

The new pathways towards plant-based meat and dairy revolution

Presented by:
Kim Bolorian – Product Manager

patSnap

AGENDA

1. About PatSnap
2. Global Meat Consumption
3. Outlook on VC Funding
4. Innovative Start-Ups Receiving Recent Funding
5. Outlook on Patent Trends
6. Discovery Tool
7. Q&A

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About patsnap

patsnap

250M

Innovation
data sources

8000+

Customers
worldwide

13+

Years of
patent
expertise

\$100M

Raised
to date

25th

Fastest
growing tech
company in
the UK

Leading

Machine
Learning and
Artificial
Intelligence
algorithms

700+

Employees
worldwide

1900+

Academy
users, on our
free online IP
courses

Los Angeles, USA

Toronto, CA

London, UK

Beijing, China

Shanghai, China

Suzhou, China

Singapore

Tokyo, Japan

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AI Connected Innovation Intelligence



 **insights**
by patsnap

 **discovery**
by patsnap

 **academy**
by patsnap

 **chemical**
by patsnap

 **bio**
by patsnap

 **connect**
by patsnap



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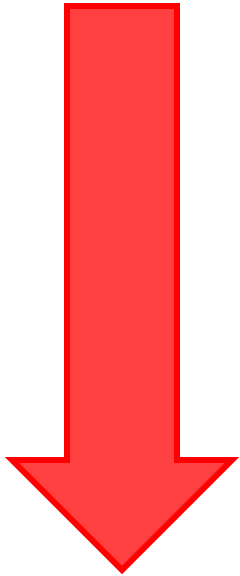
Connecting the World's Innovation Data



