

nvp

ACCELERATING
THE CULTURED
MEAT REVOLUTION

Aarhus 26-09-23

Nordic Virtual Pastures



Medfinansieret af
Den Europæiske Union



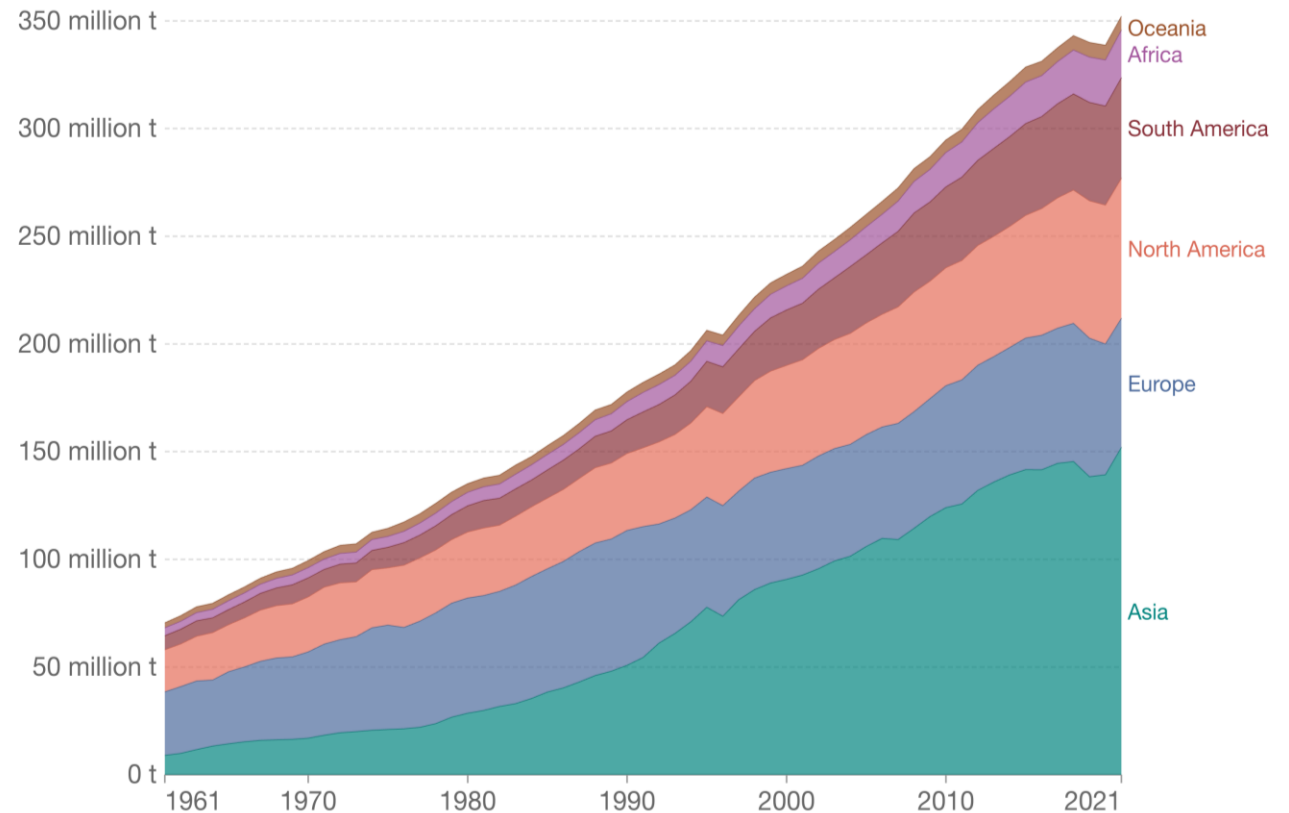
Danmarks
Erhvervsfremmebestyrelse



Food & Bio Cluster
Denmark

Consumer Habits Are Changing

People are getting richer and global meat consumption has increased dramatically from 1961 to 2021.



