, Chief Marketing Officer, Nature's Fynd, the company is planning to **bring the product** in the market by **this year**.

About:

- Nature's Fynd develops proteins from **microbial source** which has all the 9 essential amino acids.
- The company is working with microorganism named **Fusarium strain yellowstonensis** to produce a complete protein source for F&B Industry.

Year of Incorporation: 2012

Headquarter: Chicago, Illinois (United States)

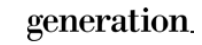
Regional Presence: North America market

Technology:

- The company is cultivating the **Fusarium strain yellowstonensis** using its breakthrough fermentation technology to produce **Fy**, which is a complete protein.
- Due to Fy's unique versatility, the company is developing many great-tasting foods that nourish people and nurture the planet.
- Fy is the rich source of fibers, oils, and micronutrients such as **vitamin B12, vitamin D, iron, and calcium**.

Total Funding: USD 113 Million

Investors:



Strength



- Nature's Fynd's protein source contains all the essential amino acids making it unique among the competitors in alternative protein space.
- Unlike its competitor, the company is not using genetic engineering
- PDCAAS score is close to animal protein

Weakness



- Scalability & Cost
- Limited market presence

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