EDISON

Agronomics

Initiation of coverage

At the forefront of a new agrarian revolution

Investment company
Cellular agriculture

10 January 2022

Price	**21.5p**
Market cap	**£201.7m**
AUM*	**£103.9m**
NAV**	12.99p
Premium to NAV***	65.5%

*At 30 September 2021. **Including income at 30 September 2021. ***Based on current share price and last published NAV.

Yield		0.0%
Ordinary shares in issue		938m
Code/ISIN		ANIC/IM00B6QH1J21
Primary exchange		LSE
AIC sector		N/A
52-week high/low	37.0p	12.5p
NAV* high/low	12.99p	5.20p

*Including income

Net gearing	0.0%
Net cash**	£44.0m

** At 1 December 2021

Agronomics (ANIC) invests in companies producing environmentally friendly alternatives to traditionally produced meat, dairy, seafood, materials and other agricultural products. It aims to create long-term value for shareholders by investing mainly in private, early-stage companies and supporting them to sale, or public listing and commercial viability. ANIC is the only UK-listed vehicle targeting cellular agriculture, offering investors a rare opportunity to gain exposure to this exciting and rapidly expanding sector, which is likely to generate broad-based disruption to conventional agriculture. ANIC's strategy is supported by growing awareness of environmental issues. It has had an early mover advantage, possesses a reputation for expertise in the sector and has a level of access to follow-on and new investments unusual in the sector. Early performance has been promising and the company is trading at a premium to NAV. While it will take time for ANIC's investments to become commercially viable, significant valuation appreciation typically precedes large-scale commercialisation within the sector. And the valuations of more advanced, plant-based protein companies suggest the possibility of substantial long-term upside for patient investors.

ETV interview with Jim Mellon, co-founder of Agronomics

Source: Edison Investment Research

The analyst's view

Cellular agriculture has scope to make major contributions to climate change mitigation, animal welfare and human well-being (see below). Accordingly, ANIC should attract investors focused on these issues. The addressable markets for cellular meat, seafood and dairy products are huge, totalling an estimated US$2.0tn, according to Mellon, so ANIC will also appeal to investors seeking exposure to the sector's potential growth. ANIC's portfolio holdings have significant scope to rise in value over time, but the early-stage nature of the investments makes it difficult to value the portfolio accurately (see below), and some investors may be wary until ANIC's portfolio holdings establish their commercial viability.

Premium likely to persist due to investor interest

ANIC's share price trades at a premium to cum-income NAV (using conservative, IFRS valuation methodology) thanks in part to its increasing popularity with investors and the scarcity of alternative investment options in the cellular agriculture sector. These factors, combined with a 'backward-looking' NAV, suggest the premium is likely to persist for the foreseeable future.

Company objective

Agronomics' objective is to create value for shareholders by investing in companies that operate in the field of cellular agriculture, which derives conventional agricultural products directly from cell culture and fermentation, without the need for animals. It encompasses the concept of cultivated meat, precision fermentation and the use of microorganisms to grow valuable, formerly animal-derived ingredients and materials.

Bull points

- A rare opportunity to gain exposure to a new, but potentially very large, game-changing sector.
- An experienced, well-respected team with a reputation for picking winners and access to new and follow-on investments in cellular agriculture.
- The sector offers potentially enormous long-term ESG positives that could make a significant contribution to climate change mitigation, animal welfare and human well-being.

Bear points

- The industry must address technical challenges and clear regulatory barriers to achieve commercial viability, so investors need to give the sector, and ANIC, time to succeed.
- Early-stage nature of ANIC's investments makes them difficult to value by standard means.
- The premium to invested cash is high, given that about 30% of NAV is currently cash, although this cash will ultimately be used for follow-on and new investments.

Analysts

Joanne Collins +44 (0)20 3077 5700
Sara Welford +44 (0)20 3077 5700
investmenttrusts@edisongroup.com
Edison profile page

Company profile: Focused on cellular agriculture

Agronomics (ANIC) was co-founded by investor and entrepreneur Jim Mellon and Anthony Chow in 2019. In August 2018, the team had already made its first investment in the cellular agriculture space, with an investment in BlueNalu. In April 2019, the vehicle, now ANIC, installed a new investment policy, to focus on investments in privately owned, early-stage companies producing environmentally friendly alternatives to the traditional production of meat- and plant-based sources of nutrition. It also has scope to invest in listed companies in this sector, as well as in related debt instruments and collective investment vehicles. ANIC currently has 18 investments in companies focused on the production of beef, pork, chicken, seafood, dairy, leather, cotton and cocoa via cellular agriculture. It is the world's largest listed investment vehicle focused exclusively on cellular agriculture and the only such vehicle listed in the UK. It aims to create long-term value by realising capital gains either via a trade sale, on the completion of a successful initial public offering (IPO) or when the valuation of an individual investment exceeds its intrinsic value. This strategy may take some years to come to fruition, as the sector is very new, and lead times to commercial viability may be long. ANIC does not pay dividends.

ANIC's advisory team consists of Anthony Chow and associate, Laura Turner. Chow has been associated with Burnbrae Group for 13 years, investing in biotech and pharma. Turner has an academic background in chemistry and chemical biology and has worked at Agronomics for over two years. The team is supported by an analyst with a background in biochemistry, and a new senior associate with a technical background will join the team in February 2022.

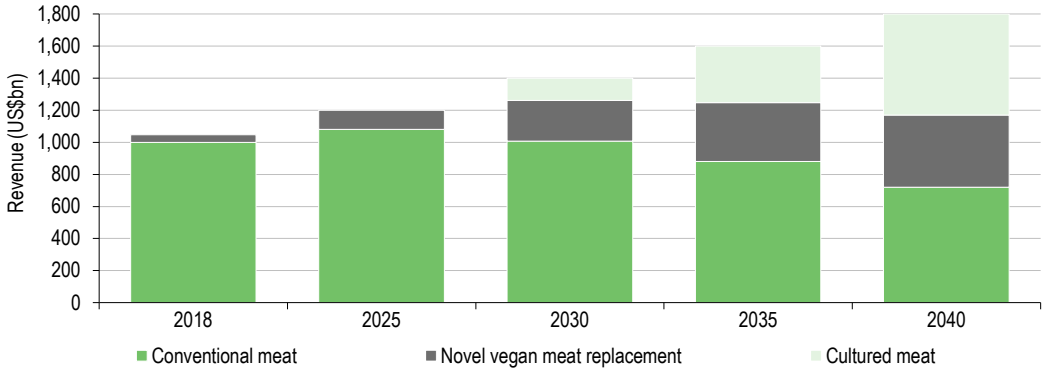
ANIC's net asset value (NAV) is calculated quarterly on a per-share, fully diluted basis, in accordance with IFRS guidelines. The company does not have a benchmark and does not use gearing.

Cellular agriculture: Set to displace traditional agricultural practices

Global demand for protein has been driven by population increases and rising wealth in markets such as China. Meat protein in particular has witnessed a sharp increase in demand, due to increasing consumption predominantly in China and India, but global supply has been disrupted at times by outbreaks of disease such as Asian Swine Fever (ASF). Yet over the last three to five years, consumers have developed an increasing awareness of the unsustainability of conventional meat and other animal proteins, providing significant scope for alternatives. While plant-based meat is currently the only commercially available alternative that is priced at a level that is affordable for consumers (albeit at a premium to mass market meat), we believe cultivated meat could become a much more desirable alternative to conventional meat, and indeed replace it over time as consumers embrace cultivated meat.

Kearney, a consulting company, forecasts that the global meat market will grow from c US$1tn in 2018 to US$1.8tn by 2040. It forecasts that plant-based meat will grow significantly over the next 10 years as conventional meat sales decline, but cultivated meat is expected to overtake plant-based meat by 2040 (see Exhibit 1).

Exhibit 1: Growth of the total global meat market by type, 2018–40e



Source: Kearney, Edison Investment Research

Protein consumption has shifted enormously over the past five years, with the launch of plant-based meat alternatives such as Beyond Meat's and Impossible Foods' burgers making meat alternatives more mainstream and acceptable to non-vegetarians. Indeed, the emergence of flexitarianism (to reduce – rather than eliminate – overall meat intake) has encouraged consumers to transition towards plant-based products as they make consumption decisions based on ethical, environmental and health considerations. Beyond Meat listed in May 2019 and has a current market cap of US$6.4bn. Impossible Foods is expected to list fairly soon and market estimates of its value have reached US$10.0bn, substantially higher than the US$4.0bn valuation at the time of its last funding round.

The dairy segment has been significantly disrupted by the advent of plant-based alternatives over the past five to 10 years. What started as a transient fashion/diet fad of eliminating traditional dairy from diets eventually led to consumers substituting traditional dairy with plant-based alternatives. The increasing availability of tasty, appealing and affordable alternatives has led many consumers to switch to what they perceive to be more ethical and healthier alternatives, and growth in the segment continues apace, with Oatly recently finding that c 60–70% of plant-based milk consumers in its major markets joined the category in the last two years.