Source: UN Food and Agriculture Organization (FAO)

OurWorldInData.org/meat-production • CC BY

A large number of cows, mostly white with some brown patches, are packed closely together in a dimly lit barn. They are looking towards the camera, creating a sense of being in a crowded, industrial environment. The barn has wooden walls and a high ceiling, with some light coming from windows in the background.

Meat Production
Needs to change

The Challenge to Replace Meat

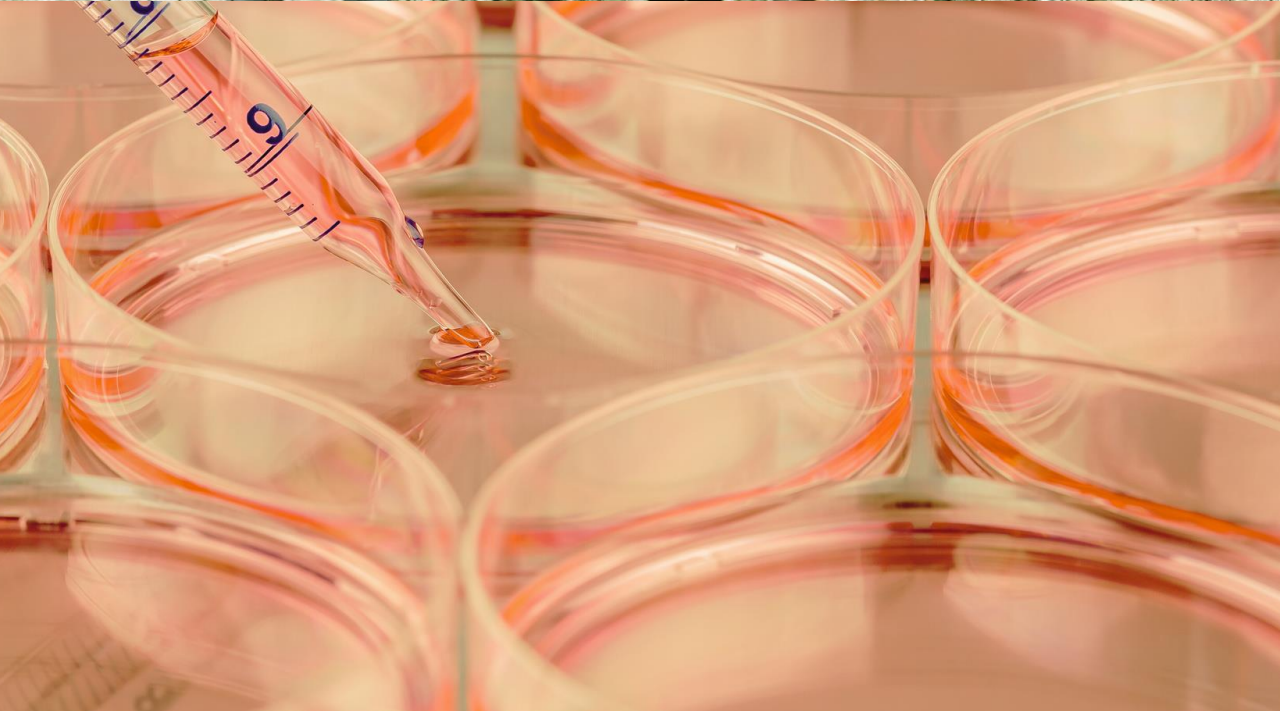
How can we replace meat without compromising on taste and nutrition?

Cultivated meat.