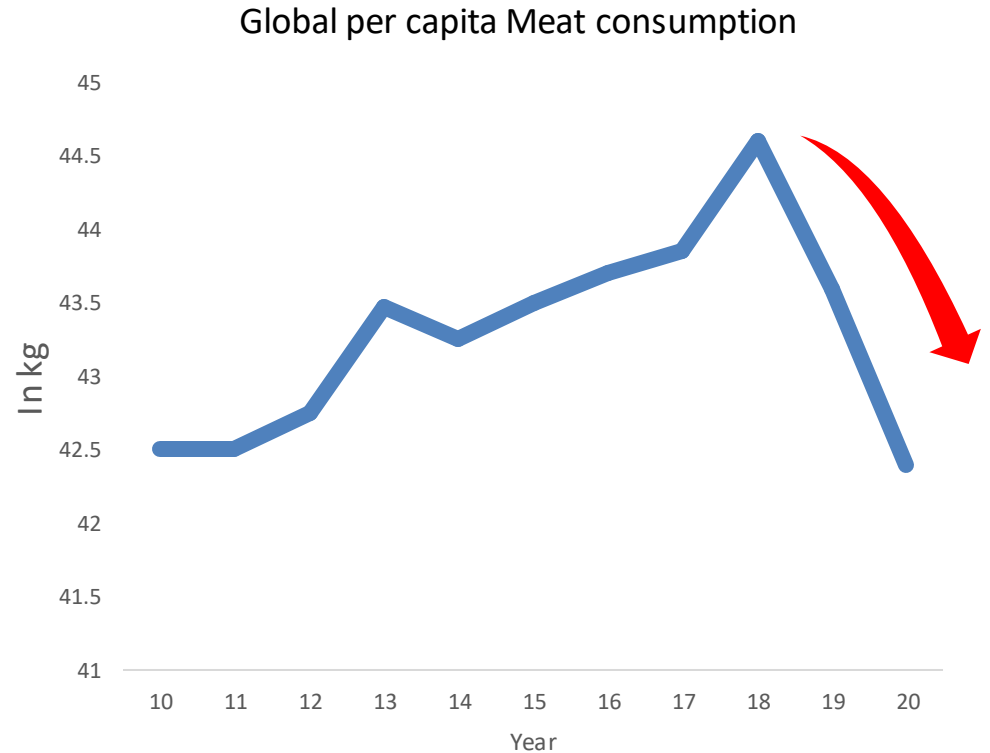
To help make better decisions

Global Meat Consumption

Global meat consumption per capita at its lowest in nearly a decade

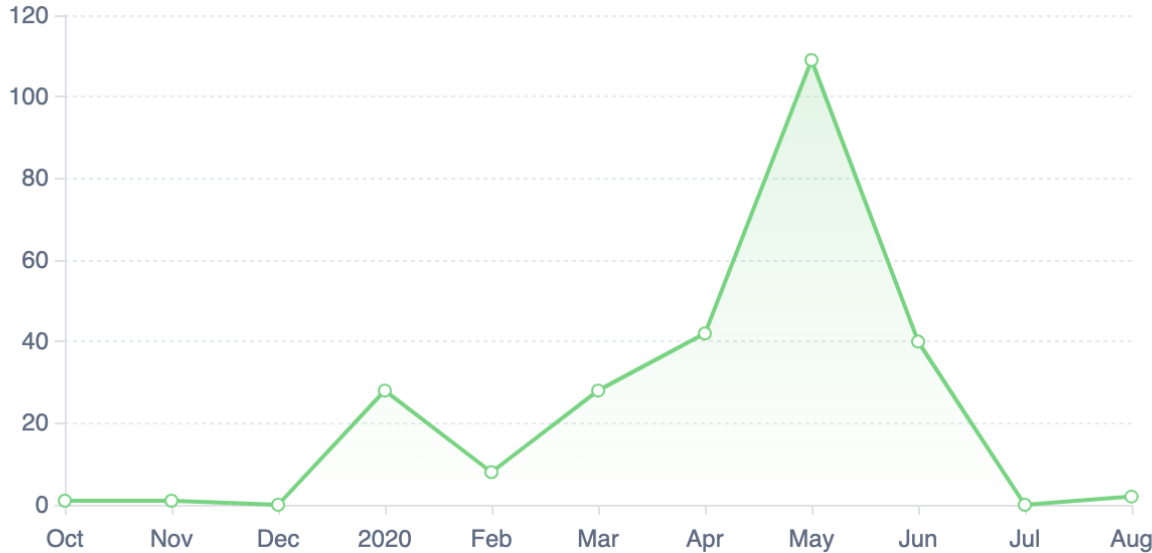


Projected to fall to the **lowest level in nine years.**

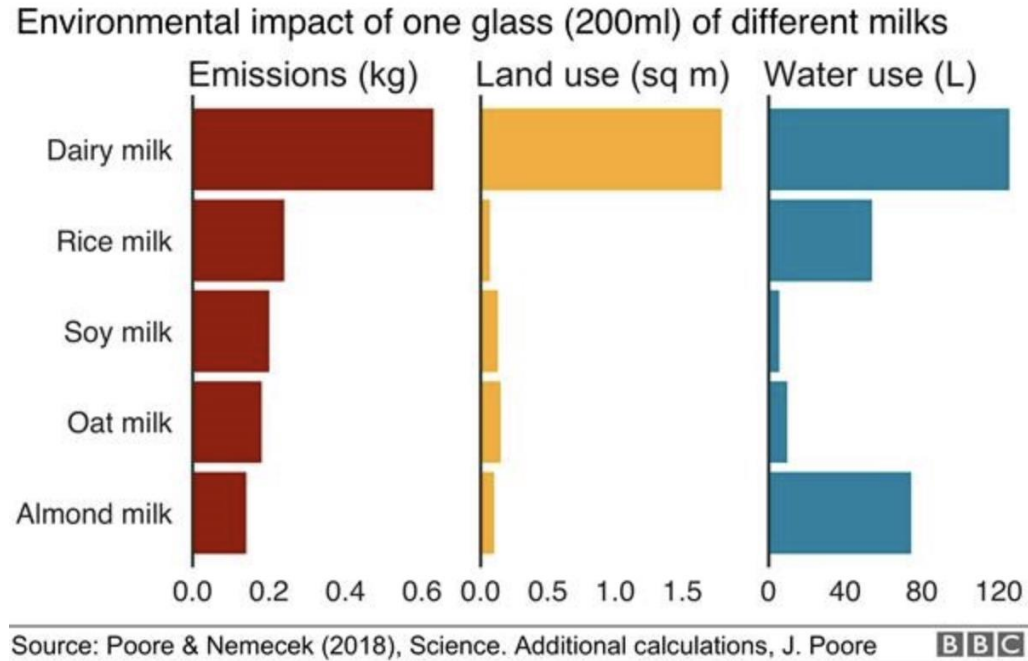


Increased research focusing on diet and lifestyle's effect on Covid-19 patients

Top universities (2020)
research output



The most environmentally damaging plant milk is still better for the planet than dairy milk



