

Pharma Food – Biotech on Your Plate

The synthetic push for lab-grown 'foods' and other alternative proteins

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the Solari Report

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PHARMA FOOD

Biotech on Your Plate:
The Next Chapter in Big Money's Battle to End Food Sovereignty

Overview

- What are pharma foods?
- They synthetic push for alternative proteins
- How to avoid them

What's in a name?

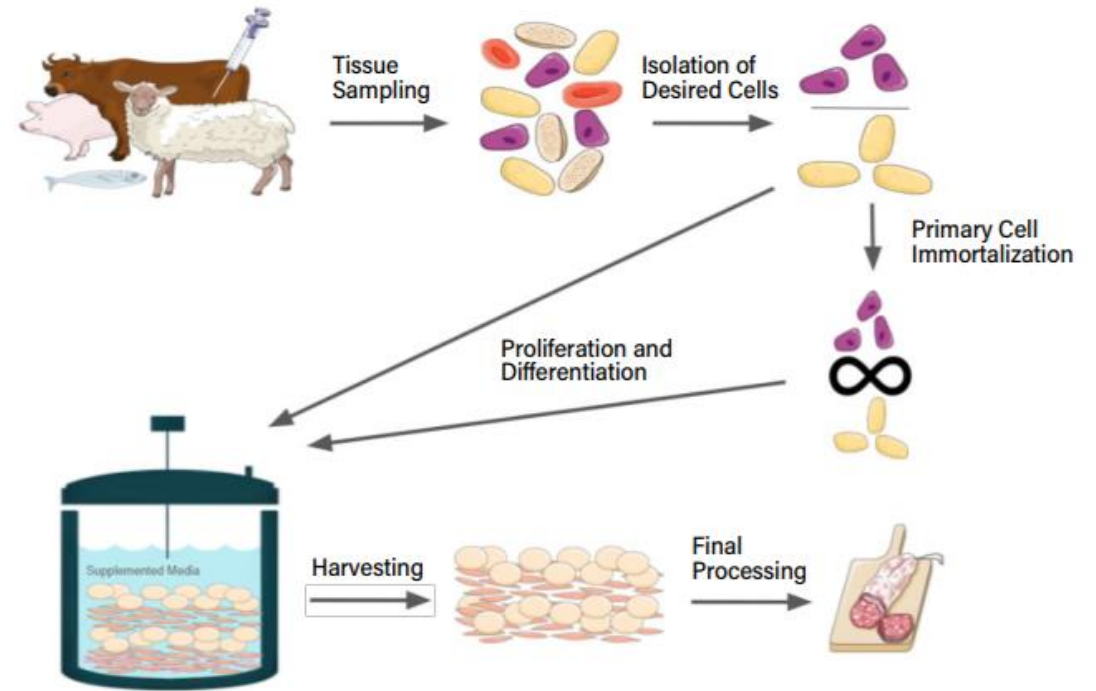
- Lab-grown meat
- Synthetic meat
- In vitro meat
- Cultured meat
- Cell-cultured meat
- Cellular meat
- Cellular agriculture
- Clean meat
- Guilt-free meat
- Cruelty-free meat
- Slaughter-free meat
- Meat?

Pharma Food

Cell culture

- Growing cells in a petrie dish, in a 'growth medium', containing: fetal bovine serum, antibiotics, hormones, trace elements, amino acids and more.

Figure 11: Production Process for Lab-Grown Meat



Source: *International Journal of Medical Sciences. Review: Immortalizing Cells for Human Consumption.* Emily Soice and Jeremiah Johnston. ijms-22-11660.pdf.

Pharma Foods -Precision Fermentation

- Precision Fermentation
- Genetically modified bacteria (e-coli) to produce substances: insulin, milk, butter, wood, industrial chemicals, enzymes, etc.

Cellular agriculture (Cell-Ag)
Alternative proteins
Synbio

McKinsey forecasts
the 'Bio Revolution':

Economic impact of
\$4 trillion a year over the
next ten to 20 years.