Cultivated meat and seafood has the potential to disrupt conventional farming and fishing industries in a similar way to what we have witnessed with non-dairy milks in the dairy segment. If the technical hurdles of cost, scalability and regulatory risk prove surmountable, cultivated protein could be priced at a similar level to conventional protein, and yet with much cleaner and more sustainable credentials.

In a similar vein, cultivated leather, cotton, cocoa and other cellular agriculture could provide a more environmentally friendly, sustainable and dependable source of raw materials. Traditional leather production is very inefficient in terms of the amount of an animal's hide that is used, and the tanning process is highly polluting. Cotton is a crop that requires a large amount of water to grow, and cotton-picking has been fraught with human rights issues. Cocoa trees are highly susceptible to disease and pest infestation, and farming of cocoa has been known to lead to deforestation. Cultivated leather, cotton, and cocoa could provide a solution to these problems.

In summary, cellular agriculture has the scope to decouple supply chains from the environment and animals, while also providing the means to feed the world's expanding population.

What is cellular agriculture?

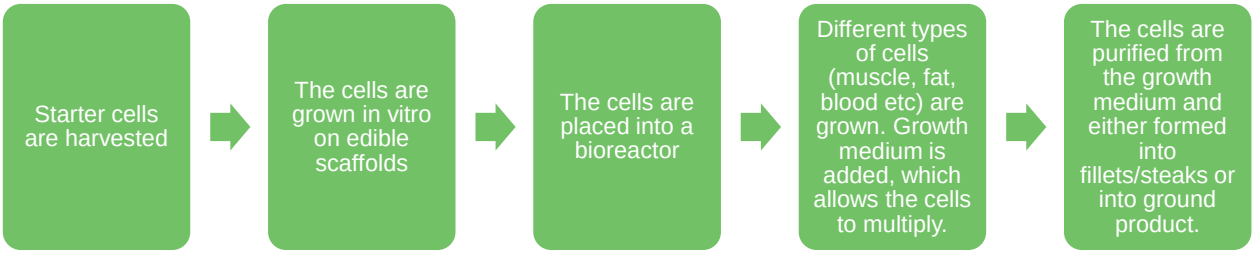
Cellular agriculture refers to the interdisciplinary scientific and manufacturing processes of deriving conventional agricultural products directly from cell culture and fermentation, without the need for

animals. This encompasses the concepts of cultivated meat, precision fermentation and the utilisation of microorganisms to grow valuable (formerly) animal-derived ingredients.

This includes cultivated meat: which is created by painlessly harvesting stem cells from an animal, such as a cow or a fish. Scientists then feed the cells growth proteins, carbohydrates, vitamins and minerals, so they multiply to create the desired cell type, including muscle and fat tissue, which are the main components of the meat we consume. The tissue is biologically equivalent to the meat tissue that comes from the original animal.

The typical time spent in the bioreactor depends on the species but is much shorter than conventional livestock farming; beef cells take c 30 days to mature compared to around 24 months via conventional farming, while chicken cells take one to two weeks compared to the usual time of four months. The key difference from plant-based proteins, which is likely to make cultivated meat much more attractive to consumers, is that cultivated meat is equivalent to normal meat at the molecular level, thus providing the same taste and nutritional profile as traditional meat.

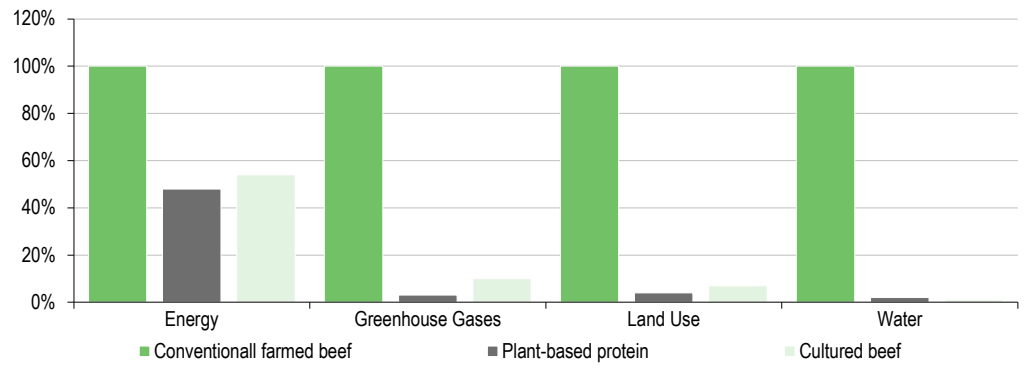
Exhibit 2: Cellular agriculture process



Source: Edison Investment Research

Cellular agriculture causes far lower carbon emissions and is much less resource-intensive than conventional livestock farming. CE Delft estimates that the carbon footprint per kilogram of product will be c 10kg CO_2 equivalent for cultivated meat by 2030, compared to c 90kg CO_2 equivalent for beef cattle currently and c 30kg for beef cattle by 2030 with an ambitious target (source: CE Delft, LCA of Cultured Meat). Land, water and energy usage are all much lower. In addition, while conventional farming of livestock and fish uses most of the antibiotics produced worldwide, cellular agriculture requires minimal or no antibiotics. Food produced via the cultivated route will not be prone to disease outbreaks or the accumulation of pollution or contaminants (such as mercury in larger fish species). In addition, as the cultivated meat industry gains traction and progress is made on the scientific side, land, water and energy usage should fall as the industry strives to reduce costs.

Exhibit 3: Environmental comparison across types of meat



Source: Agronomics, Environmental Science and Technology Journal

Technical hurdles: Early stage and challenges of scale up

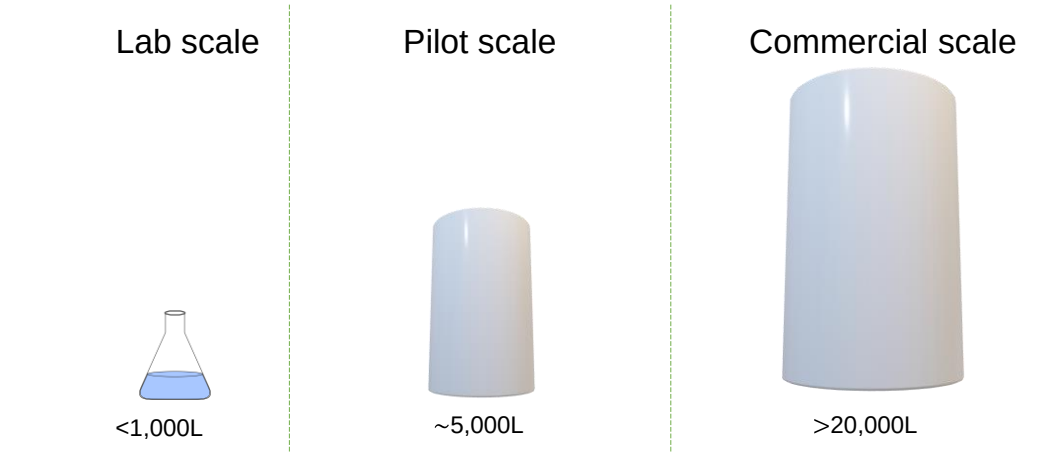
Over the last few years, there has been significant progress in producing cultivated meat as cell lines have been refined and growth media have been optimised. That said, most production processes are still operating at either lab scale or pilot scale. Cost remains a major hurdle, with the growth medium proving to be the most expensive part of the process, although this is expected to decline as volumes grow. Regulation is also a barrier, as cultivated food requires approval in most jurisdictions, in some cases by several regulatory bodies (eg in the United States approval for cultivated meat is required by both the US Department of Agriculture (USDA) and the Food and Drug Administration (FDA). At present, Singapore is the only jurisdiction globally where cultivated meat is approved for sale, with chicken being the first meat available to Singaporean consumers, although currently only in a single restaurant.

In terms of the product, while taste is of paramount importance, texture and appearance are also essential to the consumer experience. The texture of ground meat is easier to achieve, hence the reason most alternative protein products have tried to replicate ground beef or chicken. The texture of a beef steak in particular is considered the most challenging to replicate, and so far has involved layering the cultivated cells on edible scaffolding.

Scalability

Cell culture and fermentation have been used for the last 20–30 years for the production of therapeutics. Costs have been reducing over time, hence have allowed the technology to be used for food production. Cellular agriculture for food production is therefore a relatively new concept, and the technology is still developing. At present, cellular agriculture is mostly being undertaken in labs, and therefore requires scaling up to pilot stage, and then full commercial production, in order to reduce costs and manufacture meaningful quantities.

Exhibit 4: Production size



Source: Edison Investment Research

Scaling up always presents challenges, both predictable and unforeseen, as the different conditions need to be optimised. One of the problems when it comes to scaling up cell culture is the increased pressure in the larger bioreactors, particularly at the bottom. If the bioreactors are too large, this pressure can cause damage to the cell structure, thereby causing the process to break down. Unless a workaround can be found, this could ultimately limit the size of the largest bioreactors that can be used on a commercial scale, which in turn would be likely to have cost implications in the long run. Similarly, processes may need to be adapted as cellular agriculture moves to commercial scale.