Growing population



3.4
billion
more
people

Growing demand



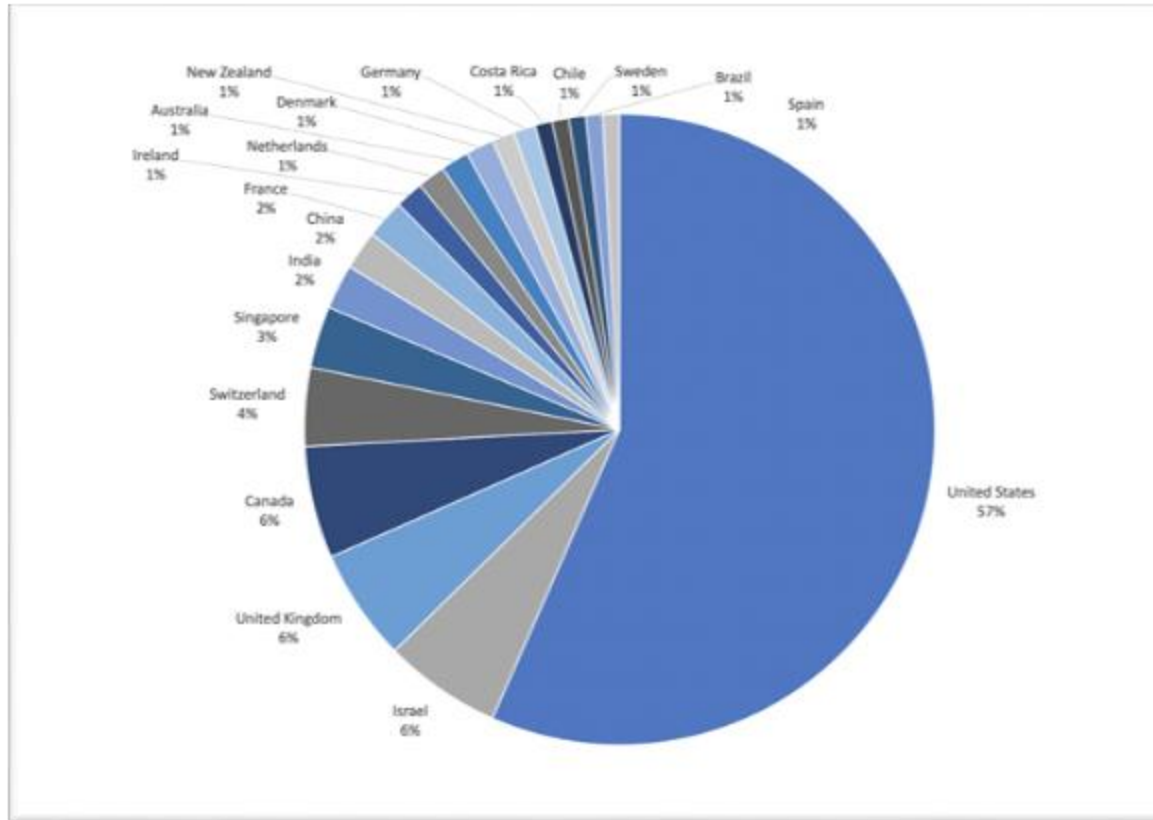
264% increase in sales

Outlook on VC Funding

Plant based related VC investments in the last 10 years

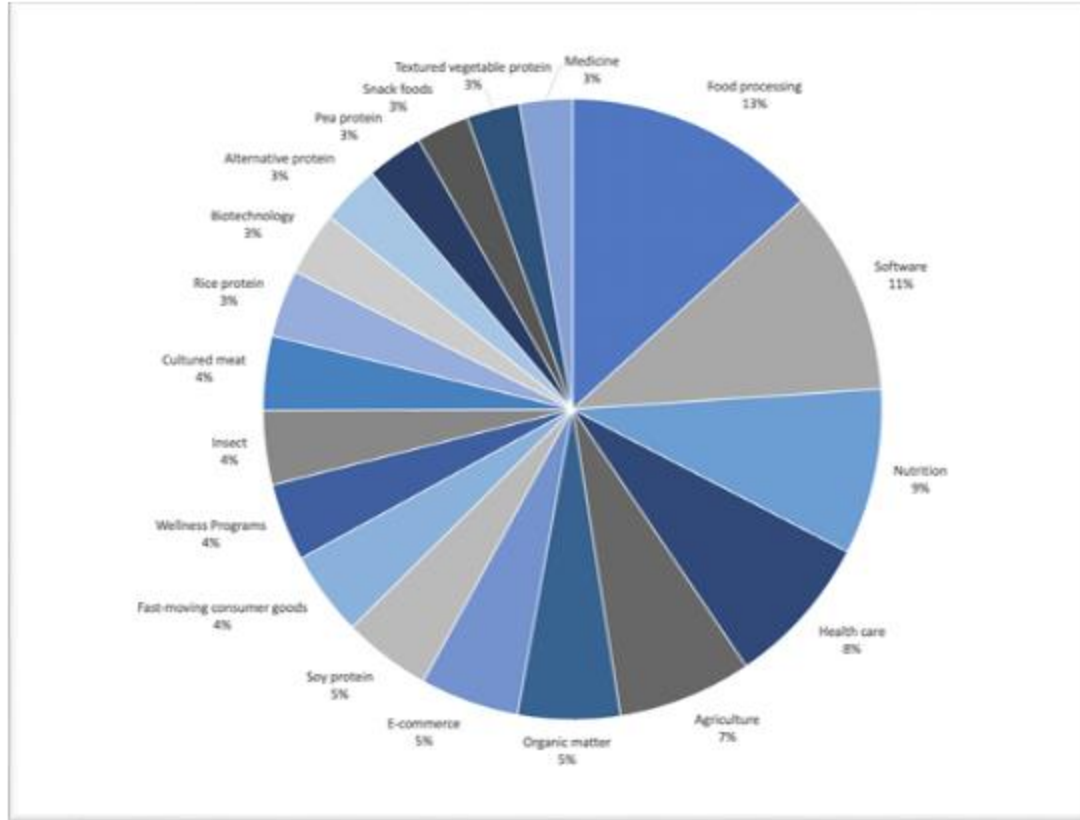


57% of plant based related VC deals are for US companies



Source: discovery.patsnap.com | Data is taken from 389 deals across 01.01.20 - 08.10.20

Global distribution of VC deals on plant based sub-topics



Source: discovery.patnap.com | Data is taken from 389 deals across 01.01.20 - 08.10.20

Plant based related VC investments in the last 12 months



Source: discovery.patnap.com

Three significant investments in March 2020



Impossible Foods's latest **\$500M** Series F funding

IMPOSSIBLE™

Founded: 2011

HQ: California, US

Total funding: \$1.39B USD

Recent funding: \$200M USD on 13 Aug 2020

Portfolio Value: \$21.9 M USD

across 182 applications

Impossible making moves into the dairy substitutes market



Publication Number: HK42020001888
 Assignee: Impossible Foods
 Application Date: 22 Jan 2020
 Publication Date: 17 Jul 2020
 Status: Pending

Compounds	Smell type	Bacteria to create	Additives, starting material
ethyl butanoate	Fruity, sweet		
2-butanone	acetone-like, fruity, butterscotch	TA61	Ile, thiamine, Magnesium ions, or ascorbic acid in yeast extract media
Acetic acid	sour	SX	< glucose in all systems
decanoic acid	rancid sour fatty goaty	SX followed by MD88 or TA61	Pea vicilins +coconut milk (with yeast extract)
Methyl Isobutyl Ketone	herbal, fruity and dairy nuances	SX followed by MD88	Pea vicilins +coconut milk (with yeast extract)
gamma-octalactone	sweet ,coconut, waxy, creamy, tonka, dairy, fatty	SX+TA61	Pea vicilins +coconut milk (with yeast extract)
delta-octalactone	Sweet, fatty, coconut, tonka, tropical dairy	SX+TA61	Pea vicilins +coconut milk (with yeast extract)
gamma-nonalactone	coconut, creamy, waxy, fatty milky	SX + MD88	Pea vicilins +coconut milk (with yeast extract)
5-Hydroxy-4-octanone	buttery	SX followed by TA61	soymilk
Ethyl octanoate	sweet, waxy, fruity and pineapple with creamy, and fatty	SX + MD88	yeast extract media with coconut milk
2-ethyl-1-Hexanol	sweet, fruity, fatty	TA61	Vitamin B12, Riboflavin, Thiamine, CoenzymeA, or Keloglutarate in yeast extract

