

Three Major Meta Themes



**Climate
Change**



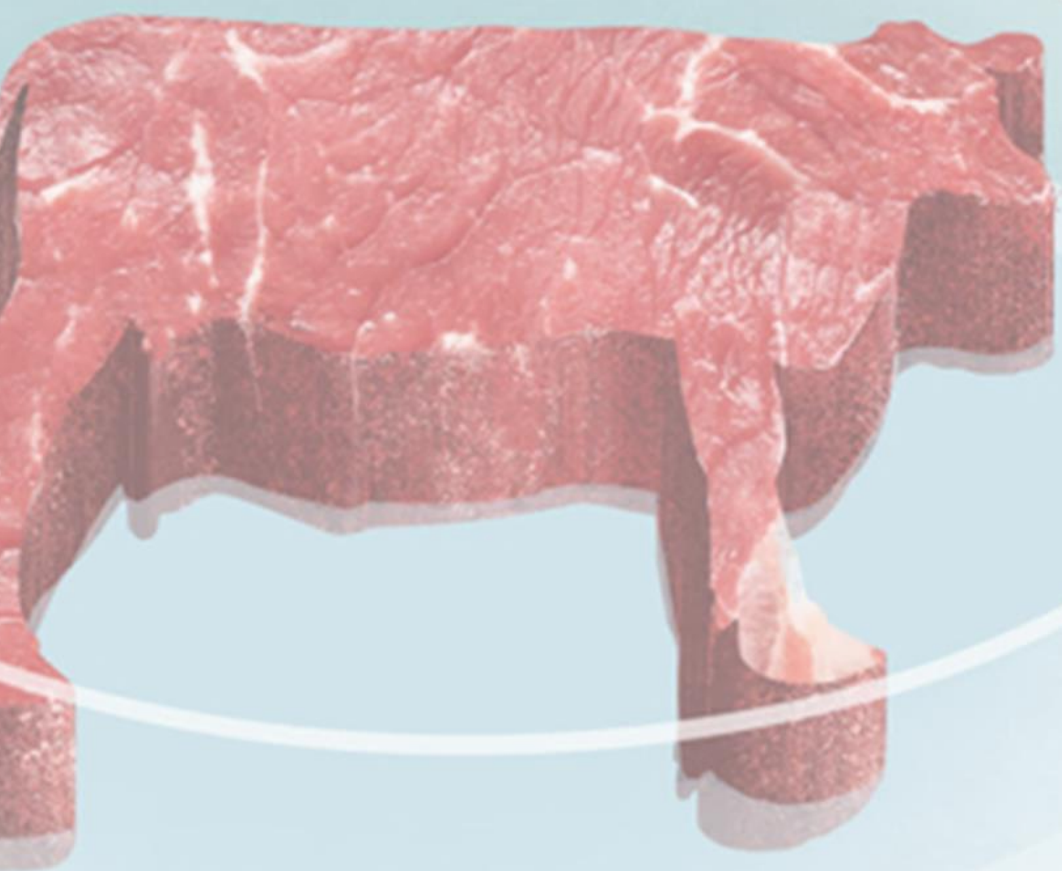
**Clean Meat &
Alternative Proteins**



Longevity

SKOLSTREJK
FÖR
KLIMATET





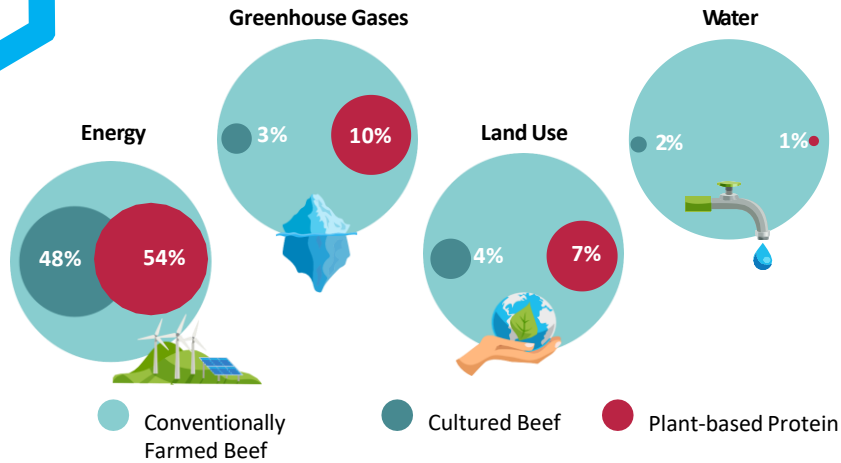
**CLEAN
MEAT**

BENEFITS OF CLEAN MEAT