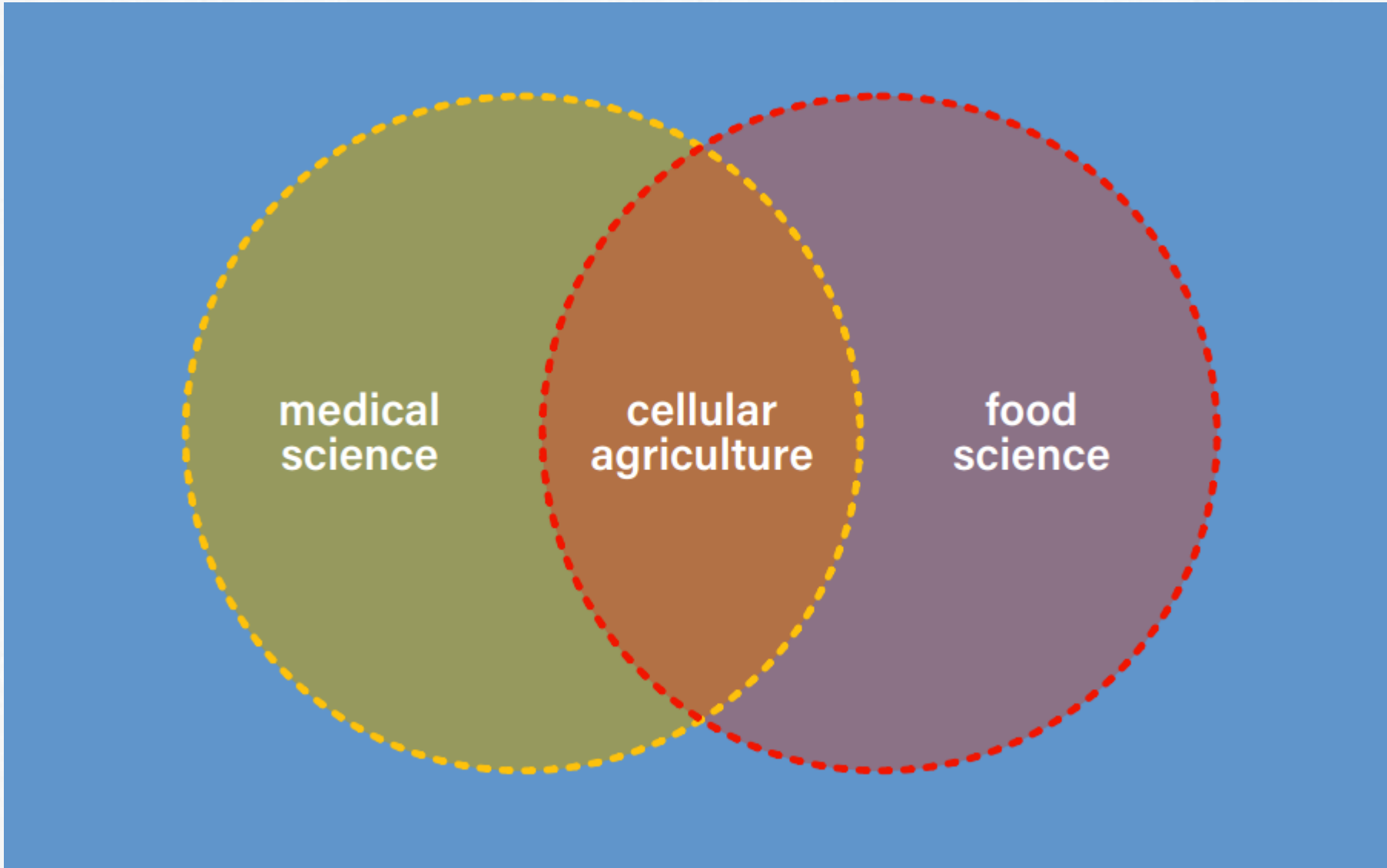
“GMO bacteria, this is an uncontrolled, global experiment” ~ GMO-expert Jeffrey Smith
Interview for De Andere Krant



ACTIVIST, AUTHOR AND GMO EXPERT

Jeffrey Smith






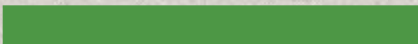
Synthetic Meat at the Intersection of Food and Pharma Science

Source: Adapted from Isha Datar. *What movement building means to us*. New Harvest

Where are pharma foods sold?

- Singapore
 - US
 - FDA-approved sale of lab-grown meat
 - Bioengineered foods
 - 'Better than butter'
 - Animal-free milk
 - EU
 - Approving lab-meat difficult
 - Novel food policy (insects, precision fermentation)
- 