Nature's Fund latest **\$80M** Series B funding



Founded: 2011

HQ: Illinois, US

Total funding: \$113M USD

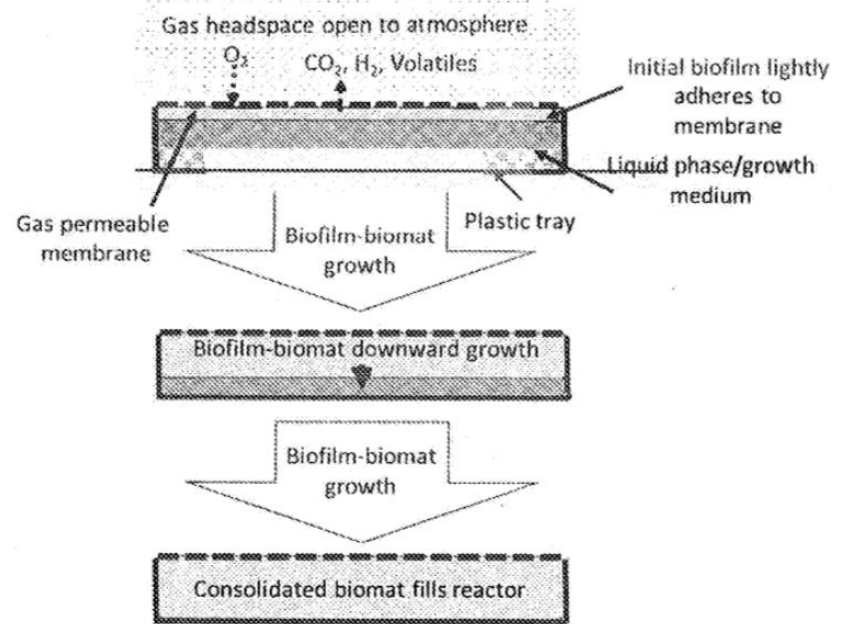
Portfolio Value: \$76,500 USD
across 31 applications

Nature's Fynd develops microbe-based proteins for meat substitutes.



Publication Number: WO2020176758A1
Assignee: Nature's Fynd
Application Date: 27 Feb 2020
Publication Date: 03 Sep 2020
Status: PCT designated stage

Figure 12.



LiveKindly latest **\$200M** funding



LIVEKINDLY

Founded: 2020

HQ: California, US

Total funding: \$335M USD

Recent Funding: \$135M USD

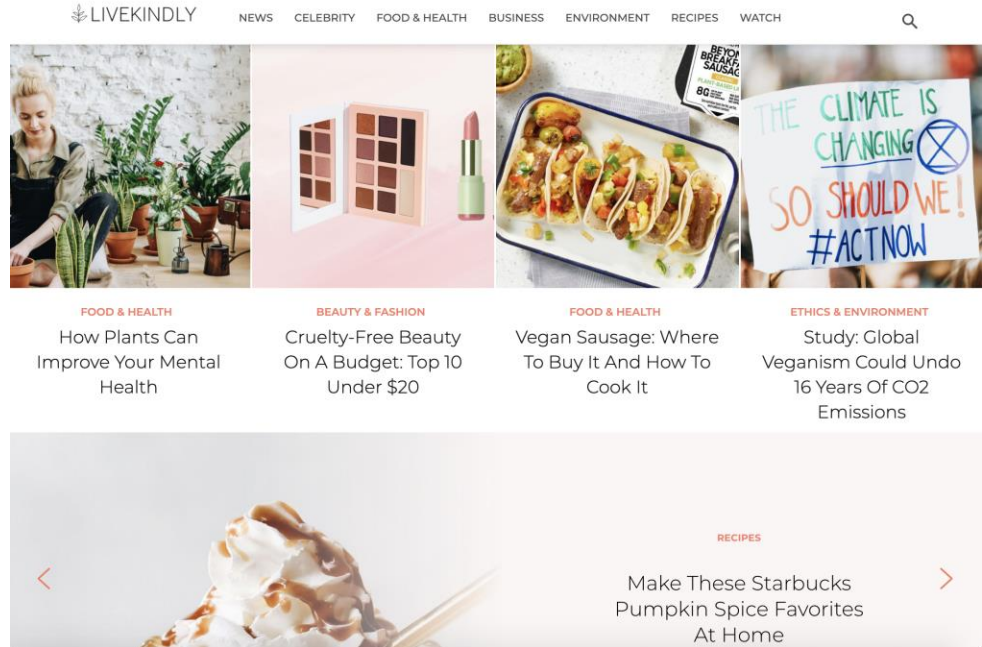
Portfolio Value: \$76,500 USD

across 31 applications

Foods United has bought plant-based digital media platform LIVEKINDLY



Rebranded as The LIVEKINDLY Co, the company moves to capitalize on the trend for vegan meat alternatives.



Innovative Start-Ups Receiving Recent Funding

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Innovative start-ups that have received recent funding



\$85M USD
Series C
09 Sep 20



\$7.5M USD
Post IPO
15 Sep 20



\$22M USD
Series A
01 Sep 20



\$28.2M USD
Series A
03 Sep 20



\$7.5M USD
Seed
01 Sep 20

Disrupting a \$70 billion global infant nutrition market

Else

Founded: 2012

HQ: Tel Aviv, Israel

Total funding: \$13.4M

USD (disclosed)