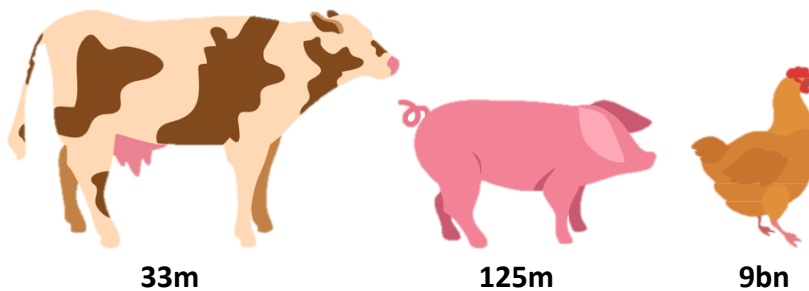
Environment

Environmental Comparison



Animal Welfare

Nearly 50% of Study Participants Want to Ban Slaughterhouses and Would Prefer Slaughter-free Meat

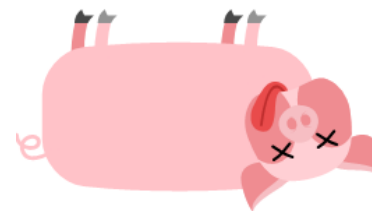
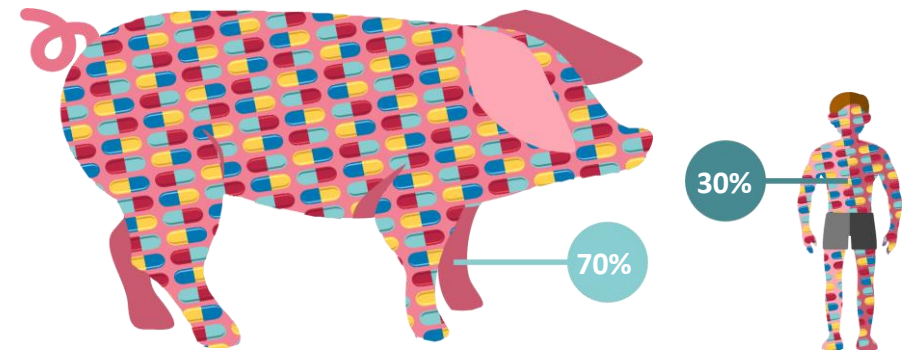