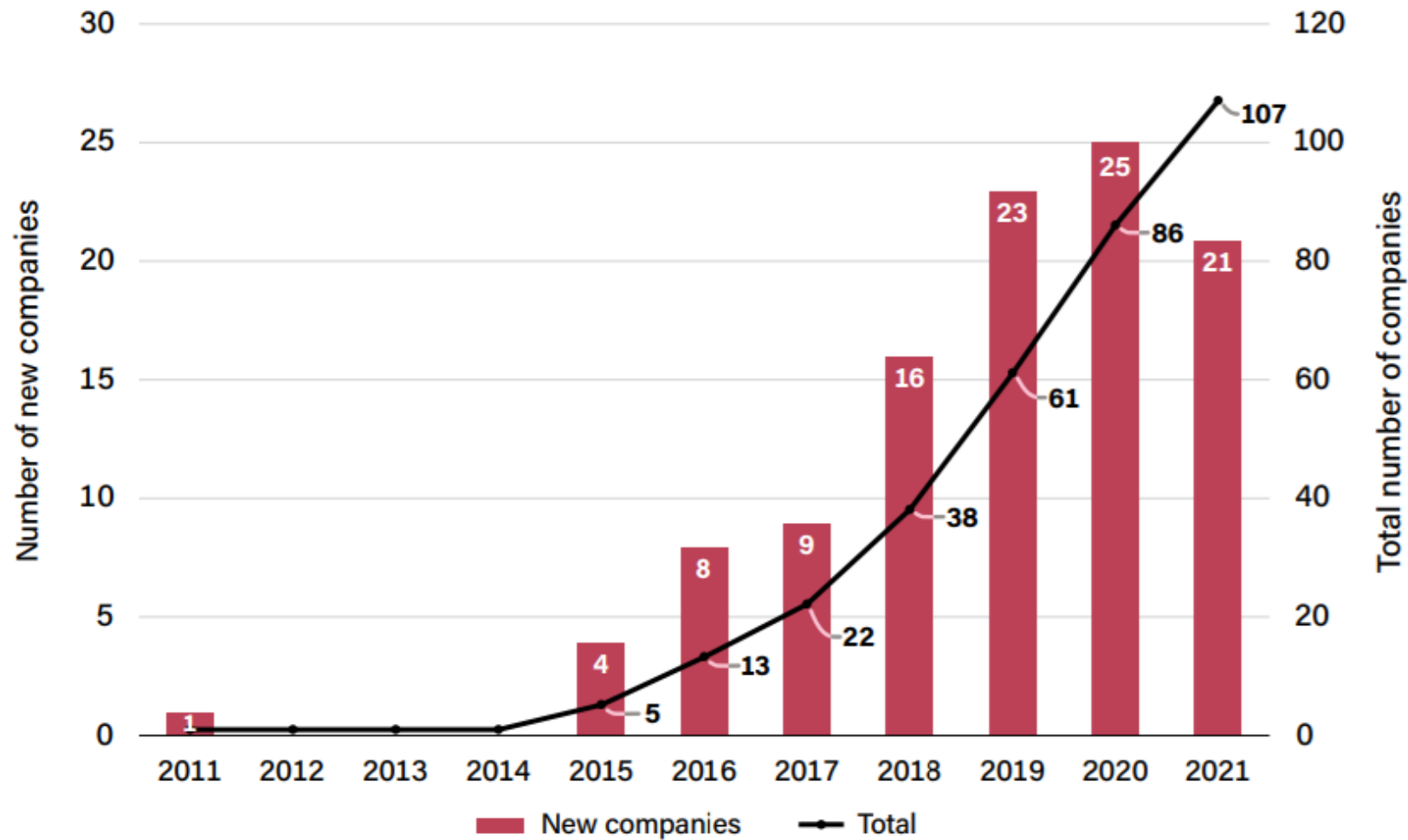
Synthetic push for pharma 'foods'