Recent funding: \$7.5M

USD

Post IPO Equity funding



Non-dairy formula patent filed in 9 countries so far



Portfolio Overview

Patent Applications

17

INPADOC Families

4

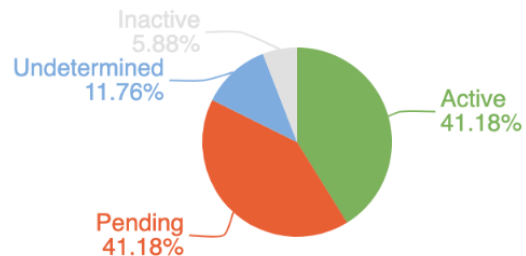
Portfolio Value

\$ 403,500

Average Patent Value

\$ 201,750

Legal status



An entirely new kind of nutrient-rich protein

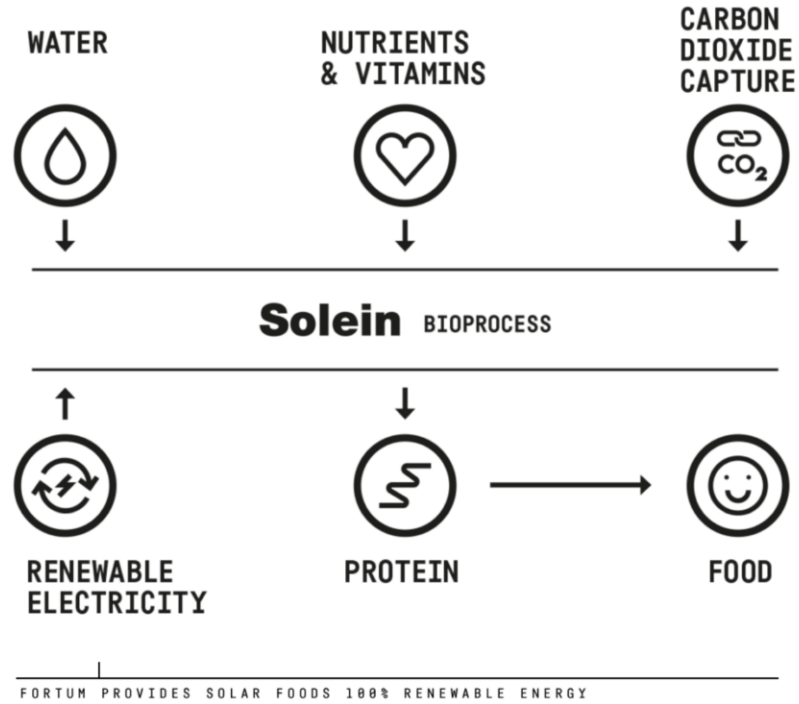


Founded: 2017

HQ: Southern Finland

Total funding: \$24.88M
USD (disclosed)

Recent funding: \$22.06
USD Seed



Patent: Bioreactors for growing micro-organisms



Publication Number: HK42020001888
Assignee: Impossible Foods
Application Date: 22 Jan 2020
Publication Date: 17 Jul 2020
Status: Pending

Portfolio Overview

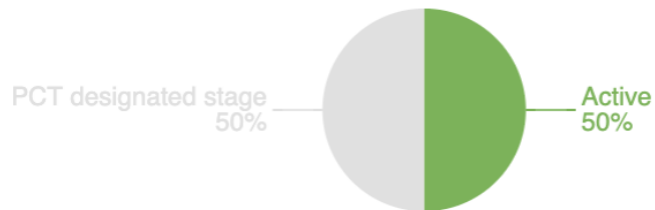
Patent Applications

2

INPADOC Families

1

Legal status



Aiming to producing tasty, nutritious protein without depleting already scarce natural resources



Founded: 2016

HQ: Colorado, US

Total funding: \$34.3M USD
(disclosed)

Recent funding: \$28.2 USD



Patents for edible compositions including fungal mycelium protein



Portfolio Overview

Patent Applications

7

INPADOC Families

3

Portfolio Value

\$ 432,000

Average Patent Value

\$ 216,000

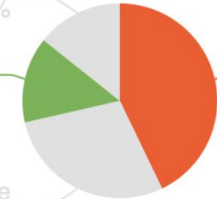
Legal status

PCT designated stage
14.28%

Active
14.29%

Inactive
28.57%

Pending
42.86%



Turning data into plant based cheese and meat



Founded: 2019

HQ: California, US

Total funding: \$7.5M USD
(disclosed)

Recent funding: \$7.5 USD



A strong team with data science and machine learning experts



Founded: 2019

HQ: California, US

Total funding: \$7.5M USD
(disclosed)

Recent funding: \$7.5 USD



CEO: Oliver Zahn
PhD in astrophysics

Zahn headed Data Science efforts
at Google and Impossible Foods.