Extending the technology from one type of cell/product to the next is also far from straightforward, as each different cell line is likely to require a different growth medium and particular growing conditions that are optimal, including potentially a different vector. Purification of the cells from the 'soup' in the bioreactor may also differ. Lastly, the scale-up phase may present different challenges depending on the various characteristics of each type of cell.

Cost: Currently high, but should reduce over time

Currently the main cost challenge within cellular agriculture is the cost of the growth medium, because of the expensive growth factors required to signal to the cells to grow, proliferate or differentiate, which needs to be optimised for each cell line. At present, most growth media are available in lab-scale quantities only, thus making them cost prohibitive on an industrial scale. For obvious reasons, both the specific characteristics of cell lines and the growth media they require are considered commercially sensitive and proprietary information, therefore there is not much current information available. In February 2019, the Good Food Institute (GFI) published a paper in which it estimated that the current cost per litre for standard growth medium is $377. Under its standard assumptions, this translated to a cost per kg of meat of c $8,600. The paper discusses various scenarios under which this can be improved, including reducing the concentration of certain ingredients (by optimising the process), replacing some ingredients with cheaper alternatives and reducing procurement costs by improving sourcing. In addition, the bio-fermentation process could improve and thus require a lower average volume of medium. ANIC states that subsequent developments have reduced the cost per litre of growth medium to $10 currently, and the GFI estimates that under the most optimistic scenario, the cost per litre would fall to $0.24, allowing the cost per kg of meat to fall to $1.37. We note that no scientific breakthrough is required to achieve these lower costs, and it is more simply a matter of scaling up the production of growth factor to sufficient quantities to allow economies of scale.

The much-touted number in the alternative protein industry is the cost of the first cultivated meat burger, which is placed at around €250,000 (it was developed by a Dutch scientist in 2013, although the CEO of Mosa Meat has subsequently stated that the real number is 'a bit higher'). The cost has come down significantly but, for the product to become a viable alternative to conventional meat, something in the region of cost parity is required. As Nick Halla, senior VP International at Impossible Foods, has said, 'you'll buy the product once based on novelty, you'll come back if the taste is good and if there are benefits such as nutrition and sustainability, and you'll buy it in the long run if the value is right'.

Regulatory risks: Approval required for each product in each market

As discussed above, cultivated meat is not approved for sale in any jurisdiction apart from Singapore. That said, as cellular agriculture becomes closer to commercial viability, we would expect more regulators to examine and approve the product. We note that regulation changes by jurisdiction, but also by product: for example, cultivated leather would not require approval as it is not a food; cultivated seafood would only require approval by the FDA in the United States, while cultivated meat requires both FDA and USDA approval in the United States. We note that in the EU, approval would be required both by the European Food Safety Authority via the Novel Food Regulation and individual countries. Furthermore, approval will be required for each different product and, potentially, using different components (such as edible scaffolds) would require a new safety review each time. Farming lobbies are powerful worldwide, especially in the US and EU. We would expect farmers to lobby aggressively against the approval of cellular agriculture, and potentially try and dissuade consumers from switching to cultivated food.

A positive force for the cellular industry is the prospect of carbon pricing. If governments start to introduce carbon taxes on the farming industry, prices of conventional alternatives would have to

rise. This would also be the case if governments decide to reduce agricultural and farming subsidies.

Prospective markets: From protein to apparel

Cellular agriculture products that are currently being evaluated for scale-up are varied and span segments – from various types of meat, fish and seafood to dairy products, but also non-edible products such as cotton and leather. The prospective markets are therefore diverse, and consumer acceptance levels are also likely to vary. Cultivated leather, for example, will provide an ethical and sustainable, and thus easily acceptable, alternative to conventional leather, with no concerns regarding implications for human health. Food is likely to prove more controversial with consumers, as cultivated foods would have to undergo safety reviews, as discussed above. Surveys on consumer attitudes to cultivated foods have been conducted in several countries and, while methodologies and questions have varied, the common theme is that younger consumers (particularly Generation Z) are more accepting of it. Of course, the terminology used around the product also makes a difference, with more artificial-sounding names (such as 'lab-grown meat') being less desirable. Overall, we believe that as long as the taste and texture of cellular foods are acceptable, the products are appropriately priced and convenient to use, then consumers will have no problems in adopting them.

Consumers have shown that they are willing to pay a premium for protein choices that they feel are important (eg organic eggs, free-range chicken, grass-fed beef), and hence cultivated meat is likely to be successful even without achieving price parity with conventional mass-market meat. That said, the consumer needs to feel the value proposition is right.

Once the technical and cost challenges are overcome and commercial scale has become commonplace, cellular agriculture is likely to expand more widely to other areas, such as pet food and industrial animal feed. We note cultured ingredients are already used in some pet food and fermentation is used in some industrial animal feeds. In the shorter term, however, we believe the main markets of interest will be in the consumer goods space, particularly at the higher price end, for example prime cuts of meat, fin tuna, high-end cheese (rather than milk) and leather.

Funding requirements in the sector

Exhibit 5: Latest funding for existing companies in the alternative protein segment

Company name	Last funding round	Type of funding	Date	Sector
Upside Foods	$161m	Series B	Jan-20	Cultivated meat
Higher Steaks	N/A	Seed	Aug-20	Cultivated meat
MeaTech	$7m	Series A	Nov-20	Cultivated meat
Meatable	$47m	Series A	Mar-21	Cultivated meat
Mosa Meat	$10m	Series B	Mar-21	Cultivated meat
Aleph Farms	$105m	Series B	Jul-21	Cultivated meat
Good Meat	$97m	Venture funding	Sep-21	Cultivated meat
Future Meat Technologies	$347m	Series B	Dec-21	Cultivated meat
Formo	$50m	Series A	Sep-21	Cultivated cheese
The EVERY Company	$175m	Series C	Dec-21	Egg proteins
CellulaREvolution	£1m	N/A	Jan-21	Continuous cell culture bioreactors
Multus Media	£1.6m	N/A	Jul-21	Growth media
Eat Just	$200m	N/A	Mar-21	Plant-based eggs
Oatly	$200m	Series C	Jul-20	Plant-based milk
Beyond Meat	$1bn	Post IPO	Mar-21	Plant-based meat
Impossible Foods	$200m	Series G	Aug-20	Plant-based meat
Nature's Fynd	$350m	Series C	Jul-21	Plant-based protein

Source: Edison Investment Research, company data

As with privately owned, early-stage companies in any sector, cellular agriculture and other alternative protein businesses need to undertake successive rounds of fund-raising to finance their development, and progress towards sales and eventual commercial viability. The growing investor

appetite for sustainable investments in general, and cellular agriculture and alternative proteins in particular, is proving to be a major factor in ensuring that companies in these sectors raise the funding they require. The table above shows a selection of companies in the cellular meat and alternative protein sectors and the amount of investment they have managed to secure in their latest funding rounds. The size of funding rounds has been increasing over the past year, with Beyond Meat raising $1bn in March 2021, Nature's Fynd raising $350m in July and Future Meat Technologies raising $347m in December.

The core team: Jim Mellon, Anthony Chow and Laura Turner

The team's view: An agricultural revolution that will meet global challenges

Agronomics' founder Jim Mellon was one of the first to recognise the potential of the cellular agriculture sector, and the investment opportunities offered by its rapid development. He believes the world is at the beginning of a multi-decade transition from traditional food production to animal derived (ie cultivated) food and products. 'Within 10 years, food and materials will be completely disrupted by cellular agriculture, by necessity, as it addresses the many environmental problems caused by conventional food production' he says. Mellon expects that the cellular agriculture sector 'will change the world', by dramatically reducing carbon emissions and energy, land and water usage, while also providing the means to feed the world's growing population. His book *Moo's Law*, published in December 2020, explores his thesis in detail and provides advice to investors wanting to participate in this food revolution.

The pace of change in the alternative food sector is particularly exciting to Mellon. He cites as one early example the case of plant-based dairy alternatives. As discussed above, this industry began as a niche market a decade ago and now comprises 15% of the US milk market. Oatly, the sector's leader, recently listed on the Nasdaq and has a current market cap of $8.0bn. Mellon believes the addressable market for cellular foods is 'enormous'. In *Moo's Law*, Mellon estimates that within the next 10 years, the combined market for cultivated meat, dairy, seafood, and materials is likely to be worth approximately $5tn, roughly twice the size of the UK economy.

In Mellon's view, Agronomics has a head start in the sector, and 'a clear and open road' ahead. He and his ANIC colleagues also have expertise and extensive experience in this highly technical field, and Mellon believes this has allowed them to build strong relationships with the sector's major participants, including significant investors, regulators and consultants. For him, this all makes ANIC ideally placed to participate in the many exciting investment opportunities on offer. 'Agronomics already has an established portfolio, with pre-emption rights [see below for explanation] in some of the most advanced and exciting companies in the field' says Mellon, and he sees lots of other 'great ideas, ripe for development', including pet food, infant formula, collagen (for use in food and cosmetics) and the 'picks and shovels' of the cellular industry, including growth factor production and machinery.