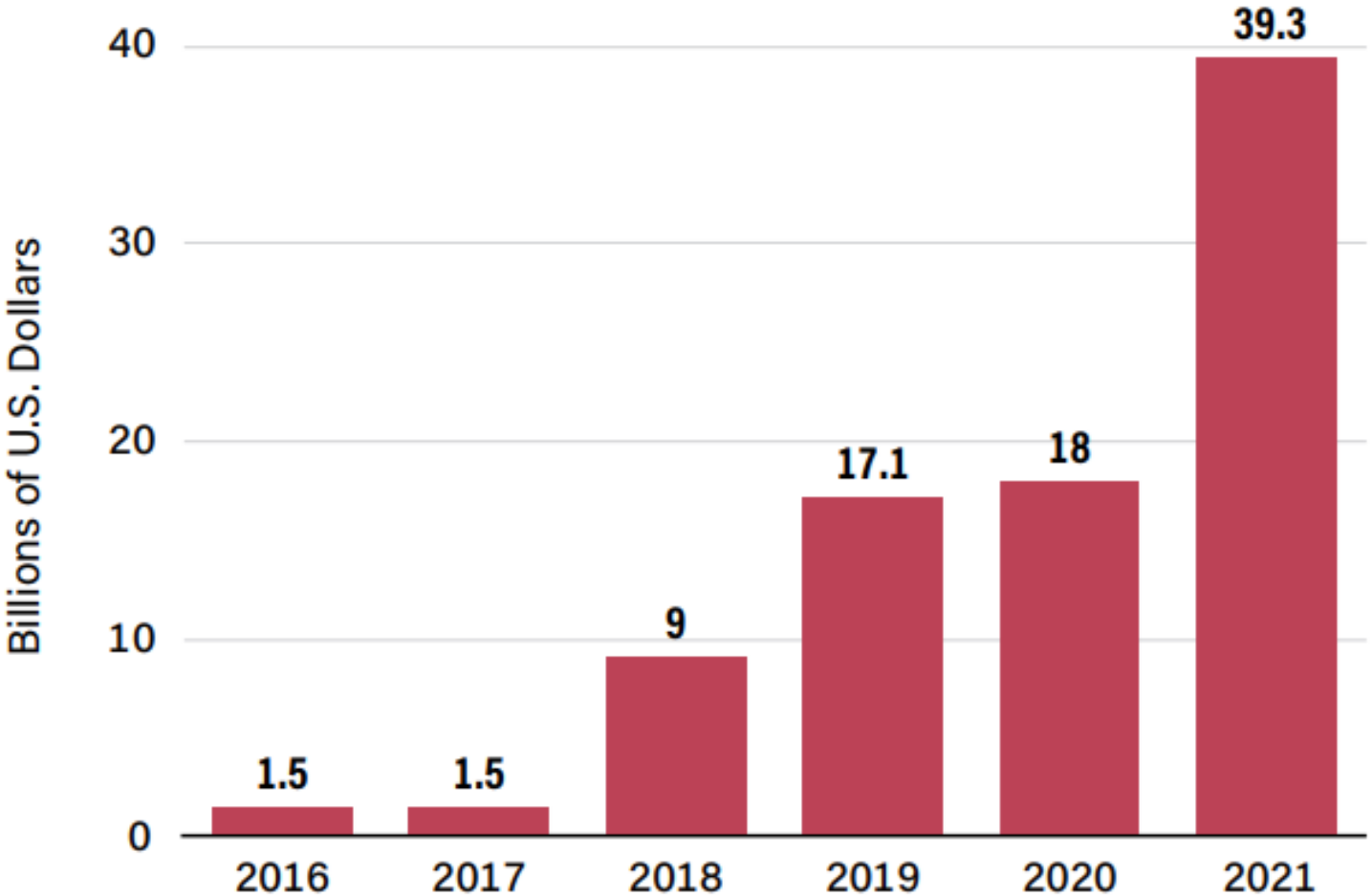
2000

Figure 3: New and Total Number of Cultivated Meat Companies, by Year Founded



Data source: 2021 State of the Industry Report: Cultivated meat and seafood. Good Food Institute, 2021.

Figure 2: Venture Capital (VC) FoodTech Funding, 2016-2021 (USD billions)



Data source: Author's research.

2017 and on, Meat Packers and Food Conglomerates investing in alt-protein

- **JBS** —the world's largest meat producer (Brazil)
 - **Tyson Foods**—the world's second largest meat producer (Arkansas)
 - **Cargill**—the world's third largest meat producer (Minnesota)
 - **Danone Manifesto Ventures**—VC arm of French multinational Danone
 - **Smithfield Foods**—the world's fourth largest meat producer (Virginia-based subsidiary of China's WH Group)
 - **Archer Daniels Midland**—food and animal nutrition and commodities conglomerate (Chicago)
- 

2019 and on - consortia to promote Cell-ag

EU - EiT Food (2019)

EU - Feed for Meat (2021)

Cellular Agriculture Europe
(2021)

Cellulaire Agricultuur Nederland
(2022)

CellAg UK (2022) US -
OpenCellAg (2022)

US - Association for Meat, Poultry and
Seafood (AMPS) (2019)

US - National institute for Cellular
Agriculture (2021)

US - OpenCellAg (2022)

Global Cultivated Meat Modeling
Consortium (CMMC) (2019)

Global alliance for advancing
cultivated foods (EU, US, Asia, 2019)