9.6 billion land animals were slaughtered in 2018 in the US



Human Health

70% of All Antibiotics Produced Are Used in Farming*



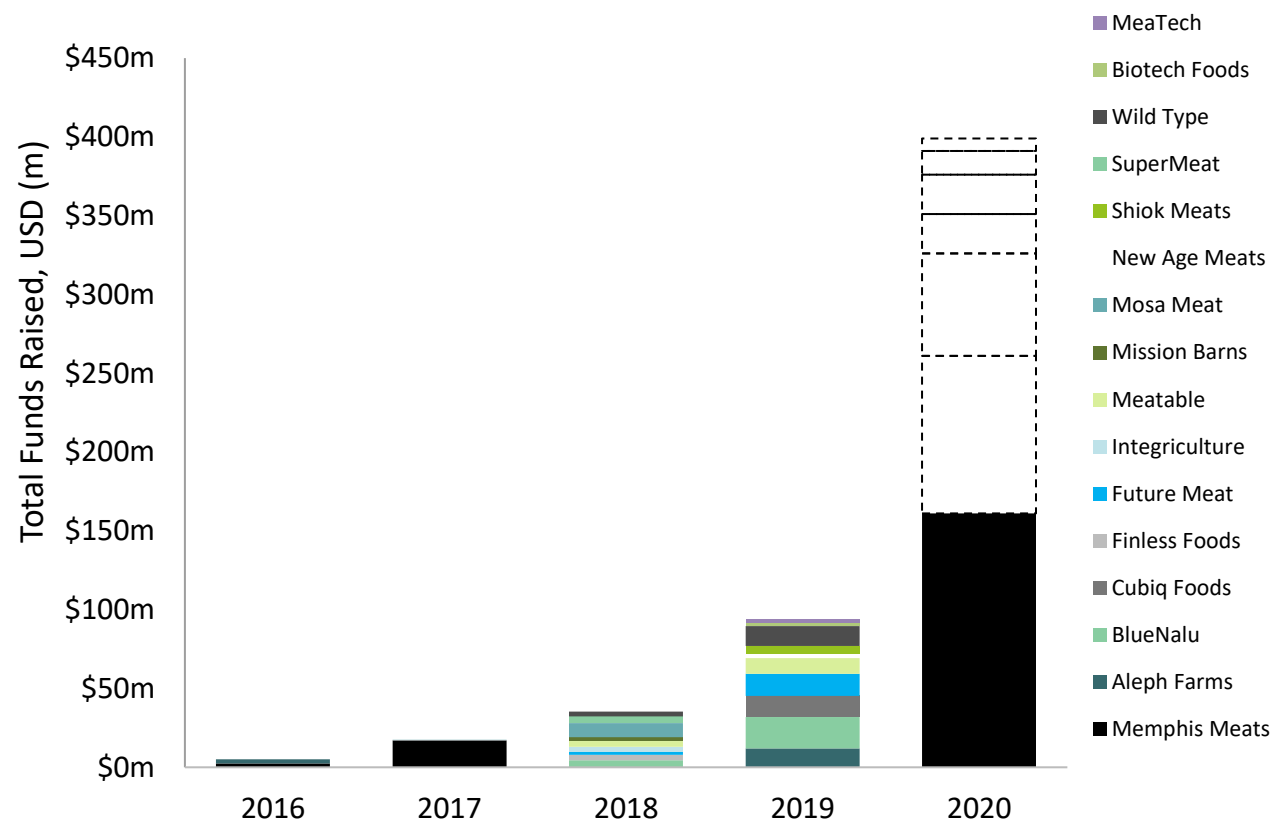
Approximately 300m pigs will have been lost to African Swine Fever; global prices have surged



75% of all new infectious diseases are zoonotic – from the animal to human interface