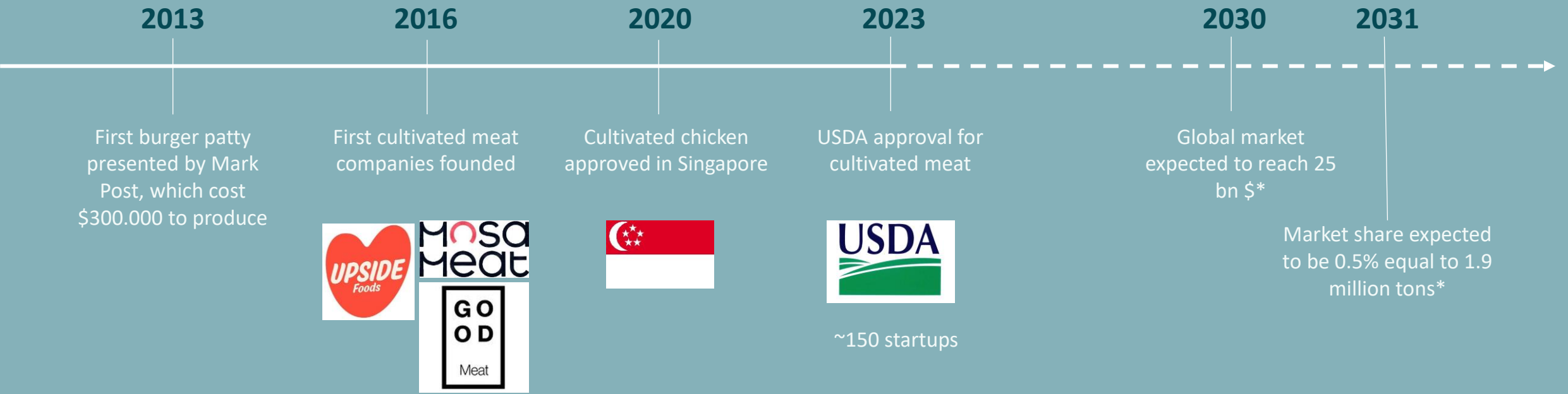


Cultivated meat



The cultivated meat industry could reach a value of €25 bn in 2030.


The Cultivated Meat Industry



*Brennan, T., Katz, J., & Spencer, B. (2021). Cultivated meat: Out of the lab, into the frying pan. <https://www.mckinsey.com/industries/agriculture/our-insights/cultivated-meat-out-of-the-lab-into-the-frying-pan>

A close-up photograph of a lush green field of crops, likely sorghum, with many tall, thin stalks and small green leaves.

The Need

A photograph of a large, complex industrial bioreactor system made of polished stainless steel. It features multiple large cylindrical tanks, a network of pipes, and various mechanical components like valves and gauges.

Cultivated meat will need 20
bn L of cell culture medium
annually in 2030.

Our Solution

Utilising nature's own ingredients to produce a cost-effective and sustainable cell culture medium.



NVP is an Enabler of sustainable and real meat, no animals slaughtered



Creating growth media from industry waste-streams of biomass.