Policy pyramid


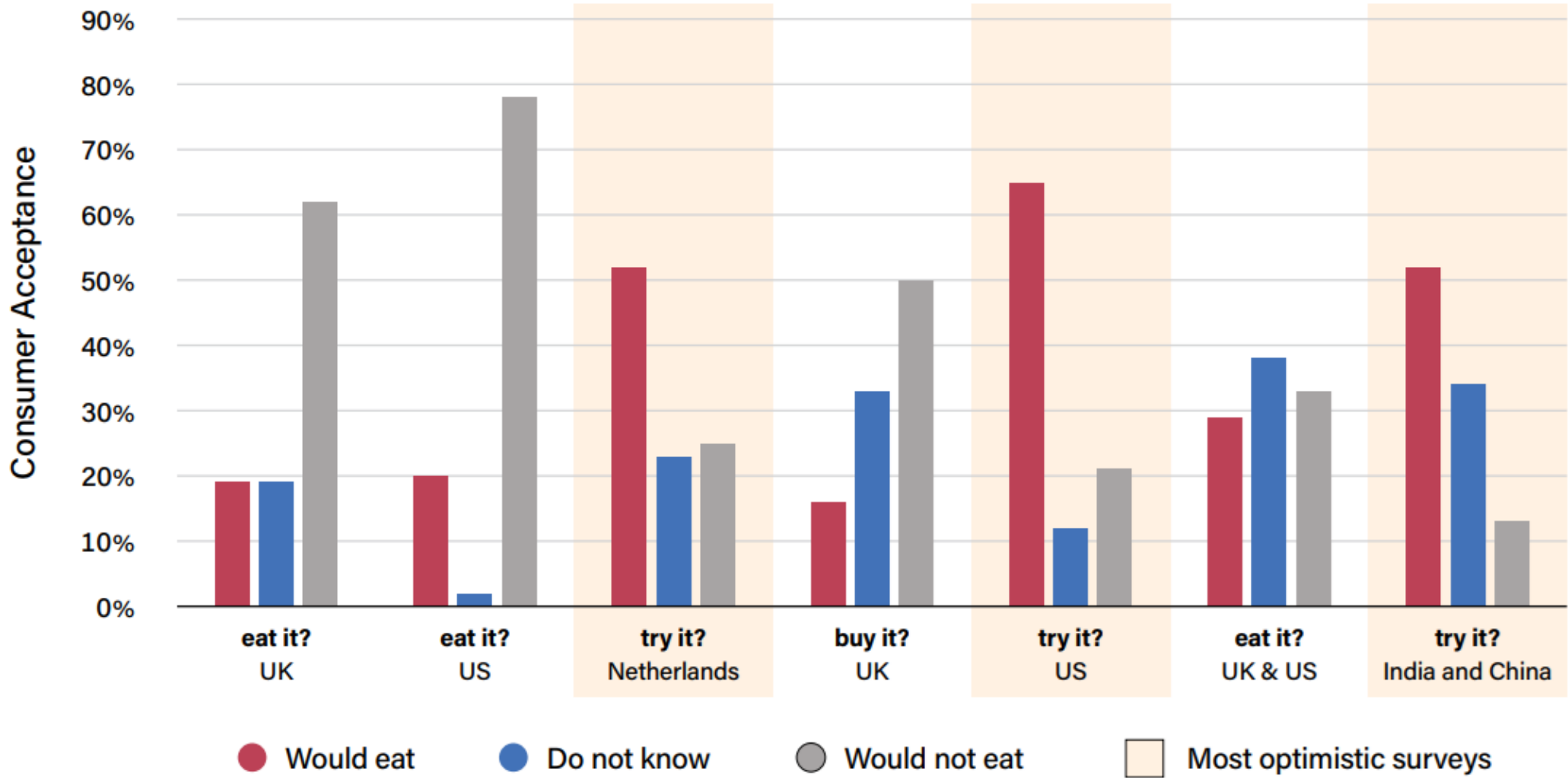
- UN Convention Climate Change
 - Transforming agriculture
 - Protein transition policy
 - Policies aimed at changing peoples diet - Behavioral government/ nudging/ school lessons
 - US - Executive Order (EO) on Advancing Biotechnology
 - One Health
 - ESG scoring
- 

Figure 5: Consumer Acceptance of Lab-Grown Meat: Survey Results



Data source: *Cultured meat: Navigating the regulations in the EU, USA and China.*
Annie-Laure Robin – Senior Regulatory Consultant. Leatherhead Food Research report.

The consumer is considered 'neophobic'





How can you avoid pharma foods?

- Buy directly from farmers or an intermediary
- Boycott the supermarket
- (in the US) Look for the non-gmo project label



Read more?

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Local Heroes in the Global War on
Our Food and Property Rights