CLEAN MEAT FUNDING IS ACCELERATING

Funds Raised in Pure Cultivated Meat Companies*



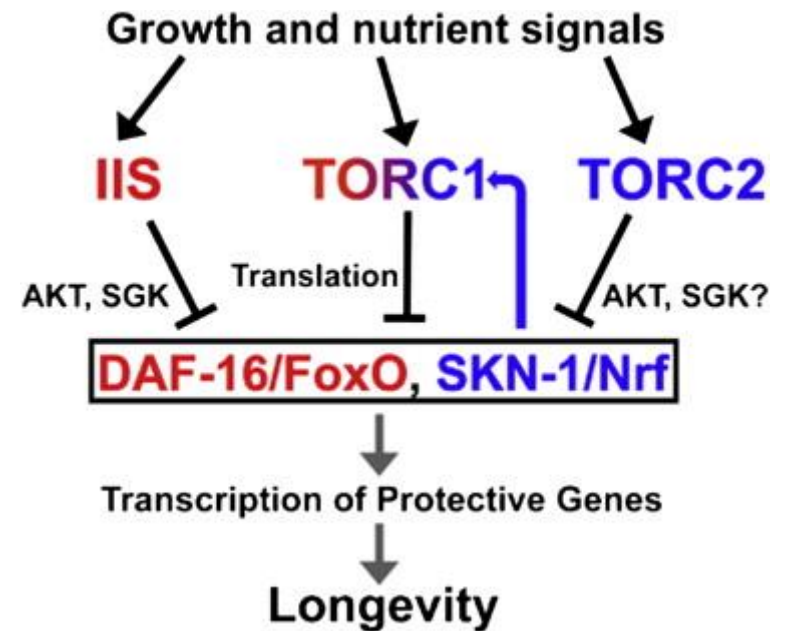
- Cultivated meat sector is still nascent
 - 2016 - 2019 USD 140 million invested globally to date
 - 2020 - YTD USD 161 million already raised
- Only 7 companies have completed their Series A financings
- Memphis Meats raised first Series B of USD 161m in January 2020
- At least another USD 250 million in planned financings anticipated in 2020
- Funding requirements growing rapidly in the near term



LONGEVITY & JUVENESCENCE

Rapamycin and Rapalogs

- Discovered in 1965 in Easter Island – local name *Rapa Nui*
- Rapamycin is a 'golden drug' currently approved for use as an immune suppressant
- Acts on mTOR - mechanistic target of rapamycin
- Also acts on other cellular pathways heavily implicated in ageing also
- Has extended the lifespan of many animals tested on



Senolytic Compounds

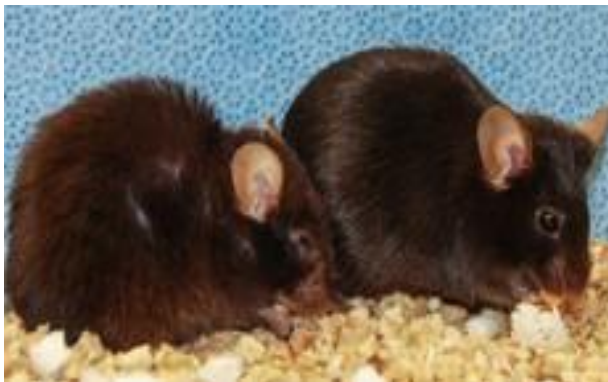
Robust Healthspan and Lifespan Increase



Mice Treated from Middle Age

Maintenance of good health

- Cardiac hypertrophy
- Kyphosis (curvature of spine)
- Loss of subcutaneous fat
- Reduced locomotion
- Cancer
- Live ~35% longer Dramatic extension of health span



Mice Treated in Old Age

Even more impressive - rejuvenation

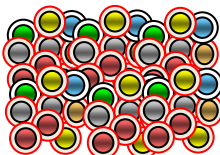


LyGenesis, Inc.

- Novel technology to use lymph nodes as mini-bioreactors
- When lymph nodes are seeded with purified hepatocytes (liver cells), the cells engraft and grow into small, functional ectopic livers
- Livers only grow to size required by body
- Bridge patients to transplant or completely supplanting the need for a transplant
- Applications in other organs including the thymus and pancreas



①



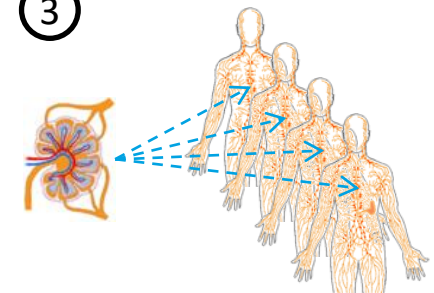
LyGenesis GMP
Cell Isolation & Suspension