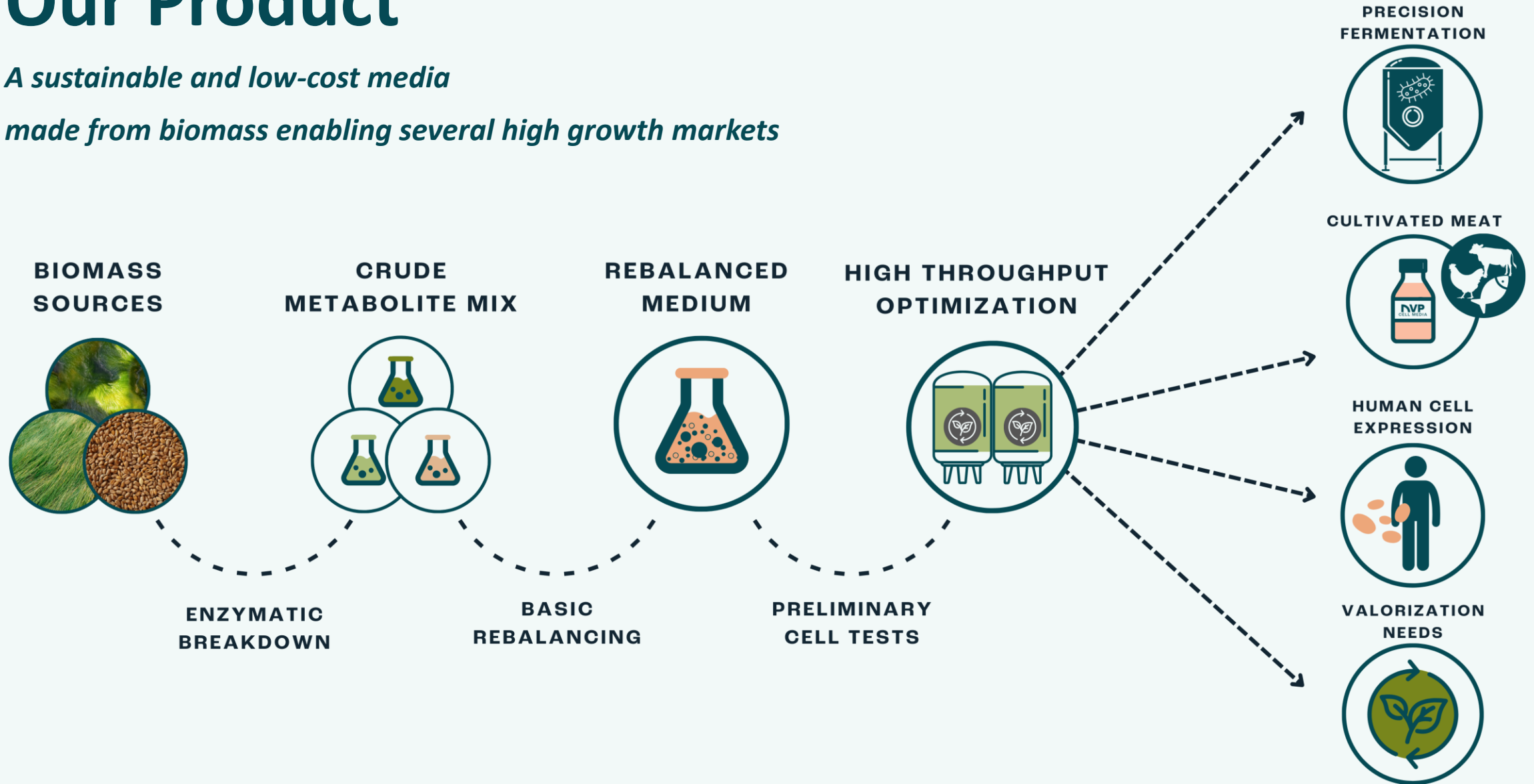
- 1 Reinventing the supply chain for cultivated meat.
- 2 Enabling price parity.
- 3 Leveraging the exponential market growth.

Producing low-cost Virtual Media™ at scale from 2027 to fulfill the demand for cell culture media