NotCo will move into the United States, Mexico, Peru and Colombia

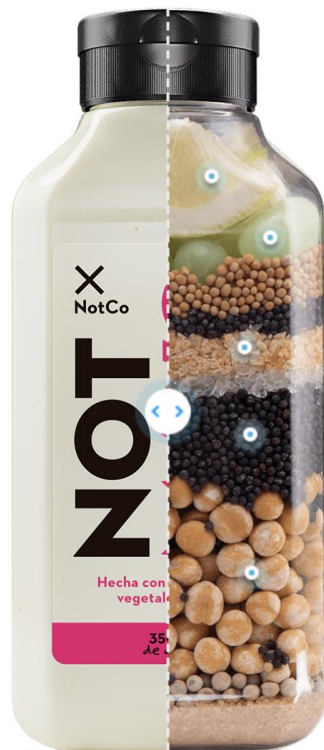


Founded: 2015

HQ: Chile

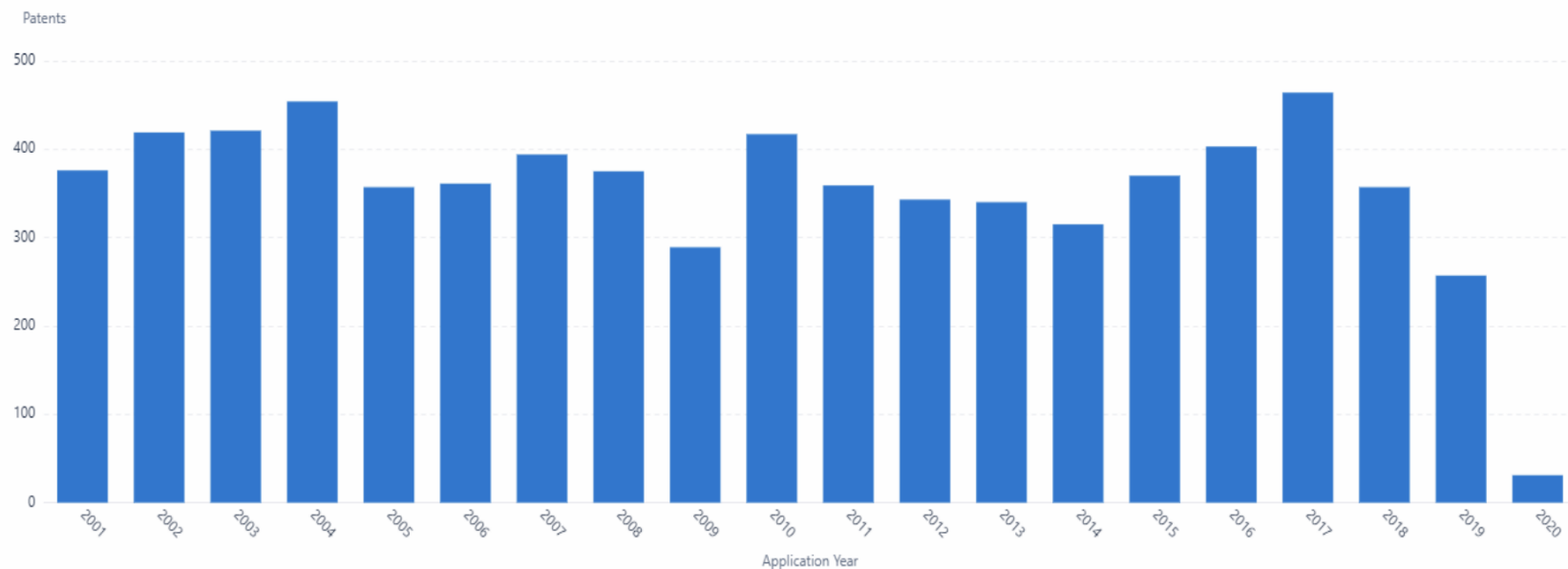
Total funding: \$115M USD
(disclosed)