Mellon's characteristically positive view extends to the regulatory outlook for the sector. Although the sale of cultivated foods is still prohibited in all jurisdictions except, to a limited extent, Singapore, he expects regulatory approval to come in the next 1-2 years in the larger markets. The US FDA is widely expected to grant approval for the sale of cultivated seafood in the US market in 2022, and Mellon believes this will escalate the debate about the merits of cellular agriculture. The sector has a tailwind thanks to several major secular trends, including the mounting focus on sustainable and ethical food production, climate change mitigation and human health, and public support can be expected to grow, especially once cultivated food begins to approach price parity with food

produced by traditional means. This is likely to diminish regulatory, and political, barriers to the sector over time.

Mellon stresses that Agronomics offers investors one of the few ways of investing in the cellular agriculture revolution. Given the scale of the investment opportunity in the sector, he and ANIC's advisor, Anthony Chow, believe that ANIC's investment portfolio shows considerable promise for future growth and that this potential is already becoming evident. 'There have been some positive recent developments in a number of our portfolio companies, that should favourably impact their valuation in the coming months' says Chow (see further discussion in the Current portfolio positioning section below).

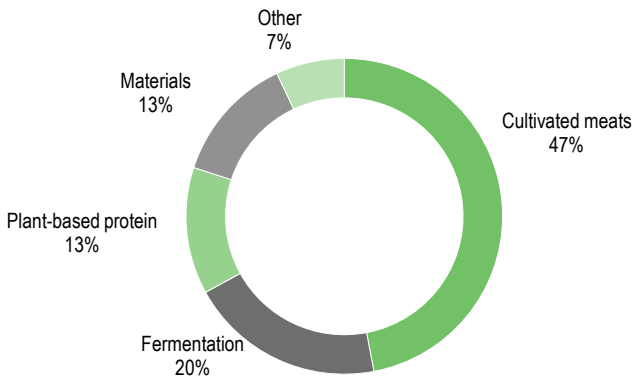
However, Mellon and Chow are just getting started. They want to ensure ANIC remains a leading player in the sector, encouraging and supporting market participants, including 'home grown' UK companies. And they want ANIC to 'grow with the sector'. So they will continue to support their existing holdings by participating in follow-on funding rounds and maintain their search for new opportunities in this burgeoning industry, which appears to offer so many potential benefits for the environment and the world's population.

Asset allocation

Current portfolio positioning

Agronomics currently has 18 companies in its portfolio, 15 of which are pure cellular agriculture companies focused on beef, pork, chicken, seafood, dairy, leather, cotton and chocolate (Exhibit 7). All are privately owned, early-stage investments, which means market prices for these companies are not available. Most are at seed or Series A funding stages. Only three have progressed to Series B funding rounds. ANIC has a global mandate; portfolio companies are based in the UK, the US, China, Singapore, Israel, the Netherlands, Finland, Germany and New Zealand. The food segment of the portfolio is also diversified across all main protein categories (Exhibit 6). Several of the company's investments are in recognised leaders in their respective fields, for example BlueNalu, a US seafood producer; Meatable, a Dutch cultivated meat producer; New Age Meats, a US producer of cultivated pork; Formo, a German cultivated dairy fermentation company; and VitroLabs, a US leather manufacturer (see details of these companies below). To date, ANIC has invested a total of approximately £53m in initial and follow-on investments and, following a capital raising in May 2021, it held cash of approximately £44.0m (at 1 December 2021). This cash, combined with a further £31m raised in December 2021, will be used to fund new and follow-on investments (see details below).

Exhibit 6: Sector split



Source: Agronomics

Several of Agronomics' portfolio holdings have seen positive newsflow during the past year. Meatable, BlueNalu, Solar Foods and LIVEKINDLY all raised large amounts of capital in H121 and several have formed new strategic partnerships (see details below). In recent months, BlueNalu announced a collaboration with European frozen food giant Nomad Foods and Meatable formed a partnership with Royal DSM, a Dutch ingredients company (see below), while Mosa Meats received a high-profile investment from Leonardo DiCaprio. In November, Tropic Biosciences received confirmation that its potato product, developed using its propriety Gene Editing induced Gene Silencing (GEiGS) technology, is exempt from regulation by the US Department of Agriculture, Animal and Plant Health Inspection Service. This confirmation ensures that Tropic Biosciences' gene-edited potatoes, which are resistant to browning, will not face regulatory barriers on their way to market. ANIC's managers believe that this ruling is also a promising indicator for Tropic Biosciences' other products such as coffee, rice and bananas.

ANIC continues to expand its portfolio. The company has made follow-on investments in several of its portfolio holdings during 2021, including taking the lead role in VitroLabs' Series A funding, and participating in Solar Foods' bridge round and in Formo's Series A funding, which was the European foodtech sector's largest ever series A funding round. In the past six months, ANIC has also added three new investments – in California Cultured, a producer of cultivated cocoa and cocoa products, in The EVERY Company (formerly Clara Foods Co), a leading precision protein fermentation company, which produces egg proteins and in Ohayo Valley, a cultivated meat company initially focused on producing cultivated Wagyu steak (see details below).

When making initial investments, ANIC prefers the agreement to include a board seat, board observer rights or, at a minimum, information rights. The company usually acts as lead or co-lead on deals and provides either debt to equity funding. It also negotiates pre-exemption rights for further investments in its portfolio companies. This mechanism gives the company the option, but not the obligation, to make follow-on investments if it wishes before additional shares are made more widely available. This is effectively a free, but very valuable option for the company, which means that unlike many other investors that are struggling to acquire exposure to the cellular agriculture sector, ANIC is well-positioned to gain additional exposure to its existing holdings as opportunities arise, if it chooses to do so. This ensures that ANIC will not be 'squeezed out' and its equity diluted, as its portfolio companies issue more capital to fund their expansion.

ANIC has conducted several rounds of capital raising to finance its follow-on and new investments. The most recent of these took place in May and December 2021. The May funding round raised net proceeds of £62.8m (of which £44.0m remained at 1 December 2021), while the December round raised net proceeds of £31.0m. These funds, which were provided by new and existing institutional and retail investors, and the directors of ANIC, including Jim Mellon, through Galway Limited, make ANIC the best funded vehicle in the sector.

Given that cellular agriculture is still in its infancy, and ANIC is still building out its portfolio, its team believes it is too early to determine whether any investments have disappointed and thus need to be exited (see further discussion in the Investment process section below). However, the company does have some small legacy holdings from the PEBI portfolio, which it is liquidating opportunistically. In June 2021, ANIC sold its position in one of these legacy companies, Insilico Medicine, a Hong Kong-based company developing AI technologies for the pharmaceutical industry, representing an internal rate of return (IRR) of 45%. A position in another of the legacy holdings, Oritain Global, a New Zealand-based origin verification company servicing organic and fairtrade businesses, was sold in September 2021, representing an IRR of 74% and the remaining legacy holdings now account for less than 1% of NAV.

Key holdings

BlueNalu: Cell-cultivated seafood

BlueNalu is a California-based business whose mission is to be the world leader in cell-cultivated seafood. Global demand for fish and seafood is at an all-time high, with global revenue in fresh fish reaching c$296bn in 2020 and forecast to grow to $369bn by 2025 (source: Statista), but the supply of fish cannot keep pace with this demand. Consumers are increasingly concerned about animal welfare and the conditions in which fish are farmed and caught. In addition, there is mounting awareness of the toxins, pathogens and other pollutants present in the fish. BlueNalu plans to provide a third option to supplement current industry practice: it will produce real seafood products directly from fish cells. The company is currently focusing on 'fin-fish', species that are overfished, primarily imported or difficult to farm. BlueNalu does not use genetic modification or antibiotics. It has recently announced a collaboration with Nomad Foods, Europe's leading frozen food company, to accelerate its market strategy in the region. BlueNalu expects US regulatory approval of its first cultivated seafood by early 2022.

ANIC's equity interest in BlueNalu is c 5.85% on a fully diluted basis. A statement from ANIC in September 2021 valued this holding, subject to audit, at approximately £13.4m, up from a previously published valuation of £6.3m (US$8.55m). This added an estimated 0.8p to ANIC's end June 2021 NAV and values BlueNalu at approximately £229m.

VitroLabs: Cultivated leather

VitroLabs is a California-based company that wants to become the world's largest tissue-engineering platform. Its goal is to develop real, ethical calf, crocodile and ostrich leather for use across a range of industries, including the luxury leather trade. Its cells come from a harmless, one-time biopsy from a living animal. The cells are then grown in specialised bioreactors. Following harvest, the product can be tanned, with no additional processing. The tanning process is simplified, however, as there is no need to remove other parts such as hairs, fats or flesh, meaning there is a significant reduction in its environmental impact. This provides a 'third way' compared to traditional leather manufacturing, which is wasteful and very damaging to the environment, and to vegan alternatives, which are often petroleum-based, highly polluting and lacking the qualities and functionality of real leather such as tensile strength. According to Agronomics, the global luxury leather goods market is a US$48bn industry and VitroLabs is set to become the world's first company to commercialise cultivated leather.