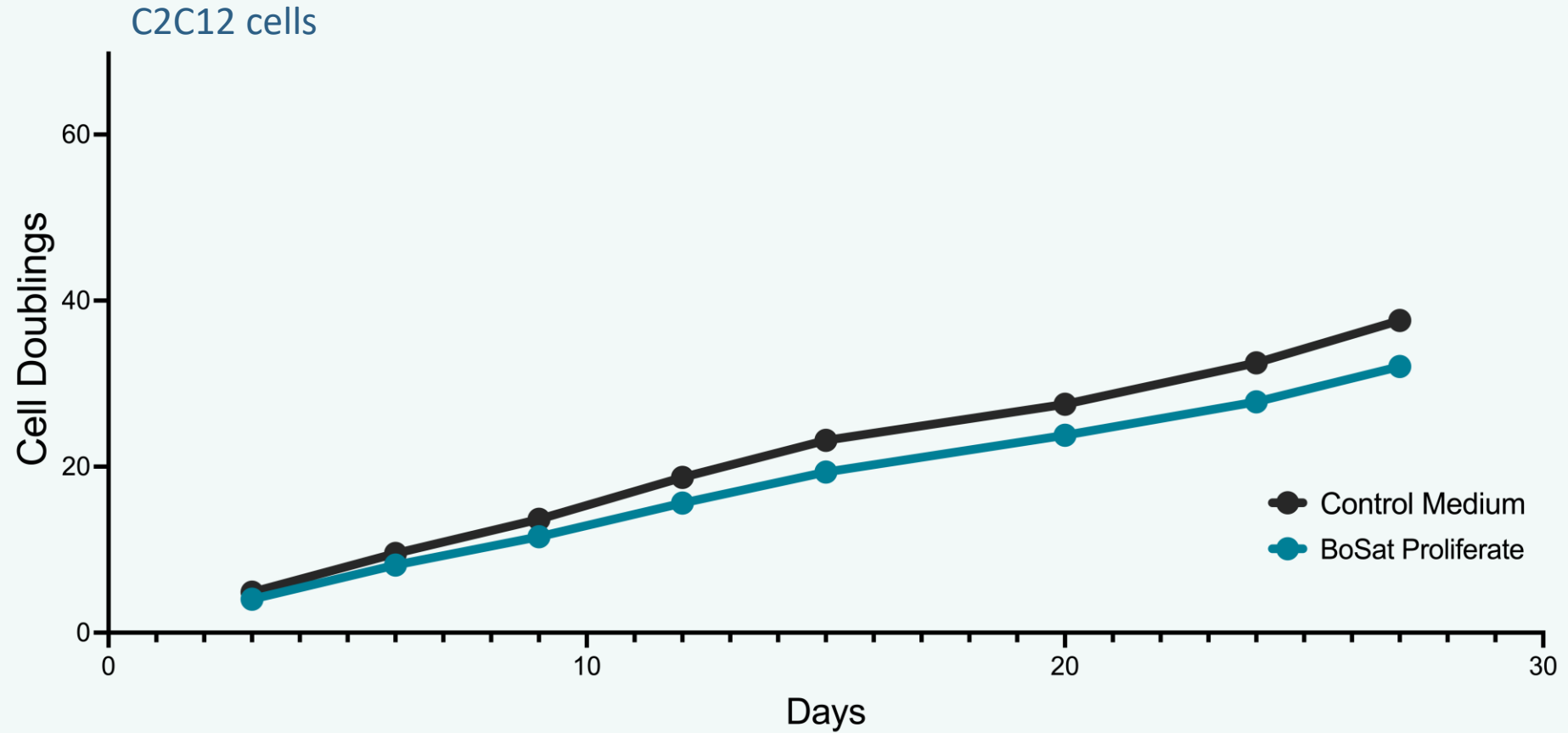
Our Product

A sustainable and low-cost media

made from biomass enabling several high growth markets



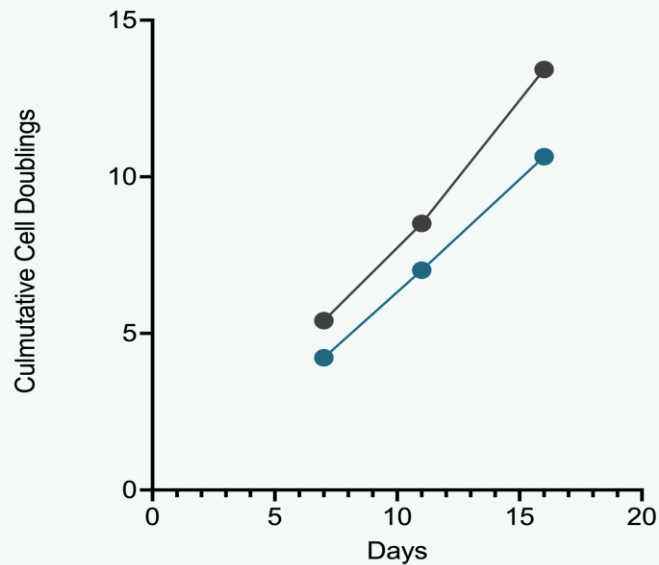
Competitive Performance



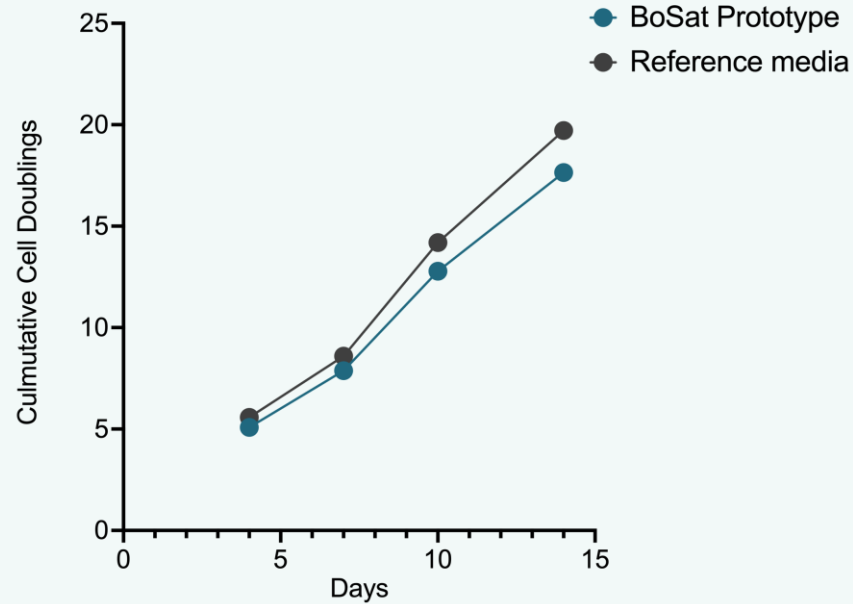
Industrial Cell Lines

Medical research and therapeutic solutions

HEK293 cells



COS7 cells

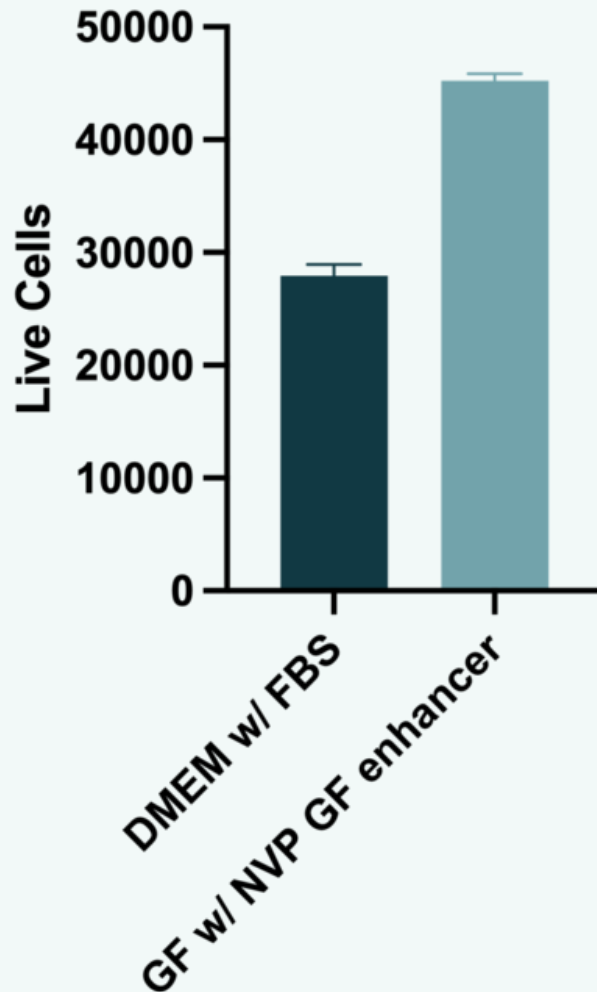


Broadening our market reach to other markets than cultivated meat.

Industrial cell lines can proliferate well in our BoSat Prototype media.

NVP growth factor enhancer

Bovine Satellite Cells



**NVP's mix
outperforms
commercially
available media
on cell growth.**

Bovine Satellite Cells
cultivated in serum-free
media with NVP's own
growth factor booster.