Recent funding: \$85 USD

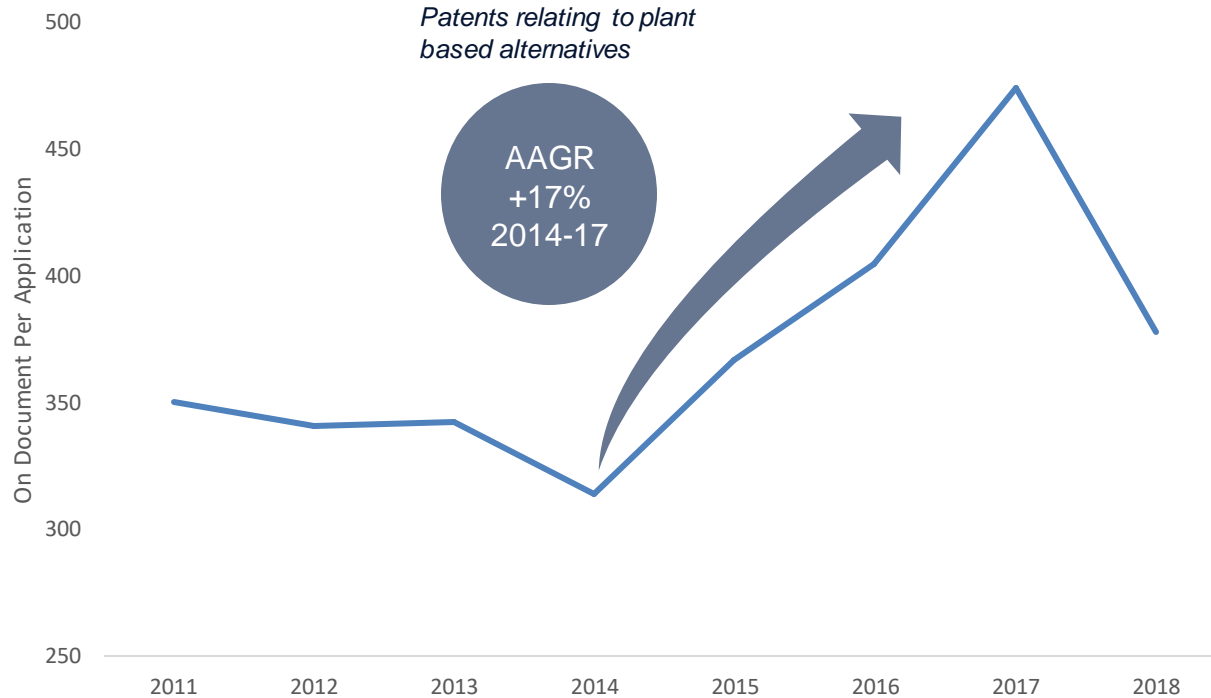


Outlook on Patent Trends

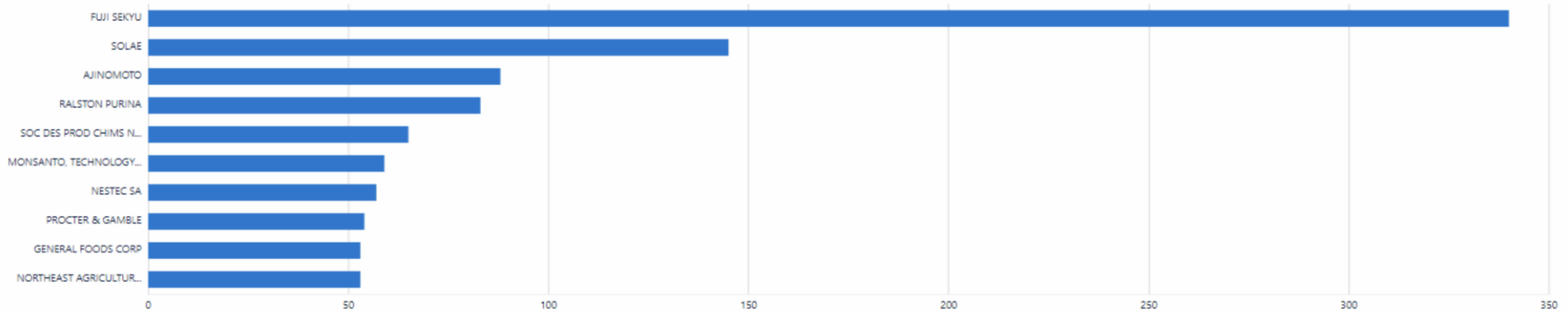
Patent application trend from 2001 - 2020