In September 2021, Agronomics led VitroLabs' Series A funding round, with a US$7.0m investment. The funding will be used to build and scale the world's first pilot production facility of cultivated leather. Following this funding round, Agronomics owns 11.69% of VitroLabs and has the right to a board seat. Agronomics will carry this position in its accounts at a book value of US$12.75m, subject to audit, including an unrealised gain on cost of US$2.25m (£1.6m) and an IRR of 40%. This added an estimated 0.2p to ANIC's end June 2021 NAV.

Formo: Cultivated cheeses

Formo is a Berlin-based company (formerly known as LegenDairy Foods) that is developing cultivated cheese. It equips microorganisms with the genetic information to synthesise milk proteins (by inserting a plasmid vector into the host microorganism, typically yeast or fungus, to produce the dairy proteins of casein and whey), lets these ferment, and then harvests the animal-free milk protein (by separating the proteins via centrifugation and purification). This is then combined with plant-based fats, carbohydrates and salt, and fermentation or heat are used to coagulate this concentrate into a curd (the solid cheese component), in the traditional way. The cheese is then formed either into a fresh cheese or ripened to create unique flavours. It plans to expand its product

portfolio to include a variety of European cheeses such as mozzarella and ricotta, in collaboration with artisan cheesemakers. The company's target is 'to replace 10% of dairy products in Europe by 2030' (Market Data Forecast estimates that the European cheese market alone will be worth US$37.3bn by 2026).

In September 2021, Formo raised US$50m in a Series A funding round led by EQT Ventures. The proceeds will be used to boost Formo's R&D capacity and fast track commercialisation ahead of its market launch. ANIC participated in the round with a €3.15m investment, which leaves it with a 5.94% equity share of Formo. ANIC co-led Formo's seed round in December 2019 with a €1.0m investment, which will see a 7.5x uplift on the original investment, representing an IRR of 225%. Subject to audit, ANIC will carry this position on its balance sheet at €10.7m, inclusive of the Series A participation. This equates to an estimated portfolio weighting of 9.1% of NAV, and added an estimated 0.7p to the 30 June 2021 NAV. Following the financing round, Formo is valued at an estimated €117.5m (£101m).

Meatable: Cultivated meat

Meatable is a Netherlands-based company that produces cultivated meat. Its aim is to deliver, at scale, cultivated meat with the look, taste and nutritional profile of traditionally produced meat. It has recently announced a partnership with Royal DSM, the Dutch speciality nutrition chemicals company, to co-develop growth media for cultivated meat. Growth media are currently estimated to account for 50–90% of the production cost of cultivated meat, hence technological and cost breakthroughs in this area are essential to make cultivated meat more affordable.

ANIC has equity ownership of 5.84% of Meatable on a fully diluted basis, a position worth approximately £6.5m, and representing approximately 5.8% of ANIC's NAV. This implies a valuation of £111.3m for Meatable.

Solar Foods: Alternative protein

Solar Foods is a Finnish company that produces a protein called Solein, using air-captured carbon dioxide and electricity. Solein production is independent of weather and climate conditions and can be produced in harsh conditions such as desert and Arctic areas, where traditional food production is not possible. It can be used in a variety of foods, to supplement the nutritional value of plant-based products, enabling them to replace animal-based food without compromising nutritional value.

Finland's state-owned Finnish Climate Fund has recently invested €10.0m to aid the build out of Solar Foods' demonstration facility, which is set to be operational in early 2023. NASA has included Solar Foods' novel technology in its Deep Space Food Challenge, which is looking for new ways to feed astronauts.

At the end of October 2021, ANIC participated in Solar Food's bridge funding round, providing €3.0m, half of the round's €6.0m total value, in the form of a convertible loan note (CLN). The CLN is expected to convert to give Agronomics an equity position of approximately 5.8%, inclusive of its prior investment announced in September 2020. This implies a valuation of €103m for Solar Foods.

The EVERY Company: Egg proteins

The EVERY Company (formerly Clara Foods) is a San Francisco-based company that is a leader in the field of precision fermentation. It produces egg proteins for use as ingredients for the global food and beverage industry and is focused on the commercialisation of proteins traditionally derived from animals. The company was founded in 2014 with a mission to accelerate the transition to animal-free and more sustainable proteins and to reduce factory farming practices.

In early November 2021, ANIC made a US$8.0m investment in The EVERY Company, for an equity stake of 1.28%. This equates to an estimated portfolio weighting based on the company's last reported NAV of 5.6% and makes this holding one of Agronomics' largest. The company invested as part of a US$175m fund raising undertaken by EVERY. This investment broadens ANIC's portfolio further into other major protein categories outside of meat and dairy.

Exhibit 7: Portfolio holdings (at 1 December 2021)

	Cost	Current value	Stage	ANIC's ownership share (%)	Category	Investment rationale
BlueNalu	USD 8.0m	USD 8.55m	Pre-Series B	5.85	Cultured seafood	Highly experienced team with +30 years' food industry experience Leader in cellular aquaculture with a species agnostic platform to produce whole muscle fish fillet
VitroLabs Inc	USD 10.5m	USD 12.75m	Series A	11.69	Lab-grown leather	Scalable tissue engineering platform Huge USD52bn global leather goods market Revenue generation expected soon
Formo	EUR 4.15m	EUR 10.7m	Series A	5.94	Clean dairy protein	Producing genuine dairy proteins, focused on cheese production Technology reduces industry inefficiency & animal welfare concerns of raising dairy cows
Meatable	EUR 5.2m	EUR 8.15m	Series A	5.84	Cultivated pork	Unique technology for raid transformation of stem cells to muscle & fat Long term sector experience
LIVEKINDLY**	USD 3.0m	USD 5.55m	Seed	1.00	Plant-based chicken	Strong operational management team including former Unilever North American president Raised $200m in largest founder round in history of food
Mosa Meat	EUR 3.5m	EUR 3.5m	Series B	1.62	Cultivated beef	Leading European cultivated meat producer with clear regulatory pathway Advanced product development with muscle, fat & connective tissue
Solar Foods	EUR 6.0m	EUR 6.0m	Series A	5.80	Air protein	Technology uses carbon dioxide from the air & water electroloysis to produce sustainable protein Versatile application as an alternative to soy & pea protein
Tropic Biosciences**	US$3.0m	US$3.0m	Series B	2.95	Gene-edited seedlings	Developing high-performing commercial varieties of tropical crops, mainly coffee and bananas
Super Meat	US$2.0m	US$2.0m	Pre-series A	2.22	Cultivated chicken	Operational pilot plant capable of producing several hundred pounds of meat per week
New Age Meat	US$0.7m	US$3.6m	Series A	< 4.00	Cultivated pork	First company to produce a meat-based tasting prototype sausage. Preparing for market entry through hybrid products
Galy	US$0.5m	US$0.5m	Seed	4.4	Lab-grown cotton	Producing cotton grown directly from cells. Minimal footprint vs intensive cotton crops
Shiok Meats*	US$0.5m	US$0.6m	Seed	1.6	Cell-cultivated seafood	Combined scientific and entrepreneurial experience of co-founders. First cultivated meat company in SE Asia
Rebellyous Food**	US$0.35m	US$0.4m	Series A	1.2	Plant-based food	Revenue generating with corporate cafeterias trailing product via Compass Group
Bond Pet Foods	US$0.15m	US$0.2m	Seed	3	Cultivated pet food	Uses cellular fermentation to produce animal proteins. Targeting the US$25bn pet food market
CellX	US$0.05	US$0.3m	Pre-Seed B	1.43	Cultivated meat and seafood	First investment for ANIC in China, which adds to portfolio's geographical diversity. Has technically strong founders. Huge Chinese animal protein market ripe for disruption
California Cultured	US$2.2m	US$2.2m	Seed	18.33	Cultivated cocoa	Harnesses cell culture technology to produce cocoa products. Potential to solve ethical and environmental issues related to conventional chocolate production
The EVERY Company	US$8.0m	US$8.0m	Series C	1.28	Egg proteins	Precision fermentation company focused on the commercialisation of proteins traditionally derived from animals. Broadens ANIC's portfolio into another protein category.
Ohayo Valley	US$1.5m	US$1.5m	Seed	18.75	Cultivated beef	Company established by a leading cultivated meat scientist; Possesses a unique technology approach for efficient production at low cost. First product is Wagyu beef.

Source: Agronomics, Edison Investment Research. Note: *Jim Mellon holds an additional personal interest in this company. **Production not based on cellular agriculture.

In December 2021, at the time of its most recent funding round, ANIC announced that it is in advanced discussions to make investments of up to US$52m (c £38m) in six new and existing portfolio companies covering category leaders in both cell culture and fermentation technologies, spanning the range from pre-seed to series B. These potential investments are detailed in Exhibit 8.

The company also said that in addition to these near-term opportunities, it has a 'significant pipeline of additional identified leads and expected funding rounds for existing portfolio companies', and that

it expects to be presented with 'significantly greater opportunities to deploy larger amounts of capital into the sector with average investment size increasing in line with sector growth'.