State of the Industry

FDA and USDA have Recently Approved Cultivated Meat

Upside Foods received FDA Approval for cultivated chicken November 17, 2022



"Lab-Grown Meat Receives Clearance From F.D.A." Nov. 17 2022

As well as USDA approval June 21, 2023

Now served at 'Bar Crenn' a restaurant in San Fransico



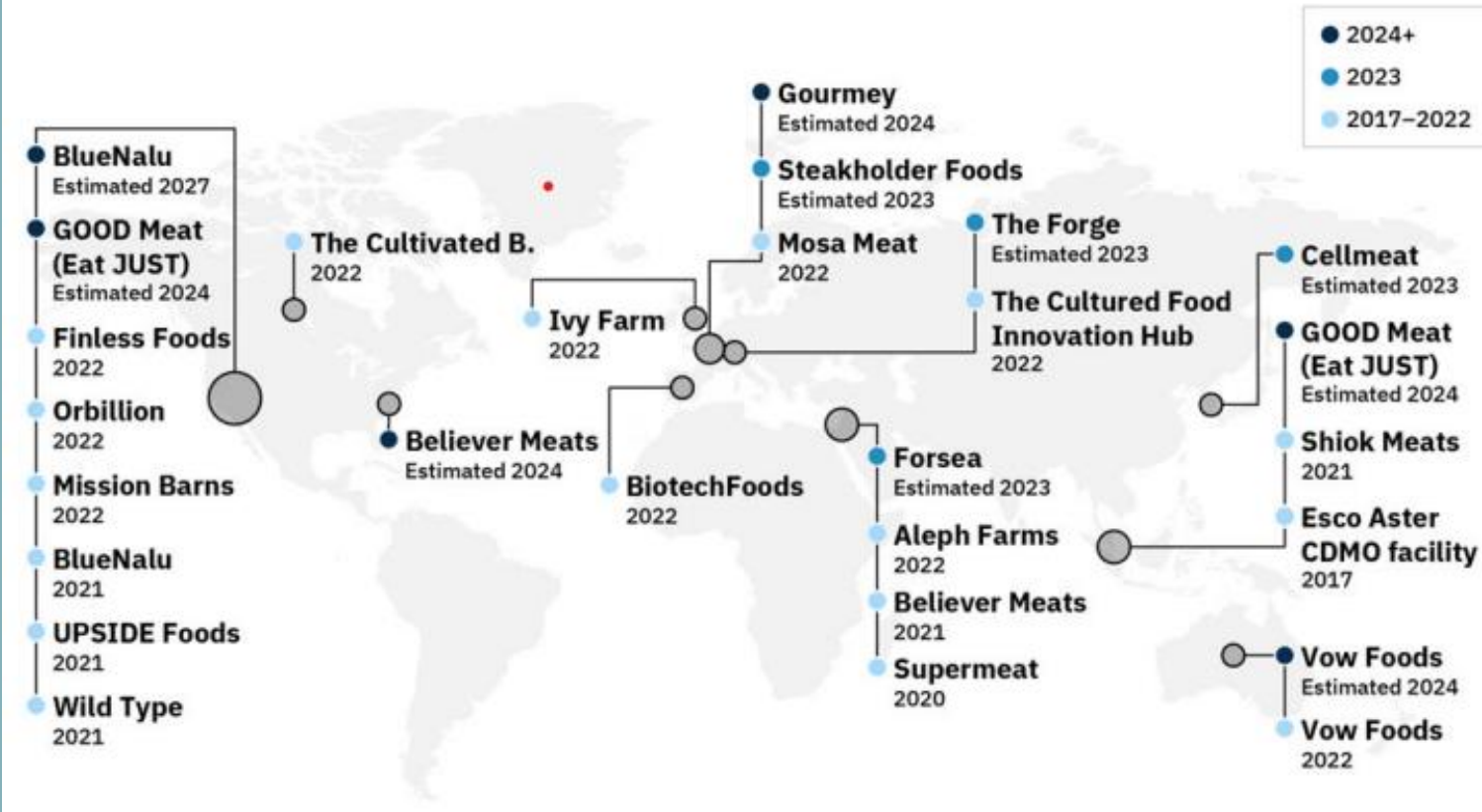
State of the industry scale-up

There are currently 18 operational facilities dedicated to cultivated meat & seafood

An increasing number of enablers like NVP are emerging in the field of cultivated meat.

An increasing number of partnerships are being formed within the industry.

Figure 5: Current and future cultivated meat production facilities



A positive outlook

- Many new scale up-facilities will soon break ground and advance the bioprocess setup.
- Increased research effort and scaling of production will bring the price of growth factors down.



Thank you!



Medfinansieret af
Den Europæiske Union



Danmarks
Erhvervsfremmebestyrelse



Food & Bio Cluster
Denmark