②

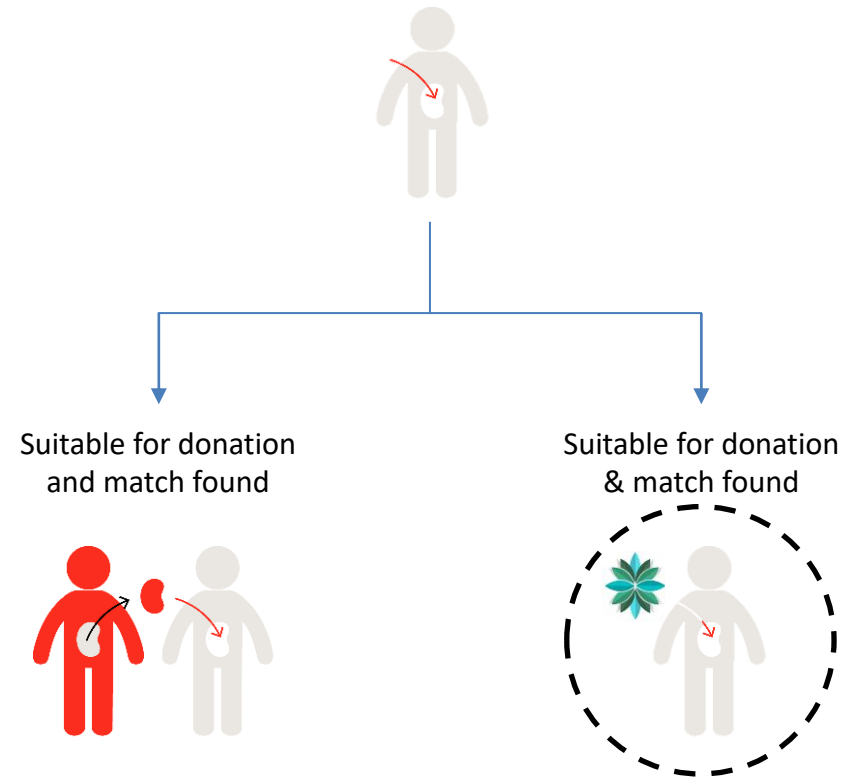


Endoscopic Ultrasound
Outpatient Procedure

③



Cell Transplantation
into Lymph Nodes





**Focus on Fortress-like
Balance Sheets**

Stock Ideas

Ticker	Name	GICS Sector	Market Cap (\$m)	Yield (%)	Forward PE	1-month total return (%)
SPX Index	S&P 500 Index	#N/A N/A	24,827,083	2.1%	21.2x	24.3%
UKX Index	FTSE 100 Index	#N/A N/A	1,930,950	5.3%	14.8x	11.8%
BABA US Equity	Alibaba Group Holding Ltd	Consumer Discretionary	577,939	0.0%	25.9x	18.4%
RDSA LN Equity	Royal Dutch Shell PLC	Energy	131,659	10.8%	12.3x	28.6%
HSBA LN Equity	HSBC Holdings PLC	Financials	105,859	7.2%	9.5x	-16.6%
BP/ LN Equity	BP PLC	Energy	76,112	10.5%	13.6x	19.9%
KHC US Equity	Kraft Heinz Co/The	Consumer Staples	36,353	5.3%	12.9x	33.1%
LLOY LN Equity	Lloyds Banking Group PLC	Financials	26,485	7.3%	6.4x	-6.2%
BA/ LN Equity	BAE Systems PLC	Industrials	21,810	4.4%	10.8x	16.3%
DAL US Equity	Delta Air Lines Inc	Industrials	15,369	1.7%	4.6x	11.6%
IAG LN Equity	International Consolidated Air	Industrials	5,560	11.0%	2.3x	4.1%
PHNX LN Equity	Phoenix Group Holdings PLC	Financials	4,970	8.6%	12.5x	14.1%
RSA LN Equity	RSA Insurance Group PLC	Financials	4,547	7.3%	7.4x	0.0%
RAV LN Equity	Raven Property Group Ltd	Real Estate	219	10.6%		14.4%

shaded area = recession

Oil Price

● begin recession
● end recession

Sources: National Bureau of Economic Research, Federal Reserve Bank of St. Louis, own calculations. (c) Lighthouse 2020