With cash reserves of £75m once the December funding round is finalised, the company has sufficient funds to finance the near-term projects outlined in Exhibit 8 and at least some of the opportunities in its longer-term pipeline.

Exhibit 8: Expected near-term investments (as at 1 December 2021)

Project	Technology focus	Anticipated commitment (GBP, million)	Stage	Estimated time to commercial launch (years)	Description
Project A	Cell culture	5-9	Series A	1-2	Major protein category; company has established an efficient bioprocess entering scale-up phase
Project B	Cell culture	7-11	Series B	1-2	Leading US based cellar agriculture company
Project C	Fermentation	7-11	Series B	< 1	Company provides infrastructure capabilities to fermentation companies to facilitate scaling
Project D	Fermentation	6	Series B	< 1	A leading fermentation company with a platform technology
Ohayo Valley	Cell culture	1.1	Pre-seed	4	Company established by a leading cultivated meat scientist; Possesses a unique technology approach for efficient production at low cost. First product is Waygu beef.
Project F	Cell culture	0.25	Pre-seed	3	Identified white space opportunity within cellular agriculture

Source: Agronomics

Performance: An impressive start in a nascent industry

Exhibit 9: Five-year discrete performance data

12 months ending	Share price (%)	NAV (%)	MSCI World (%)	CBOE UK All Cos (%)
31/12/17	-	--	9.7	14.0
31/12/18	-	--	(4.9)	(9.8)
31/12/19	-	--	20.4	19.3
31/12/20	29.7	6.9	10.5	(10.9)
31/12/21	87.5	133.6*	21.2	18.4

Source: Refinitiv. Note: All % on a total return basis in pounds sterling. *Using NAV at end September 2021.

ANIC is a relatively new investment vehicle, having only adopted its current investment strategy of investing in cellular agriculture in April 2019. Early performance under this strategy has been impressive. ANIC reports its NAV on a quarterly basis and the latest available NAV is 12.99p per share, as at end September 2021. This represents a 10.9% increase on the NAV of 11.71 p per share at end June 2021 and is 108.8% higher than the 6.22p per share NAV at end March 2021. The company has made a cumulative NAV return of 53.4% since inception. (The December NAV is due to be published in mid- to late January 2022.)

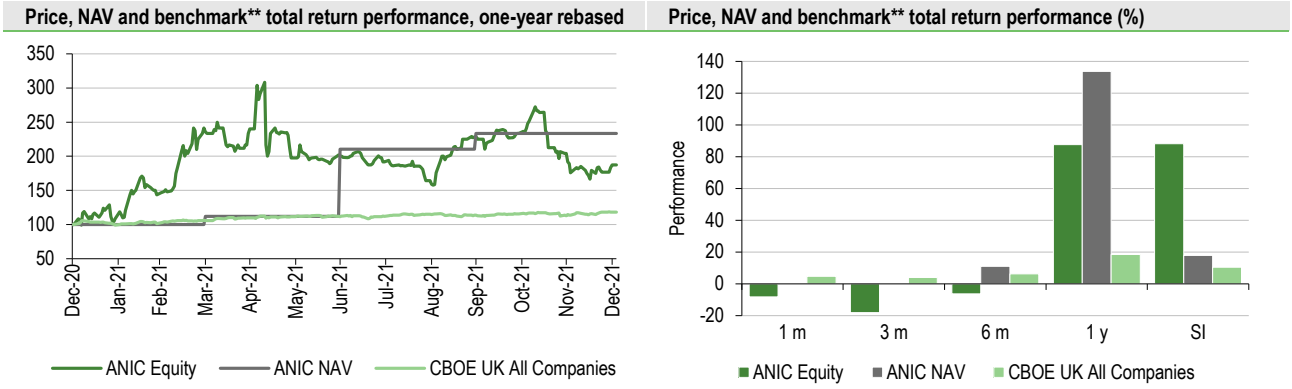
The valuation policy ANIC uses to value its portfolio holdings aligns with the IFRS guidelines for the valuation of international private equity and venture capital investments. ANIC's individual portfolio companies are held at cost or at the value of the most recent funding round. At the end of September 2021, these investments were valued at £50.5m. In addition, ANIC's NAV at end September 2021 included uninvested cash of £55.1m and total net assets were £103.9m. This represents a £10.3m increase on ANIC's total net assets of £93.6m at end June 2021. Following three investments made during October and November (discussed above), net cash totalled £44.0m at 1 December 2021 and will rise to £75.0m once the December funding round is finalised.

During the quarter ended 30 June 2021, ANIC's NAV benefited from revaluations to its positions in Meatable and CellX. In May, ANIC completed a secondary purchase of shares in Meatable,

increasing its stake to 5.84%. Subject to audit, the additional acquisition allowed ANIC to carry this position in its accounts at a book value of €8.15m, representing an unrealised gain on cost of €2.95m. At the end of May, CellX completed its seed funding round. This valuation event triggered the conversion of ANIC's initial $50,000 investment into preference shares and resulted in a 500% uplift in the value of its holding. The NAV also benefited from the profitable sale of its legacy holding in Insilico Medicines (discussed above). The further £10.3m increase in ANIC's NAV in the three months to end September 2021 was driven by valuation events related to three of the company's portfolio holdings – New Age Meats, Formo and VitroLabs (details above).

It is important to note that under the company's valuation policy, it is not possible to reflect significant uplifts between valuation events such as a new third-party funding. ANIC's board therefore believes that the stated NAV per share may not fully represent the current intrinsic value of the portfolio companies, given their continued progress and the rising valuations of listed companies in the broader alternative protein sector. In essence, ANIC's published NAV can thus be said to be 'backward looking', providing only a lagged estimate of the value of ANIC's assets. As Chow says, 'this is the nature of private holdings in public structure'.

Exhibit 10: Investment trust performance to 31 December 2021*



Source: Refinitiv, Edison Investment Research. Note: *Using NAV at end September 2021. **Although ANIC does not have a benchmark, the CBOE UK All Companies Index is included for comparative purposes. Since inception (SI) figures are annualised.

Exhibit 11: Share price and NAV total return performance, relative to indices* (%)

	One month	Three months	Six months	One year	Since inception
Price relative to CBOE UK All Companies	(12.3)	(21.3)	(11.8)	58.4	352.8
NAV relative to CBOE UK All Companies	(4.5)	(3.8)	4.4	97.4	34.3
Price relative to MSCI World	(9.8)	(23.5)	(14.2)	54.6	251.6
NAV relative to MSCI World	(1.7)	(6.5)	1.5	92.7	4.2

Source: Refinitiv, Edison Investment Research. Note: Data to end-December 2021. Geometric calculation. *Although ANIC does not have a benchmark, the CBOE UK All Companies index and MSCI World Index are used for comparative purposes.

ANIC's share price is not subject to the same valuation constraints as its NAV and reflects the market's positive assessment of the current, intrinsic value of the company's portfolio. It is thus not surprising that ANIC's share price performance has outpaced its performance in NAV terms. In the year ended 31 December 2021, the share price rose 87.5% and is up a total of 417.2% since the adoption of the current strategy (Exhibit 10). ANIC's market cap is currently £201.7m, 94.1% above its last reported NAV of £103.9m (at end September 2021).

Several factors have supported the share price. Investor interest in the cellular food sector is rising, encouraged in part by the publication of Jim Mellon's book *Moo's Law* and by a steady flow of positive media coverage of the industry. However, investors have very limited opportunities to gain exposure to cellular agriculture companies, given their status as early-stage, privately held businesses, and ANIC's position as the sole UK-listed investment vehicle focused on this industry means its shares are experiencing strong demand, as evidenced by the oversubscription of the May 2021 equity funding round. ANIC's share price has received additional support from the

valuation events at BlueNalu, New Age Meats, Formo and VitroLabs discussed above, and the associated uplifts announced by ANIC. There has also been recent positive news flow related to several of ANIC's other portfolio holdings, including Meatable and Tropic Biosciences (discussed above), although these did not relate specifically to valuation events.

Exhibit 12: NAV performance vs benchmark* since adoption of current investment strategy

Source: Refinitiv, Edison Investment Research. Note: *Although ANIC does not have a benchmark, the CBOE UK All Companies index is included for comparative purposes.

Valuation considerations

To make a comprehensive assessment of the value of any investment vehicle's portfolio holdings at any point in time, it is necessary to forecast the sales, earnings and/or cash flow of each portfolio holding several years ahead, based on a set of assumptions about each company's growth and costs and developments in its addressable markets. However, the valuation exercise is much more challenging in cases such as ANIC's for several reasons. All the company's investments are at the very early stages of development. Most need to solve technical challenges, in particular in relation to scalability and costs, and food producers face significant regulatory uncertainties, especially in the near term. So, none of ANIC's cellular agriculture holdings are generating any sales (although Rebellyous and LIVEKINDLY are revenue generating). Most of the company's cellular agriculture holdings are several years from this point, and further away from establishing their commercial viability. Even if these businesses become revenue-generating, and subsequently also profitable, it is impossible to estimate now, with any accuracy, the market shares they will ultimately capture in this rapidly evolving sector. All of these factors render conventional equity valuation methods such as P/E ratios and discounted cash flows ineffectual.