Steady growth in meat alternative patents from 2014



Top 10 companies with the most patents within the 'meat substitute' industry



 **FUJI OIL**

340 patents

 **Solae**TM

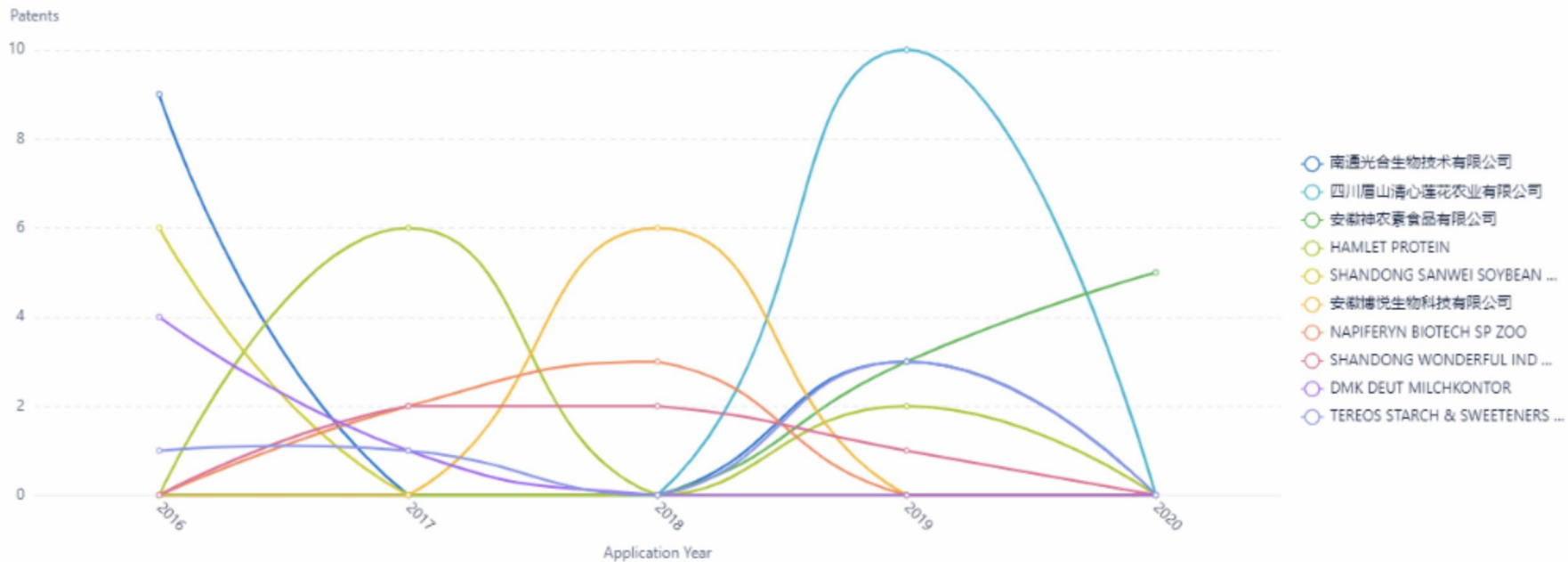
85 patents

 **AJINOMOTO**[®]

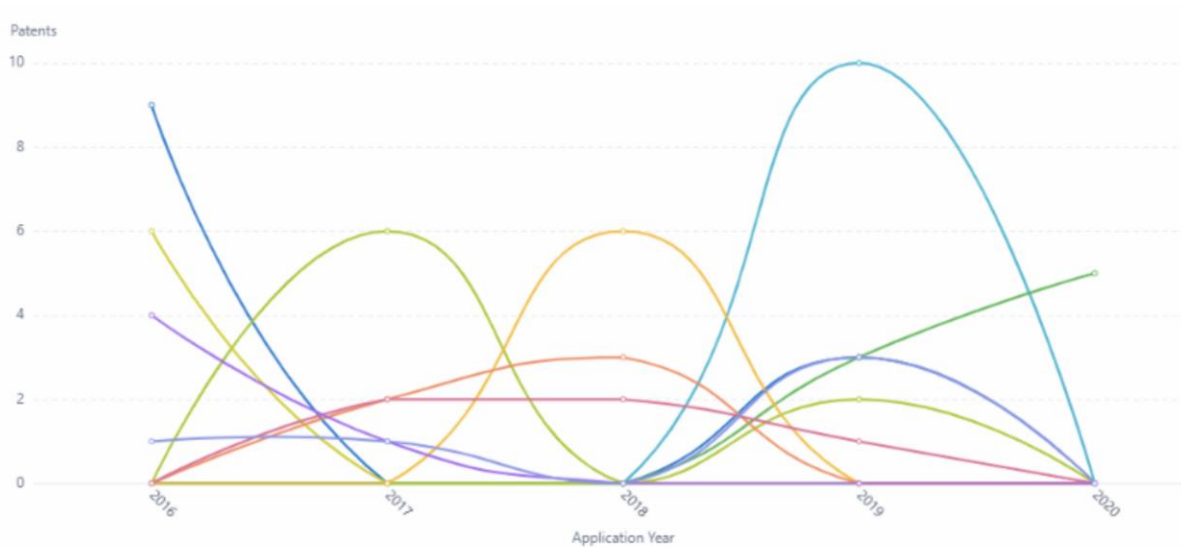
147 patents

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New entrants



Hamlet Protein applied for 8 patents in 2017



- 南通光合生物技术有限公司
- 四川眉山清心莲花农业有限公司
- 安徽博悦生物科技有限公司
- NAPIFERYN BIOTECH SP ZOO
- SHANDONG WONDERFUL IND ...
- HAMLET PROTEIN
- DMK DEUT MILCHKONTOR
- SHANDONG SANWEI SOYBEAN ...
- TEREOS STARCH & SWEETENERS ...



HAMLET
PROTEIN



discovery

by patsnap

Every year the world changes... a lot !

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In 2018 there was ...



3.3 million
Patent
applications¹



3 million
Academic
papers
published²



\$131 billion
dollars of VC
financing³



More than 3.3
trillion in
announced
M&A⁴

1. 2018, World Intellectual Property Indicators (WIPI) WIPO

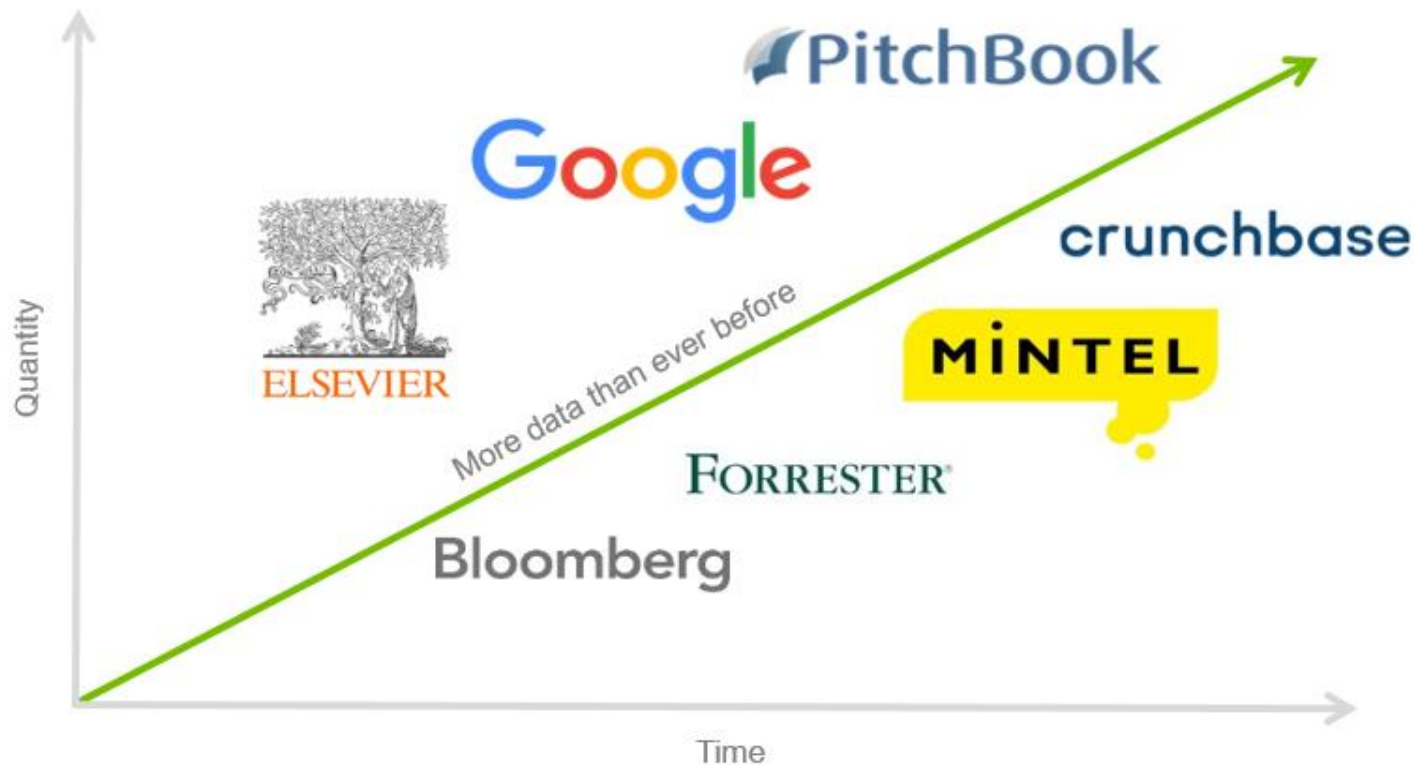
2. 2018, STM report

3. 2018, NVCA Venture Monitor, PitchBook

4. 2018, Global M&A activity, Financial Times

Tools are disparate, expensive or out of date

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An ever-growing insights gap



To make better decisions, you need to be informed

- Patents
- Tech Transfer
- Clinical Trials
- Journal Papers

**Technology
Intelligence**

**Competitor
Intelligence**

- Companies
- Investments
- M&A
- Government Grants
- Universities
- Research Funding
- Experts

**Market
Intelligence**

- News and Tech Blogs
- Market Reports
- Press Releases
- Key Opinion Leaders

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Q&A