However, recent revaluation events do provide some insight into the potential growth in the value of ANIC's portfolio. In the September quarter alone, the valuation uplifts of just three of ANIC's 18 holdings – New Age Meats, Formo and VitroLabs – have raised the NAV by £10.3m (+10.9%), as discussed above. This is a modest increase compared to the 88.2% increase in ANIC's NAV during the June quarter 2021 (when the NAV rose to 11.71p per share, from 6.22p per share at end March 2021), but even so, if future uplifts were to continue at the Q321 pace and size (which comprised valuation uplifts for only three of ANIC's 18 assets), over the course of the next year, this could amount to annual NAV growth of around 50%. And it is not difficult to foresee circumstances under which ANIC might experience more significant annual NAV uplifts, as it invests its available cash and as portfolio holdings progress and are revalued upwards over time.

A look at a few of the more advanced alternative and plant-based protein companies, whose products are already on the market, provides a different, and even more positive, perspective on the same question of ANIC's potential future valuation. While ANIC's portfolio companies presently have valuations ranging up to approximately £200m, the market cap of these plant-based food companies are several orders of magnitude larger. The table below includes Beyond Meat, which

many consider the 'poster child' of the alternative proteins business, although Impossible Meat, which is expected to go public soon, may trump it in market cap terms if market speculation of a US$10.0bn valuation proves correct.

Exhibit 13: Leading plant-based protein companies

	Established	Listed	Countries	Annual sales (US$m)	Market cap (US$bn)
Beyond Meat	2009	May 2019	80	406.8	6.4
Oatly	1994	Jun 2021	Sweden, Germany, UK, US, China	421.4	8.6
Impossible Foods	2011	Expected	US, Hong Kong	N/A	10.0*

Sources: Beyond Meat, Oatly, Impossible Foods, CNBC, *Reuters

Although precise valuations are impossible, what is clear from these examples is that the alternative protein sector, in all its forms, already has significant momentum, and the potential for growth of successful early-stage participants is enormous and should not be underestimated. This suggests that ANIC should be very well-positioned to benefit. The significant experience and expertise of the fund's management team also suggests that at least some, if not most, of its portfolio holdings may well be set for significant growth and valuation uplifts over coming years, as technical, cost and regulatory barriers are surmounted, and products approach price parity with food produced by traditional means.

Peer group comparison

ANIC is unique in the UK market, as it is the only UK-listed venture capital company focused exclusively on investments in early-stage companies operating in cellular agriculture. There are a couple of other funds, Rize Sustainable Future of Food (FOOD) EFT and Pictet's Nutrition Fund, which invest in the food sector. However, neither targets alternative food products exclusively and both hold only listed companies, including, in Pictet's case, such large and long-established companies such as Nestlé, Danone and Deere & Co. As such, both are very different from ANIC and are not meaningful comparators.

ANIC's closest peer in the global market is Eat Beyond, a Canada-listed venture capital fund specialising in early-stage and growth companies working with plant-based proteins, meat alternatives, cellular agriculture and experimental projects. Its remit is thus somewhat wider than ANIC's and there is no overlap in the portfolio holdings of the two companies. Like ANIC, Eat Beyond is a relatively new company, which listed in November 2020, but it is much smaller, with a market cap of only C$26.1m (£15.3m). During the first quarter of 2021, Eat Beyond's shares lost most of the gains made in the first months after listing and have since drifted lower. Cult Food Science is another Canadian investment fund investing in companies producing ethical, lab-grown foods. However, it is even smaller than Eat Beyond and it has no investments in common with ANIC.

Premium driven by strong demand and valuation policy

ANIC's share price usually trades at a premium to its cum-income NAV, especially over the past year. The premium peaked at around 500% in May this year. Upward pressure on the share price eased somewhat with the issuance of 297.8m new shares in May 2021, although the issue was over-subscribed. ANIC publishes its NAV at the end of each quarter and the premium narrowed further in July 2021, when ANIC published its end June NAV of 11.71p/share. This represented an increase of 88.2% compared to the NAV of 6.22p at end March 2021 and saw the premium fall to around 120%. Based on ANIC's current share price and the end-September 2021 NAV, ANIC's share price is currently trading at a premium of 65.5% (Exhibit 14), although the premium to invested cash is higher, given that about 30% of the NAV is currently cash. However, this premium

to invested cash will diminish as ANIC uses the cash for follow-on investments and further acquisitions.

Exhibit 14: Premium/discount since inception (NAV including income), %

Source: Refinitiv, Edison Investment Research

In general terms, ANIC's relatively high premium reflects several factors discussed above: ANIC's conservative and 'backward-looking' valuation approach, which has the effect of limiting NAV upfits, combined with rising investor interest in the cellular food sector and ANIC's scarcity value, as the sole UK-listed investment vehicle focused on this industry. ANIC's share price has received additional support from the spate of positive news flow related to several of ANIC's portfolio holdings (discussed above).

Looking ahead, ANIC's share price premium is likely to remain supported by the same factors that underpin it at present. ANIC will likely conduct further rounds of equity issuance to meet its funding requirements as it strives to maintain its equity share in its portfolio holdings as they expand and rise in value. And while any additional equity issuance should limit upward pressure on ANIC's premium, as will future NAV uplifts, the company's popularity, combined with its 'backward-looking' NAV, suggest the premium may well persist for the foreseeable future.

Investment process: Seeking winners with big markets

Shellbay, a consultancy company that has Jim Mellon as a principal, provides consultancy services to ANIC, supported by Anthony Chow and Laura Turner, who together comprise ANIC's advisory team. ANIC also has a five-member scientific advisory board, comprising experienced academics specialising in relevant areas of engineering, chemistry and biology, including stem cell research. The managers view this board as a key asset that ensures they have the technical knowledge necessary to realistically assess potential investments and thus invest with high degrees of confidence.

ANIC's operational team is well known and highly regarded in the sector. Mellon, Chow and Turner maintain close engagement with the sector's key stakeholders, including the incubators, significant investors, regulators, consultants and leading non-profit organisations such as New Harvest and the Good Food Institute.

Chow and Turner are responsible for sourcing investment ideas for ANIC and their mandate is global. To this end, they monitor new opportunities within cellular agriculture and supporting fields around the world. They believe their good relations and close collaborations with the sector's main stakeholders are the key to future opportunities. In normal times, the team visits ANIC's existing investments at least once a quarter and conducts exploratory and due diligence meetings with potential investments. Since the onset of the pandemic, the team has been doing quarterly update calls with its portfolio companies and also conducting other meetings online. The team has a

reputation for knowing the sector well and their participation in an investment attracts others. In addition to generating their own investment ideas, Mellon, Chow and Turner also receive regular direct approaches from entrepreneurs and referrals from their extensive networks.

The team targets companies within cellular agriculture companies with large addressable markets, due to their growth potential, and also because change in large markets will have a more meaningful environmental impact. In addition, target companies must have intellectual property that is defensible, and workable technology that is scalable to industrial size and commercially viable. Potential investments must have management teams who are experienced in the food industry and familiar with regulatory requirements. Chow and Turner much prefer to meet all the principals of potential investments in person and have resumed face-to-face meetings where possible.

ANIC's investment committee reviews Chow's and Turner's recommendations for new and follow-on investments, assesses risk exposures and makes recommendations to the board. Investment decisions are made by majority vote at both the investment committee and board level.

ANIC sometimes acts as lead investor in fund-raisings undertaken by investee companies, but it will be a minority investor, taking initial minority equity positions, depending on the level of the team's conviction. The company invests alongside other investors, some of whom are more experienced in the alterative proteins field, including Stray Dog Capital, a US venture capital company focused on sustainable investments. The participation of these investors serves to reinforce ANIC's investment decisions. While ANIC takes minority positions, it is not a passive investor. Chow has board membership or observer status on the boards of several portfolio companies, including Formo, Solar Foods, New Age Meats and Meatable. Jim Mellon is board observer to BlueNalu.

ANIC's approach is to grow as its portfolio holdings grow and to maintain its share of investee companies as they undertake further funding rounds, thus preventing dilution. This will require the company to have the necessary cash available to make larger follow-on investments as the capital raisings and valuations of portfolio companies increase.

As discussed above, all ANIC's holdings are private companies, which, by definition, do not have market prices. Given the lack of observable prices, ANIC's board believes that a recent share transaction cost represents the best available estimate of fair value. This valuation technique, calibrated using both financial and technological milestones, is commonly used for seed, start-up and early-stage investments and is consistent with IFRS guidelines. It does, however, mean that the valuations of portfolio companies, and hence ANIC's NAV, lag their intrinsic values.

The company aims to deliver capital growth by realising capital gains on the completion of a successful IPO, or alternatively, when a holding's share price has exceeded its intrinsic value, or, as is often the case in the cellular food sector, as a result of trade sales.

Aside from the disposal of some small legacy holdings mentioned in the Portfolio positioning section, ANIC's investment strategy is focused on the long term and the managers believe that it is too early in the company's life to sell any of its positions. Even if the managers were to become dissatisfied with a particular holding for some reason, they are prepared to be patient. In their view, the high degree of interest in the cellular food sector will eventually provide an opportunity to sell at an attractive price and they are prepared to wait for the right buyer to emerge. In the longer term, Mellon and his team believe that their portfolio companies will be targeted by big biotech, pharmaceutical and food companies such as GSK, Cargill and Unilever, and this could provide ANIC with opportunities to exit particular investments. Such acquisitions would be relatively small investments for these giant companies. It is the managers' intention to recycle any capital raised from such sales into new investment opportunities.

ESG considerations

Environmental, social and governance (ESG) considerations lie at the very core of the cellular food sector, and they are a key tenet of ANIC's investment philosophy.

ANIC claims that the cellular food sector makes meaningful contributions towards eight of the United Nations' 17 sustainable development goals, as follows:

- Zero hunger
- Good health and well being
- Industry, innovation and infrastructure
- Sustainable cities and communities
- Responsible consumption and production
- Climate action
- Life below water
- Life on land

Meat, especially beef and lamb, is the most emission intensive food, due to the methane gas the animals produce. In the case of beef production, replacing meat produced from livestock with meat produced using cellular technology would reduce emissions from this source by 90%. Land and water usage would decline by equivalent magnitudes (Exhibit 3). And there are additional benefits for human health, thanks to the dramatic reduction in the use of antibiotics. Cellular food also has scope to solve the problem of food insecurity in the Middle East, which is presently forced to import much of its requirements.

ANIC choses its investments in part for their potentially positive environmental impact and each portfolio holding, once commercially viable, will make some contribution towards addressing these issues.

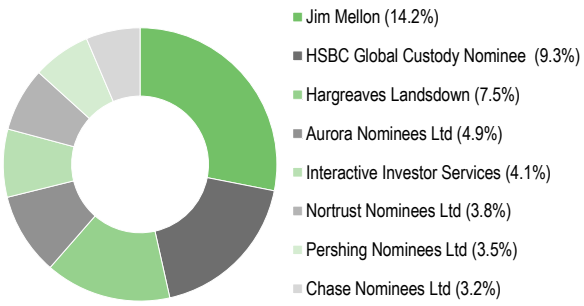
In addition to supporting the development of the leaders of the cellular food sector and maximising the portfolio's positive contribution to the realisation of sustainable development goals, ANIC also takes account of the environmental impact of its own day-to-day business activities and seeks to minimise this impact wherever possible.

Capital structure, life of the company and ownership

ANIC adopted its current name and investment strategy in April 2019. It is an investment company, with one class of ordinary shares. The company has undertaken several rounds of capital raising, the most recent of which were completed in May and December 2021. These raised net proceeds of £62.8m and £31.0m respectively, from new and existing institutional and retail investors, and directors of ANIC, including Jim Mellon, resulted in the issuance of a total of 435.1m new ordinary shares. The proceeds will be used to provide additional capital to companies currently in the ANIC portfolio, as well as to fund new investment opportunities (as discussed above). At end December 2021, the company had 938m shares in issue.

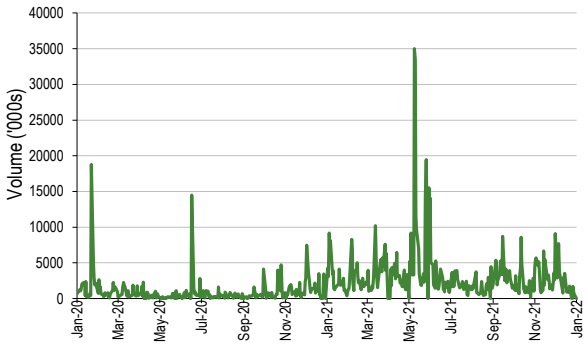
The company has an unlimited life. Its largest shareholder is its founder, Jim Mellon, who owned 14.2% of the company at 30 June 2021 (Exhibit 15), although his percentage holding has since declined to 13.0% due to the subsequent issuance of additional shares.

Exhibit 15: Major shareholders (ordinary shares)



Source: Agronomics, At 30 June 2021

Exhibit 16: Average daily volume (ordinary shares)



Source: Refinitiv. Note: Two years to 31 December 2021.

Fees and charges

ANIC does not pay a management fee. It pays a performance fee of 15% to Shellbay Investments, calculated on the increase in NAV each quarter, subject to the previous high-water mark and also subject to an initial high-water mark of 10 pence per share. This is only payable on the realisation of gains and is satisfied by the issue of ordinary shares equivalent to the value of the 15% fee.

A fee of £7.4m was paid to Shellbay, in the form of new shares, for the financial year ended 30 June 2021. The issue of these shares will have a dilutive effect on the NAV per share, equal to approximately 3.8% of the end September NAV of 12.99 per share. An irrecoverable VAT charge of £1.5m was payable on the Shellbay fee, but as a gesture of goodwill, Shellbay has agreed to contribute £0.8m towards this VAT charge. ANIC's ongoing charge is 0.54%.

The board

Exhibit 17: ANIC's board of directors

Board member	Date of appointment	Remuneration for year ended 30 June 2021 (£)	Shareholdings at 31 Dec 2021
Richard Reed (chairman)	April 2019	11,667	6,354,412
Jim Mellon*	April 2019	-	122,121,894
David Giampaolo	April 2019	11,667	2,434,783
Denham Eke (FD)	April 2019	-	-

Source: Agronomics. Note: *Any emoluments are subject to an agreement with Shellbay Investments, whereby Shellbay receives a profit share equating to 15% of any increase in NAV per share of the company, subject to the previous NAV high-water mark being exceeded, and subject to an initial high-water mark of 10p per share.

General disclaimer and copyright

This report has been commissioned by Agronomics and prepared and issued by Edison, in consideration of a fee payable by Agronomics. Edison Investment Research standard fees are £60,000 pa for the production and broad dissemination of a detailed note (Outlook) following by regular (typically quarterly) update notes. Fees are paid upfront in cash without recourse. Edison may seek additional fees for the provision of roadshows and related IR services for the client but does not get remunerated for any investment banking services. We never take payment in stock, options or warrants for any of our services.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained in this report represent those of the research department of Edison at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of Liability: To the fullest extent allowed by law, Edison shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out or in connection with the access to, use of or reliance on any information contained on this note.

No personalised advice: The information that we provide should not be construed in any manner whatsoever as, personalised advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Edison's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in the report may not be eligible for sale in all jurisdictions or to certain categories of investors.

Investment in securities mentioned: Edison has a restrictive policy relating to personal dealing and conflicts of interest. Edison Group does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Edison may have a position in any or related securities mentioned in this report, subject to Edison's policies on personal dealing and conflicts of interest.

Australia

Edison Investment Research Pty Ltd (Edison AU) is the Australian subsidiary of Edison. Edison AU is a Corporate Authorised Representative (1252501) of Crown Wealth Group Pty Ltd who holds an Australian Financial Services Licence (Number: 494274). This research is issued in Australia by Edison AU and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by Edison AU is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a particular financial product you should read any relevant Product Disclosure Statement or like instrument.

New Zealand

The research in this document is intended for New Zealand resident professional financial advisers or brokers (for use in their roles as financial advisers or brokers) and habitual investors who are "wholesale clients" for the purpose of the Financial Advisers Act 2008 (FAA) (as described in sections 5(c) (1)(a), (b) and (c) of the FAA). This is not a solicitation or inducement to buy, sell, subscribe, or underwrite any securities mentioned or in the topic of this document. For the purpose of the FAA, the content of this report is of a general nature, is intended as a source of general information only and is not intended to constitute a recommendation or opinion in relation to acquiring or disposing (including refraining from acquiring or disposing) of securities. The distribution of this document is not a "personalised service" and, to the extent that it contains any financial advice, is intended only as a "class service" provided by Edison within the meaning of the FAA (i.e. without taking into account the particular financial situation or goals of any person). As such, it should not be relied upon in making an investment decision.

United Kingdom

This document is prepared and provided by Edison for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned or in the topic of this document. A marketing communication under FCA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This Communication is being distributed in the United Kingdom and is directed only at (i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "FPO") (ii) high net-worth companies, unincorporated associations or other bodies within the meaning of Article 49 of the FPO and (iii) persons to whom it is otherwise lawful to distribute it. The investment or investment activity to which this document relates is available only to such persons. It is not intended that this document be distributed or passed on, directly or indirectly, to any other class of persons and in any event and under no circumstances should persons of any other description rely on or act upon the contents of this document.

This Communication is being supplied to you solely for your information and may not be reproduced by, further distributed to or published in whole or in part by, any other person.

United States

Edison relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a)(11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Edison does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell or hold that or any security, or that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person.

Frankfurt +49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
1185 Avenue of the Americas
3rd Floor, New York, NY 10036
United States of America

Sydney +61 (0)2 8249 8342
Level 4, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia