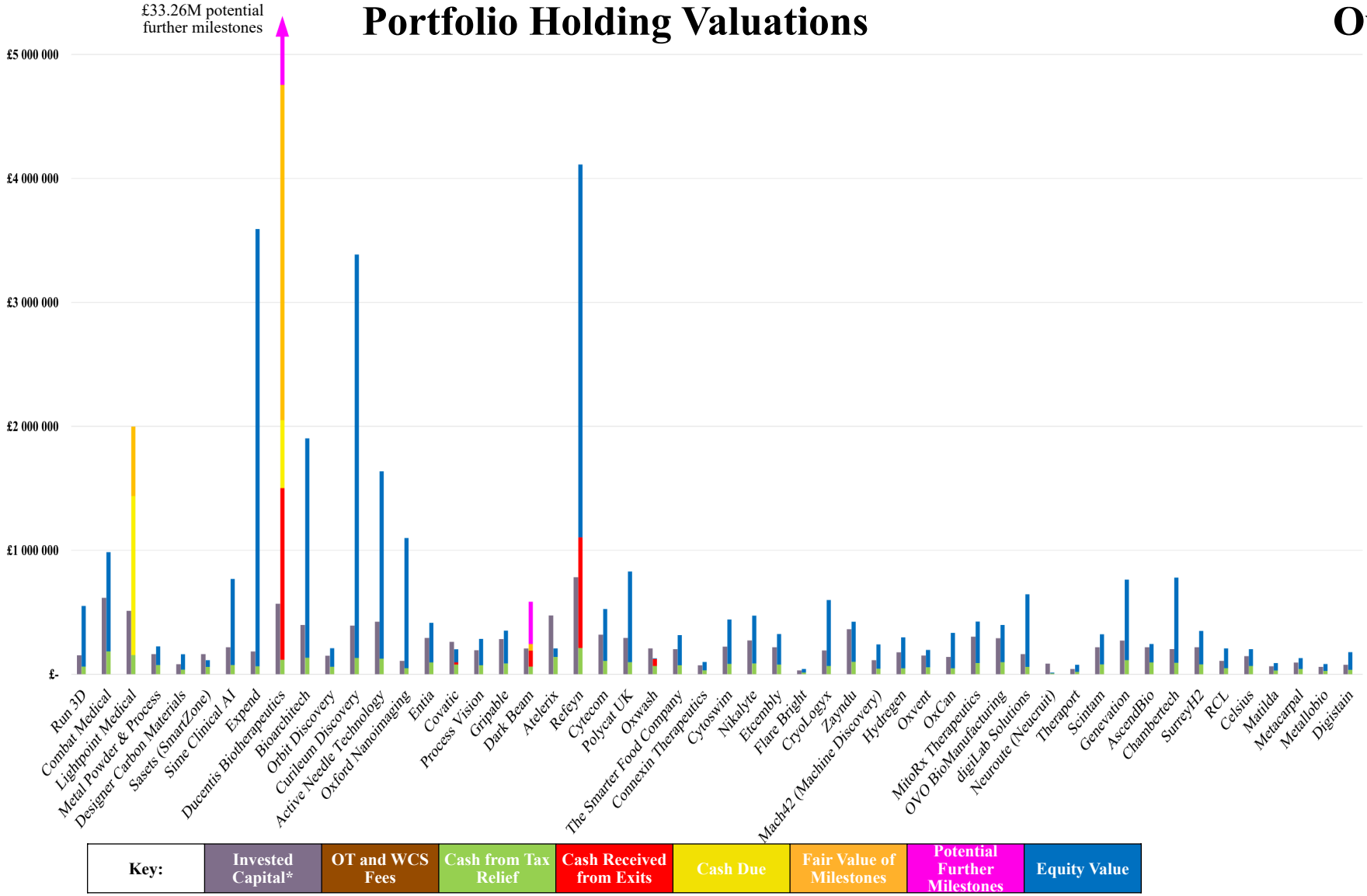
OT(S)EIS Full Portfolio - Q3 2024

Investment Objective

1. OT(S)EIS invests in life, physical, and data science start-ups based in and around Oxford and London, at the pre-seed and seed stage. Our investment horizon is patient and long-term.
2. We are active investors, using our expertise to help portfolio companies develop scalable business models, robust pricing strategies, and effective R&D programmes.
3. We use the SEIS and EIS tax relief schemes to de-risk investments whilst offering our investors significant (and tax-free) capital growth potential.

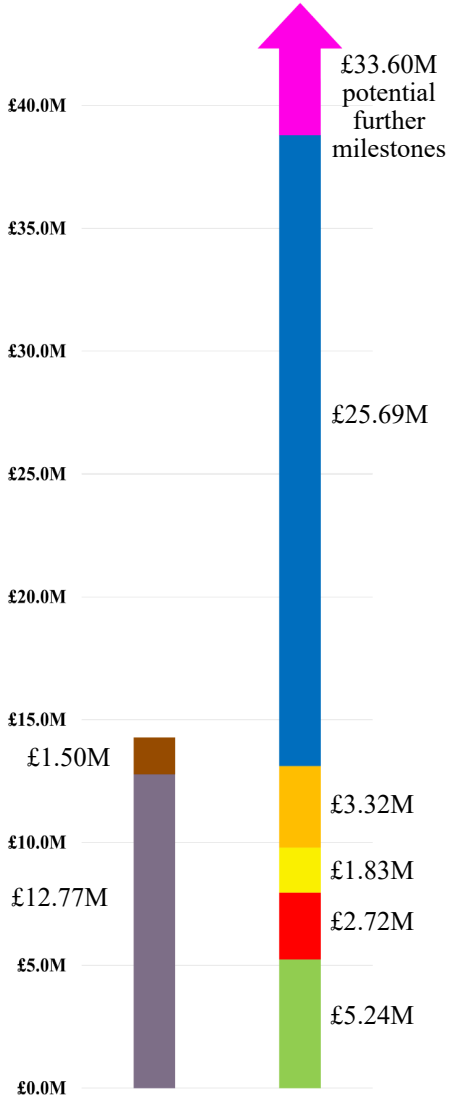
Managers	Lucius Cary and Andrea Mica
Fund Value	£38.96m*
Portfolio	52 Active Companies
Contact	otseis@oxfordtechnology.com

Portfolio Holding Valuations



*On the Portfolio Holding Valuations graph, OTM & WCS fees are included in the Invested Capital bars.

Overall Fund Value



*Excluding potential further milestones

Introduction

Portfolio by Tax Year

Oxford Technology Q3 2024 Portfolio Report

Summary

This report summarises the progress made by portfolio companies in the latest quarter. By the 1st October 2024, OT(S)EIS had completed 244 investments in 64 companies. It also details useful information about the fund, including how we invest, opportunities for co-investment at presentations, and the intricacies of SEIS/EIS tax reliefs.

The investment figures for the fund as a whole are as follows:

Invested Capital: £12.77m

Total OTM and WCS fees: £1.50m

Cash from Tax Reliefs: £5.24m

Cash from Exits: £2.72m

Cash due from Exits: £1.83m

Fair Value of Post-Exit Milestone Payments: £3.32m

Remaining Equity Value: £25.69m

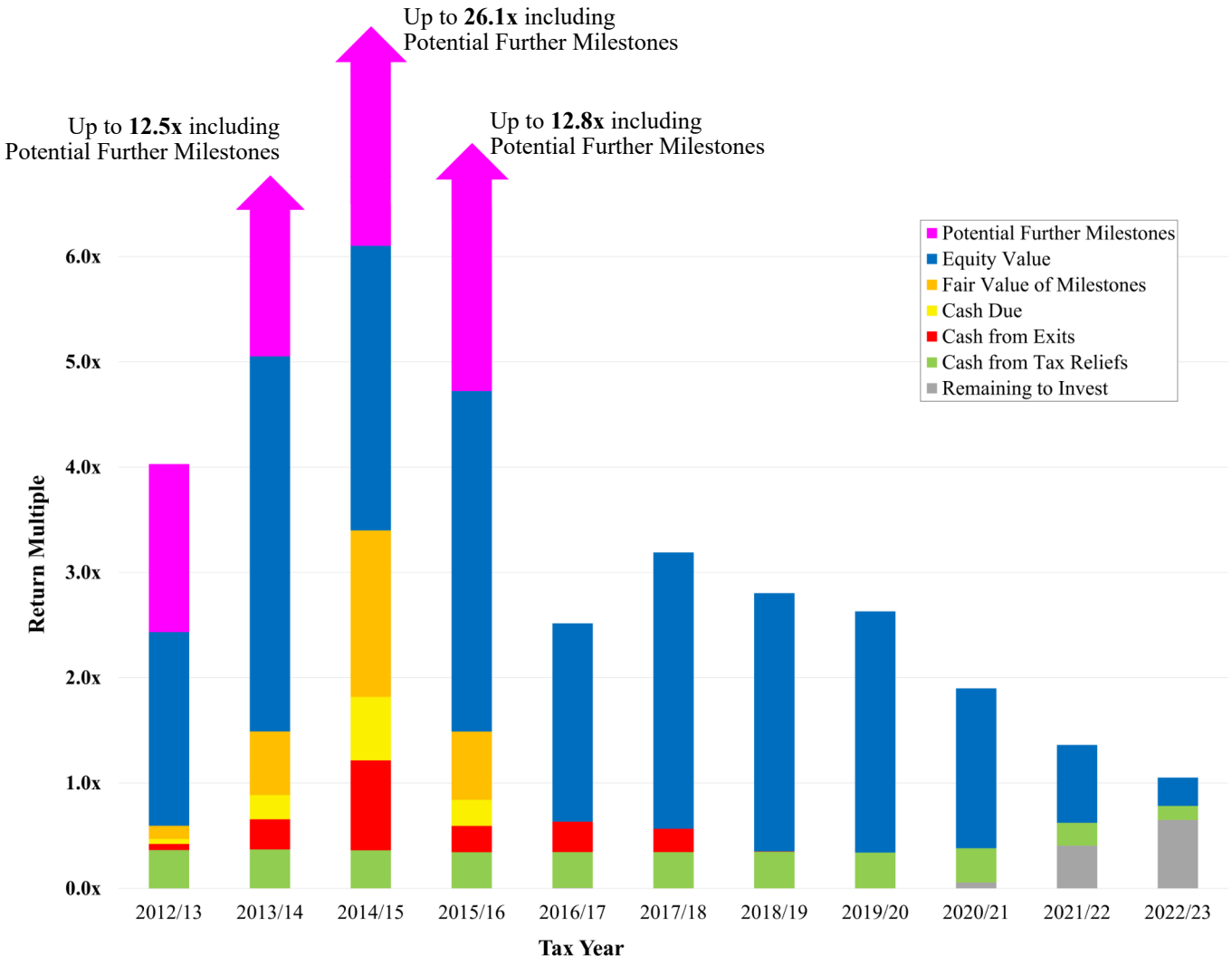
In addition, there is a potential for further £33.6m in milestones from the Ducentis and Dark Beam exits.

Valuations are all made according to the most recent price paid by investors in a company. If, following an investment, things have gone wrong, then the valuation is reduced. But if things have gone well, the valuation is not increased unless there is another funding round. To this extent the valuations are conservative, but obviously nothing really counts until the gains are realised through exits.

The figures assume that the investor in question has claimed the full amount of income tax relief available from the SEIS and EIS investments (investors who also get relief against capital gain tax have an additional benefit). The cash back from tax reliefs can take some time to arrive, but it comes in the end. Firstly, the investee company has to meet certain HMRC requirements (e.g. trade for 4 months). Then they inform HMRC, who must authorise the issuance of certificates which will enable investors to claim their tax relief.

Exits are typically expected on a 10 year timescale: investments in OT(S)EIS are illiquid and long term. Nevertheless, the return multiples when exits occur can be considerable. For instance, the Ducentis exit could have a return multiple of up to 127x.

Returns to investors in OT(S)EIS over the last ten years



The above figure refers to the past and the past performance is not a reliable indicator of future results.

The above data represents the portfolio performance as in Q2 2023

The graph above shows the returns which have been made so far by those who invested in OT(S)EIS in each of the tax years over the last ten years. So, for example, those who invested £100,000 (to make the sums simple, although some investors did invest this amount) in the 2014/15 tax year have so far been able to claim about £36,000 in income tax reliefs and received back about £85,500 in cash from exits (all tax-free). In addition they had about another £60,500 of escrow cash (also tax-free) paid out in Jan 2024. In addition, they have another £158,000 which is what we regard as the 'fair value' of the exit milestones from one investment. The fair value of the remaining investments, which have not yet exited is a further £270,500. So the total return, adding all these together is £610,500, a multiple of just over 6x of the initial amount invested. And in addition to this, there is the potential to receive up to a further £2m if all the milestones from one of the exits are met. All these returns will be tax free.

We believe that an investment in OT(S)EIS has been one of the best investments that it has been possible to make in the UK over the last ten years. We believe the reasons are clear. It is not luck. We are all scientists. We focus on the science. We receive a large deal flow and pick carefully (about 5/1,000 each year) and we get actively involved with the founders, especially in the early years to help establish the business model and pricing. We thought that it would work and so far it has. So please consider making an investment in OT(S)EIS. Min £15k.

News in Brief

The good news from the investees generally outweighs the bad. The most recent investment, Digistain made at the end of Q1, is doing very well with sales having grown from $3k in February to $35k in August. Matilda which displays brainwaves to the user in real time via a small headpiece behind the era, now has a saleable device made in China and has achieved its first sale. My Celsius now has a saleable version of its device for helping women with menopause symptoms and this may be ordered at a discount via its website for delivery in early 2025.

WOTAN (Wider Oxford Technology Angel Network)

Surprisingly there has been no call from any of the investee companies to raise capital via a WOTAN presentation for the last for months. In the previous 24 months, there was over demand and we had to limit the number of companies presenting to 2 or occasionally to 3.

WOTAN now has more than 200 members - sign up to become a member on the website www.oxfordtechnology.com/wotan

Subject to demand the next WOTAN presentations, by Zoom, are:

10 am Thursday 7 November

10 am Thursday 5 December

10 am Thursday 9 January (NB the first Thursday in January being too close to the New Year.)

Despite the good financial returns to investors in OT(S)EIS over the last 12 years, we manage to raise disappointingly small sums, less than £1m per year in recent years. This limits the amount that we can invest in start-ups, currently to about £60,000. We would prefer that this amount were larger. Companies may now raise £250,000 under the SEIS scheme and that fact that we can provide only £60k means that we miss out on some opportunities.

When we started in 2012, we said that the idea should work. The SEIS scheme is perfect for investing in high risk start-ups. The losses on the failures are greatly reduced, to as little as 26% of the sum invested (or even 12.5% for those with capital tax to pay) while the gains of the winners can be very large and are tax free. The maths says that investors should get a very good return, and this has indeed been the case. Much of the gain is still on paper, but investors have also received substantial cash payments from exits with much more to come if/when exit milestones are achieved.

As may be seen from the tables at the end of the report, 12 of the 64 investee companies have failed and the after tax losses on these have been £665k. There have been 6 exits so far and the cash payout on these has been £2.724m so far, a gain of £2.304m on the cost after tax reliefs of £420k. In addition there are potential further exit milestone payments of £33m, all of which would be tax free.

The unrealised equity value of the investee companies now stands at £26m against a cost (after tax reliefs) of £6m.

In summary, the model works, just as we thought it would. We cannot guarantee that it will continue to work as well but we believe that it will. The maths hasn't changed. So we would encourage investors to include an annual investment (min £15k) in OT(S)EIS each year. You get a report each quarter on how your investments are doing and also a valuation statement.

Our Funds

Oxford Technology manages two funds:

1. **OT(S)EIS** - The Start-up Fund: Investors' money is invested over 3 years - Approx. 1/3 (less fees) in SEIS investments in year 1, 1/3 in EIS investments in year 2 in those of the earlier SEIS investees which are doing well, and the same again in year 3. SEIS investments are very high risk and some failures are to be expected, although there have been relatively few so far which is why the track record is so good. So it takes 3-4 years before all the tax reliefs are obtained, which does not suit everybody.

2. **OTEIS** - The Development Fund: Investors have all their money invested within one year in EIS investments, mainly in earlier OT(S)EIS investments which are developing well. So this fund has a lower risk profile than OT(S)EIS and investors can claim their tax reliefs more quickly.

It is possible to invest in both funds. Information Memorandums and Application forms can be downloaded from www.oxfordtechnology.com/invest**.**

OT(S)EIS Fees

Type	Details
Initial Fee	1%
Management Fee	2% (Years 1-3) 1.5% (Years 4-7) – deferred and to be paid only from proceeds of exits 0% (Year 8 and onwards)
Custodian Fee	0.15% + VAT annually (NB – reduced from 0.35% in 2017). There is also a receiving agent fee of up to £25 + VAT for each subscription, and a £15 fee will apply for any transfers of holdings. Distributions may also incur a small administrative charge. These fees will be paid from the investor's cash pool.
Performance Incentive	Once a typical investor, defined as a 40% taxpayer with no capital gains tax to shelter, has received a return of £1.20 (including tax benefits) for each £1.00 invested then 20% of all further payments to all investors who invested at the same time will be paid to OTM as a performance incentive.

SEIS and EIS Tax Reliefs - Overview

Please consult HMRC or your financial advisor for full details and conditions.

Type of Tax	SEIS	EIS
Income Tax	Reduced by 50% of investment Reduced further by up to 22.5% if the business fails Income tax relief can be applied to tax bill year prior to investment	Reduced by 30% of investment Reduced further by up to 31.5% if the business fails Income tax relief can be applied to tax bill year prior to investment
Capital Gains	Relief against capital gains equal to 50% of investment (max £100k of the relief per tax year), which is not merely deferred but cancelled. No capital gains tax to pay on exits	Deferral relief on capital gains arising 3 years before, or 1 year after investment No capital gains tax to pay on exits
Inheritance Tax	No inheritance tax (after 2 years)	No inheritance tax (after 2 years)

Example SEIS investment

An individual investor with income tax of £25,000 to pay, and capital gains of £100,000 in the 2020/2021 tax year on which tax of £20,000 at the 20% rate is due to be paid, invests £10,000 in an SEIS qualifying company in 2020/2021:

Initial Investment	£10,000
Income Tax Bill Relief (50%)	-£5,000
Capital Gains Tax Relief	-£1,000
Net Cost of Investment	£4,000

If the above investor had had the same tax status in 2019/2020, they could also choose to treat their 2020/2021 investment as if having been made in 2019/2020, and claim relief for that year instead.

If the investee company fails, the remaining part of the investment on which income tax relief has not been claimed (£5,000 in this example), may be set against the investor's income tax liability. For a 45% taxpayer, for example, this relief is worth £2,250. If they also have capital gains tax to pay, then the total loss on the investment of £10,000 would be reduced to £1,750 if the investment was made in 2020/2021 and not carried back to the previous year - in other words, a downside of 17.5%. There is also the further possibility of capital gains tax loss offsets.

If the investment succeeds, and the shares are sold for, say, £20,000 (twice the purchase price), the £20,000 would be tax free, a multiple of 5 times the net cost, or an upside of 400%.

California Office - bijan@oxfordtechnology.com

Oxford Technology also has an office in Menlo Park, just outside San Francisco in California. This office is run by Bijan Kiani. Oxford Technology invested in his first start-up business, INCA, in the 1980s. The business did very well and 3i later invested. INCA was ultimately acquired by a company in California, for whom Bijan then went to work. After a few years, Bijan was headhunted by Synopsys to head up their sales and business development strategy. Synopsys employed 300 people at that time. Bijan played a major part in its growth to 13,000 people and the No 1 position in its field (Electronic Design Automation).

In 2019, Bijan contacted OTM, saying that while he had enjoyed working with Synopsys and building a large and successful business, what he had really enjoyed most was the early days of his first business, working with OTM to get it all going and getting the first sales contracts in the US etc. What he would now like to do would be to help our investees in the UK get going in the US. He has been as good as his word, and all the CEOs of our investees who have worked with Bijan have said how helpful and useful he has been. In January 2021 Bijan became the CEO of Machine Discovery, an OT(S)EIS investee, in which he is also a shareholder.

Invest in OT(S)EIS

While it is very good to make direct investments into presenting companies, please do also consider making an additional investment into OT(S)EIS as well. The reasons are:

1. OT(S)EIS can get you access to significantly better valuations. Presenting companies are those in which we have already made SEIS/EIS investments, typically at lower share prices. For example, in Q1 2020 we made an SEIS investment into Etcembly at 40p per share (so 20p after SEIS tax relief). In Q4 2020, Etcembly gave a presentation and raised £1.6m of EIS investment at £1.58 per share (so £1.10 after EIS tax relief — more than 5x the after tax share price of the earlier SEIS investment).

2. With OT(S)EIS, you make a single investment and we do all the work. We handpick about 5-6 SEIS investments, diversifying risk, and then invest in a similar number of follow-on EIS investments. We send you all the forms necessary to claim your tax reliefs, a report with a valuation each quarter, and we actively help the investees.

3. Unless we raise capital for OT(S)EIS, we're not able to make the initial SEIS investments in start-ups, so there won't be any companies to present down the line!

OT Growth Fund

We continue to believe that there is a good opportunity to create a larger fund, maybe £50m which would invest in those of the earlier investments in the portfolio which are doing well, and which might also provide an exit for some of the SEIS and EIS investors. The concept is very simple. Since we invest in companies at the very earliest stage, typically when there are one or two people in a lab with an idea, and because we get actively involved (almost all investments are within an hour's drive) we get to know the founders very well. And we know the things which the founders might prefer that we didn't know - problems with personnel and patents, for example. This puts us in a very good position to be able to judge which investee companies are worth backing with significantly larger investments of several £m. A particular aim would be to use Bijan (who helped build Synopsys in California from 300 to 13,000 people) to help these companies develop in the US. The valuations of technology companies are generally significantly higher in the US than in the UK, so this should benefit the initial UK investors.

[Run3D.co.uk](Run3D.co.uk)

Company Valuation	Valuation Share Price	Fund Holding
£2.07m	£0.60	23.7%

Run 3D Investment History

Date	Amount	Share Price	Type
Dec 2012	£100,000	£0.15	SEIS
Oct 2013	£15,000	£0.15	SEIS
Oct 2013	£10,000	£0.15	N/A
Nov 2017	£3,000	£0.30	EIS
Mar 2019	£10,206	£0.45	EIS
Apr 2024	£2,316	£0.60	EIS

Description of Business

Run3D is the brainchild of Dr Jessica Leitch, who is an International runner herself (representing Wales) and who has a D.Phil from Oxford in the biomechanics of running. Runners have reflective balls attached to their various joints (hips, knees, ankles) and then run on a treadmill. Special cameras capture the image of the balls at 200 frames/sec. This data is then fed into a computer programme which then outputs a complete gait analysis, giving every detail; the angle of heel-strike, the rotation and rate of rotation of each joint, etc. The analysis can be used to modify the gait for two purposes; to reduce the likelihood of injury and to increase speed.

Progress since Investment

Initial progress was quite good. But after a few years, it became clear that improvements in the software were needed, so Run3D then spent the next two years, in collaboration with a company in Amsterdam, rewriting the software. The new software was used for the first time in summer 2016, and was a big step forward - easier to use and with many new features. In Q1 21 Run3D's AI went live to interpret the results. The AI add-on software automatically interprets a gait report, and makes suggestions as to what the issues might be, making Run3D more appealing to a wider market of less-experienced clinicians.

Date	UK & Ireland	US	Europe	Rest of World	Mobile	Total
Dec 2019	10	1	1	2	1	15
Dec 2020	13	0	4	2	1	20
Dec 2021	19	1	4	3	1	28
Dec 2022	27	1	2	3	1	34
Dec 2023	29	0	2	3	1	35
Sep 2024	28	1	2	2	1	34

Recent Developments

Run3D has had an encouraging quarter. A particular piece of good news is that there is again a Run3D clinic in the US, this time in California. It is hoped that this will provide a foothold for growing the business in the large US market.

Run3D sought to raise £100,000 via a WOTAN presentation at the end of Q1. Some investment was received very quickly. But the last of the funds sought came in at the end of Q3, so Run 3D should now be able to carry out its strategy for growth as planned.

CombatCancer.com

Company Valuation	Valuation Share Price	Fund Holding
£30.19m	£11.28	2.7%

Combat Investment History

Date	Amount	Share Price	Type
Apr 2013	£74,999	£4.31	SEIS
Dec 2013	£74,998	£4.74	EIS
Oct 2014	£10,002	£4.98	EIS
Dec 2014	£34,271	£4.98	EIS
Mar 2016	£74,998	£14.10	EIS
Oct 2016	£64,995	£11.28	EIS
Mar 2017	£129,212	£14.10	EIS
Mar 2018	£27,058	£14.10	EIS
Mar 2021	£54,223	£11.28	EIS
Apr 2022	£21,218	£11.28	EIS

Description of Business

Combat Medical develops and manufactures devices for the treatment of bladder and peritoneal cancers. The bladder cancer device consists of a control unit and a disposable heat exchanger and catheter. These are used to deliver a treatment consisting of heating a chemotherapy liquid and circulating this through the bladder. The standard treatment for bladder cancer involves cutting out the tumours in the bladder and results in up to 78% recurrence of tumours which then require increasingly drastic surgery. Combat's treatment, called HIVEC (hyperthermic intra-vesical chemotherapy), reduces recurrence rates by up to 4 times. The peritoneal cancer device works according to a similar principle, with the addition of CO2 agitation.

Sales are growing well, and the core business is profitable. The devices are CE marked and in use with doctors. Thus far they have been used in combination with surgery, but they are also being investigated as standalone treatments. This would reduce costs for medical providers, as repeated surgeries are extremely expensive. Combat is undertaking further clinical trials in order to make the treatment a standard of care. Success here should further accelerate sales of the device and dramatically increase the value of the company.

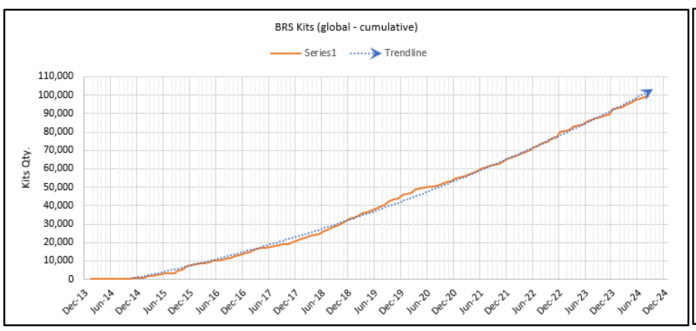
The clinical trial HIVEC HEAT that will provide the data for FDA approval has been launched at Leicester University hospital. It is a phase 3 trial run to FDA specification to see the impact of HIVEC treatment on patients who have failed BCG treatment. It has been over two and a half years in preparation. It will recruit 238 patients across 25 trusts and will follow patients for 2 years after the treatment to see long term effects. In the meantime sales continue to rise and accelerate.

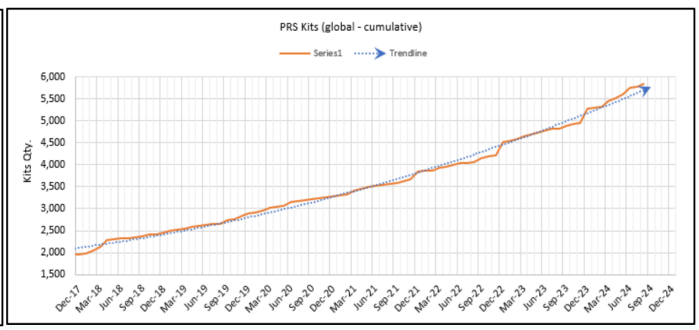
The first six months of 2024 were good for Combat with good growth.

Recent Developments

The Hivec Heat Trial has now had full approval and will be able to start. The trial has attracted a lot of attention with many medical centres wanting to join and others being encouraged by the trial taking place Interim results from 75 patients are expected in 2026, at which point Combat will raise a further £30m+ to support FDA approval for use in the US. In the meantime the sales of bladder and peritoneal kits are progressing well, with the PRS kit showing a particularly good period. Production and quality continue to improve.

Summary - Good progress of Combat continues.





The company previously named Lightpoint.

LightpointMedical.com

Exit Value	Exit Share Price	Multiple
Up to $50m	Up to £0.64	1.4x - 5.8x*

*Depending on the investment round, assuming full options conversion and that all milestones are met. The multiple is calculated based on the share price of £0.64 and in respect to the net cost of investment, i.e. includes tax reliefs.

The Company's Investment History

Date	Amount	Share Price	Type
Jun 2013	£74,999	£0.047	SEIS
Mar 2014	£75,000	£0.19	EIS
Nov 2014	£9,991	£0.238	EIS
Dec 2014	£124,895	£0.238	EIS
Mar 2016	£100,000	£0.509	EIS
Mar 2016	£20,000	£0.509	EIS
Mar 2019	£26,941	£0.65	EIS
Mar 2020	£38,825	£0.65	EIS

Description of Business

In cancer surgery, a surgeon cannot see whether the entirety of a tumour has been removed. In prostate cancer surgery, for example, roughly one quarter of surgeries will leave some cancerous tissue behind after surgery. The company has developed an imaging technology based on existing imaging PET and SPECT radiopharmaceuticals, to provide surgeons with a real time image of the cancer. The company is very actively engaged with surgeons to ensure that the products are best suited to their needs.

Sale of the company

OT(S)EIS was the initial investor in the company when we invested £75k in 2013 to get it started. In June 2023, the company announced that it had been acquired by Telix, a radiopharmaceutical company which is quoted on the Australian Stock market. The acquisition was completed on the 1st of November 2023. The deal came with an initial allocation of $20m of Telix shares to be held in escrow with a further $15m to follow against milestones over the next two years. The milestones are in line with the company's development plans and, unforeseen circumstances aside, should be achieved. At the time of the deal, the Telix share price was A$9.57. At the end of Q3 24 it was A$ 20.27

Those investors who invested in OT(S)EIS at the start, participating in the first SEIS investment and the follow-on EIS investments do very well with a return of about 5.5x the net cost of their overall investments in the company if all the milestones are met. Those who invested directly more recently do much less well.

The company was in a difficult position since the semiconductor chip shortages that started during Covid meant that the chips used in its product suddenly became unavailable. This meant that the company could make no more sales despite having orders. It could have redesigned the product using different chips, but this would have meant applying for a CE mark all over again, an expensive process which might take several years to achieve with uncertainty about availability of slots with the notified bodies. Under these circumstances the company made the decision to seek for acquisition and it is much to its credit that the deal with Telix has been concluded. We hope that with Telix backing, the technology will be able to go on to fulfil its potential, to save lives and reduce morbidity associated with cancer surgery.

The company is now a holding company that will distribute the returns through a liquidation. The amount that is distributed will depend to some degree on how Telix performs. If the exit goes according to what is transparent at the moment, investors should expect approx. 42p per share, not including potential milestones and the value of Active Needle shares held by the company. However, the share price of Telix shares on the 1st of October was A$20.93, and at the time of the deal (Nov 23) it was A$9.57. It is a meaningful increase in value and it is not guaranteed the share price will continue to rise and can fall before the exit can be materialised. You can follow Telix and the company's product progress here: https://telixpharma.com/investor-centre/

The company was able to sell the first quarter of its Telix shares. It will use that money to buy back some shares from non-EIS investors, however the earliest that we expect to distribute funds from the exit is Nov 2025 (possibly early 2026), as we are seeking to maximise the investors' EIS benefits and also the maximum value from the exit.

METAL POWDER AND PROCESS

MPP Investment History			
Date	**Amount**	**Share Price**	**Type**
Aug 2013	£150,000	£1.25	SEIS

MetalPowderProcess.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£1.25m	£1.25	12.0%

Description of Business

Metal Powder & Process (MPP) was established to produce high quality metal powders by gas atomisation for the aerospace, medical, and other industries. Metal is melted at the top of the atomiser, a machine the size of a small house, poured through a nozzle and blasted by jets of supersonic argon gas, and so turned into dust. The use of powdered metals has been growing steadily over the last 50 years. It is less expensive to produce certain components, e.g. gear wheels used in cars, by metal injection moulding powdered steel, than it is to start with solid steel and then cut each tooth on a machine. Metal injection moulding also produces parts which can be stronger and more accurate. Now demand is increasing even more quickly due to the rapid growth of 3D printing of metal parts.

Due to the incorporation of some novel technology, it was hoped that the atomiser (known as Bertha) operated by MPP will produce powder of higher purity than the powders produced by existing atomisers. This, in turn, should make the powder suitable for use in the aerospace industry. In the past, the aerospace industry has been reluctant to use powdered metal since the impurities which are present in powders produced by existing designs of atomisers are potential crack-initiation sites.

Progress Since Investment

Work on completing and commissioning Bertha has been continuing since the investment. The first sales were achieved in Q1 2015 for trial quantities. In Q4 2016, and after a development programme lasting about a year aimed at producing powder of a novel alloy for diamond attachment for an overseas customer, MPP received its first significant order. This order was worth >£1m, to be delivered at steadily increasing monthly quantities. This was a great achievement and an important milestone in the development of the company, but it brought new challenges. Unfortunately, in 2020, the customer sold the product line which used the MPP powder and MPP lost its largest customer. In Q2 2017, Bertha produced her first titanium powder. During Q1 2021 the new fluidised bed, owned by MPP's sister company PSI, became operational. This will be used, initially experimentally, to coat particles used in battery anodes in electric vehicles in a way which, it is hoped, will result in longer life batteries, capable of a significantly increased number of charge/discharge cycles. If this works, the potential is large. The rig will also be used to heat treat post-production metal powders to make them more suitable for repairing military aircraft in remote locations. The other use for the rig will be to recondition waste powder from AM operations. Several of these developments are grant-funded and with several parties involved.

Recent Developments

The large atomiser was delivered as hoped and will be commissioned during Q4. PSI/MPP are also involved in a govt funded project whose ultimate aim is to produce powdered titanium at lower cost by a new continuous process. It has been decided that the Tempest fighter jet, due to come into service in the 2030s will be manufactured from powdered titanium, and a supply of this material on UK soil is needed for strategic reasons.

DCM Investment History			
Date	**Amount**	**Share Price**	**Type**
Apr 2014	£75,000	£0.75	SEIS

Company Valuation	Valuation Share Price	Fund Holding
£0.9m	£1.25	13.9%

Description of Business

Professor Kyriakos Porfyrakis developed a method of producing small quantities of endohedral fullerenes, while working in the Materials Department of Oxford University. Carbon exists in many forms, including graphite and diamond. But carbon can also exist as fullerenes, hollow spheres of carbon atoms, the simplest of which is made up of 60 carbon atoms. Professor Porfyrakis developed a method of making fullerenes which contain an atom of another element inside. At the time of the investment, the elements chosen were Gadolinium,Yttrium and Nitrogen. It was believed that these novel materials would have potential uses as a better contrast agent for MRI scans, for improving the efficiency of photovoltaics, and for use in certain quantum computing applications. There had been considerable interest from researchers around the world. Production capacity at the time of investment was about 1 gram per month. This is a classic high risk, high potential reward investment.

Progress since Investment

Production of the materials and research continued in the lab. An important milestone was achieved in Q3 2014, when DCM received its first order, £22,000 for 0.2mg of a nitrogen-containing fullerene, with a purity of 1 in 1,000, so 200 micrograms of the N@C60. This is a price of more than £100m per gram, so we think this might be the most expensive material on the planet. The material is being used in a research project whose aim is to produce an extremely accurate atomic clock on a chip so that it could be used in a mobile phone. In Q1 2018, a contract was signed with LocatorX, a US company, which will be seeking to commercialise the atomic-clock-on-a-chip application. DCM agrees to supply LocatorX N@C60 exclusively for this application and they agree to buy only from DCM. DCM received 100,000 founder shares in LocatorX.

In 2020, Professor Porfyrakis became Head of Research for the school of Engineering at the University of Greenwich. Work of the atomic clock continues and DCM manufactures and supplies the N@C60 for this work. In Q4 21, a team, including Professor Porfyrakis, was able to align N@C60 and N@C70 derivatives in a liquid crystal matrix with ordering parameter Ozz = 0.61. (Perfect alignment is 1, random is 0 and orthogonal anti-alignment -0.5) With the aligned samples, the company was able to achieve addressability of the available 4-electron spin levels in endohedral nitrogen by coherent manipulations. This could become the basis for a Qudit, as a more efficient alternative to the conventional Qubits used in quantum computing. The paper published by Professor Porfyrakis and his collaborators in one of the most prestigious chemistry journals: Angewandte Chemie, has now received 11 citations. In 2022 Professor Porfyrakis was chosen to lead the newly-formed Centre for Advanced Manufacturing and Materials (CAMM) at the University of Greenwich, leading a team of approximately 30 academics.

The customer base for endohedral nitrogen fullerenes has expanded and orders were received from 3 new customers, the University of Nottingham, University College London and the University of Leeds.

Recent Developments

Prof. Porfyrakis is the inventor in a second patent that has been granted and published recently (https://patents.google.com/patent/US12019407B2/en). LocatorX is in discussions with the University of Oxford to licence this patent too. There are also collaborations with the University of California, Santa Barbara (UCSB), and the University of Chicago. In summary there is much going on, but so far, all still at the research stage.

Sasets.com

Sasets Investment History

Date	Amount	Share Price	Type
Jul 2014	£75,000	£0.12	SEIS
Jan 2016	£75,000	£0.28	EIS

Company Valuation	Valuation Share Price	Fund Holding
£0.7m	£0.06	7.6%

Description of Business

Sasets provides software for construction companies which enables them to replace paper forms with forms on mobile devices. The forms may have information such as the weather entered automatically. The net result is a jump in efficiency and a big time saving. The forms are transmitted instantly to the department where they are needed, a huge improvement on the old methods of sending forms in triplicate by post to departments which then had to re-enter the data. Time stamped, geotagged photographs may be added to the forms, a great advantage in many situations.

Progress Since Investment

As so often, things went more slowly than hoped, and new issues emerged when the product began to be used in the field. But technical development continued, and the number of users started to increase. Users pay a monthly subscription to use the software. Sasets grew to a peak of 493 users. Then two bad things happened. First, Keir acquired A1, which had about 150 Sasets users. Despite the protests of the users who liked the Sasets platform a lot, the contract with Sasets was cancelled. Then Covid struck, many construction sites were closed, and some construction companies went out of business.

Date	Paying users
Dec 2015	102
Dec 2016	200
Dec 2017	310
Dec 2018	422
Dec 2019	493
Dec 2020	437
Dec 2021	409
Dec 2022	453
Dec 2023	518
Sep 2024	485

Recent Developments

Market conditions remain difficult, with many construction companies cutting back the number of users as their own work has contracted, many of them associated with the cancellation of the HS2 extension. On the positive side some of the existing users have requested special features which have been implemented as paid projects. The number of users has grown very slightly since the last quarter, but the pipeline of potential new customers has shrunk. The Sasets platform continues to work very well and gets steadily better as improvements/new features are added. All the existing users remain very happy with the service.

SimeDX.com

Company Valuation	Valuation Share Price	Fund Holding
£16.69m	£8.36	4.2%

SIME Investment History

Date	Amount	Share Price	Type
Sep 2014	£75,000	£2.11	SEIS
Apr 2016	£100,000	£2.35	EIS
Nov 2018	£25,040	£5.00	EIS

Description of Business

Sime Diagnostics makes use of mathematical techniques to extract information from spectrometric readings of medical samples. The first application is in determining whether premature babies (and possibly babies born by Caesarean) need an application of lung surfactant to protect their lungs. Respiratory Distress Syndrome (RDS), a breathing disorder caused by surfactant deficiency, affects 1 in 4 premature babies.

Babies with RDS require mechanical ventilation, oxygen therapy and longer hospitalisation - all at significant cost. RDS can be prevented with surfactant treatment at birth. Prophylactic surfactant treatment harms healthy babies so neonatologists have to wait for RDS symptoms to develop before starting treatment. Sime's new test should give results within 10 minutes of birth. Sime's technology was used successfully for the first time on a premature baby in China in Q4 2018.

Sime's work has now been published and shows the Lung Maturity test has a very high sensitivity of 91% (accurately identifies 91% of babies that have a deficiency) and a specificity of 79% (accurately identifies 79% of those who don't).

Progress Since Investment

Using the data generated from Sime's Lung Maturity Test to predict RDS at birth, Sime's propriety AI was able to successfully predict another lung disease at birth, BPD (Bronchopulmonary Dysplasia, more commonly known as chronic lung disease), a life-threatening disease that can have serious complications and large economic costs.

In parallel Sime's unique data and positioning in the respiratory diagnostic space has enabled Sime to rapidly develop a respiratory test for adults in intensive care with Acute Respiratory Distress Syndrome(ARDS), including Covid-19 patients. Insufficient surfactant in the lungs is a major contributor to ARDS, and treatment requires high-cost invasive ventilation. Early scientific validation of the test achieved positive results and IP has been filed.

In Q4 2022, Sime achieved its CE mark that enabled its device to be sold for clinical use.

Recent Developments

Ongoing clinical pilot studies are generating data needed for FDA discussions and these are progressing well in terms of number of patients and quality of the data.

Interest in SIME's technology is strong from several large hospital groups. This is not only for RDS, but also for BPD or bronchopulmonary dysplasia which is increasingly being seen as an important disease.

Preparation for market access is going full steam on the manufacturing, pricing as well as on the regulatory fronts.

Expend.com

Company Valuation	Valuation Share Price	Fund Holding
£31.03m	£0.22	11.4%

Expend Investment History

Date	Amount	Share Price	Type
Dec 2014	£75,000	£0.005	SEIS
Feb 2017	£17,338	£0.06	EIS
Dec 2017	£3,000	£0.16	EIS
Aug 2018	£13,000	£0.10	EIS
Mar 2019	£30,719	£0.10	EIS
Mar 2020	£29,300	£0.10	EIS

Description of Business

Expend is a payment and accounting software platform specialising in expense management for small and medium-sized businesses. Its mission is encapsulated in the tagline "Easy expenses. Simple spending. Better business."

Progress Since Investment

Expend has grown significantly since Oxford Technology's initial investment. It generates recurring revenue from subscriptions and payment product usage and through partnerships with financial institutions. Customers include Amazon, Cote Restaurants, AgeUK, and Mind.

A standout feature is real-time Visa and Mastercard transaction support Card Connect® feature, allowing users to integrate their own bank cards. This innovation positions Expend as a market leader.

In 2022, Expend secured widely publicised partnerships with Virgin Money, and then with Mastercard in 2023. Conversations with other such institutions are ongoing.

Recent Developments

Since the last update, Expend has made steady headway and the ARR (Annual Run Rate) has now surpassed £1.2m.

Expend plans to introduce virtual cards in Q4. This new feature is anticipated to further streamline business expense management and bolster Expend's product offering.

Expend has been actively participating in industry events and government-backed programs. As part of the 2024 Grow London Global cohort, Expend has been selected to take part in an exciting delegation trip to Toronto and New York City in October. The trip presents a prime opportunity for the company to build relationships with new financial institutions and explore opportunities for US VC funding, positioning Expend for expansion into North America.

Additionally, Expend continues to benefit from positive attention within the industry. The company received four unsolicited acquisition approaches during Q1 and Q2, and another in Q3, and while these offers were not pursued, the interest in Expend underscores its growing market reputation.

Ducentis
BioTherapeutics

DucentisBio.com

Exit Value	Exit Date	Multiple
Up to $400m	12/09/22	Up to 127x*

*Calculated based on the data received at the time of the deal, i.e. Sep 2022

Ducentis Investment History

Date	Amount	Share Price	Type
Jul 2015	£50,000	£0.14	SEIS
Dec 2015	£30,000	£0.18	SEIS
Mar 2017	£160,275	£0.36	EIS
Mar 2018	£45,314	£0.40	EIS
Mar 2019	£53,820	£0.70	EIS

Description of Business

The purpose of the initial investment was to conduct an experiment to increase the affinity of the protein CD200. If this worked the hope was that this might become a treatment for rheumatoid Arthritis and various other autoimmune diseases.

Progress Since Investment

The experiment worked very well and the affinity was increased more than 100 fold. Ducentis applied for a patent on this family of molecules. This has now been been granted. In 2019 Ducentis raised a round of >£1.5m to continue its development programme. The cornerstone investor was LifeArc. Eli Lilly, a major pharma company, also announced a programme in CD200, using antibodies. They completed a successful clinical trial in Atopic Dermatitis. This encouraged Arcutis, https://www.arcutis.com a Nasdaq listed dermatology company, who then acquired Ducentis in Sept 2022.

The deal was quite complicated but definitely very good for OT(S)EIS shareholders and for those who invested directly as a result of a presentation. It consisted of an upfront payment of $15m in cash and $15m in Arcutis shares with up to $400m of milestone payments and mid single digit royalties for sales surpassing a high (but not impossible) annual threshold.

The deal is summarised below: Return to someone for whom we invested a total of £5k in Ducentis following a £25k investment in OT(S)EIS.

Date	Invested	Tax Return	Net Cost of Shares	Capital Return
2015 14p/share	£1,250	£625	£625	
2016 18p/share	£1,250	£625	£625	
2017 36p/share	£2,500	£750	£1,750	
Initial payout 2022				£21,669
Escrow cash payment 2024				£5,590
Cash totals so far	£5,000	£2,000	£3,000	£27,259
Future payments:				
Arcutis shares ($9.30/share on 30.09.2024)				£10,778
Potential Future Milestones				*£707,983

*In steps over the next 10 years - and NOT guaranteed

Small update: The escrow payment was received and distributed in Q1. Arcutis published a poster on ARQ-234. It can be seen here http://bit.ly/3KVzRiD and consists mostly of the work done at Ducentis. The Arcutis share price is volatile. At the time of the deal it was £22. It fell to a low of $2 but has since risen.

2024 Arcutis share price at the end of Q1: $8.55, Q2: $8.88, Q3: $9.30.

We are waiting for the price to rise a little before selling the shares. Arcutis' other products are doing well and expanding their indications. In the latest earning report they indicated the filing of the Investigational New Drug application for 234 (Ducentis CD 200 drug) in 2025, so that should lead to a phase 1 trial and the next milestone payment.

BIOARCHITECH

Bioarchitech.com

Company Valuation	Valuation Share Price	Fund Holding
£7.91m	£6.00	22.4%

Bioarchitech Investment History

Date	Amount	Share Price	Type
Aug 2015	£79,560	£0.60	SEIS
Mar 2016	£40,000	£1.00	SEIS
Jul 2017	£16,200	£1.00	EIS
Oct 2017	£29,000	£1.20	EIS
Mar 2019	£89,674	£1.80	EIS
Dec 2019	£4,637	£2.80	EIS
Mar 2020	£36,758	£2.80	EIS
Mar 2021	£69,804	£4.00	EIS

Description of Business

Bioarchitech (BA) aims to improve cancer treatment by creating a drug that attracts, activates, and redirects a patient's immune system to destroy their tumours. Known as immunotherapy this technique has shown the potential to cure patients. The drugs which BA is developing will be able to be administered to successfully treat many more types of cancer than is currently possible.

The Managing Director is Prof Geoff Hale who has an international reputation in therapeutic immunology. As a scientist, he has published over 300 articles on the mechanisms of action of antibodies. He was formerly head of the Therapeutic Antibody Centre at Oxford University, and was the founder and CEO of BioAnaLab Ltd, a successful spin-out from Oxford which grew from nothing to c.50 people before being sold very profitably to Merck Millipore. Kevin Maskell is the principal researcher and developed the idea together with LiLi Wang and Hannah Chen. From 2002 -2009, Kevin was a research assistant in the department of clinical pharmacology at Oxford University, then principal scientific director of DDS, a subsidiary of Merck Millipore. Before starting Bioarchitech, he was a senior scientist at Oxford Cancer Biomarkers.

Progress since Investment

The core of BA's research has been to identify immunotherapy molecules, typically antibodies or CAR-T cell receptors, which have shown efficacy in clinical studies but are limited by toxicity to normal tissues when administered systemically. BA re-engineer these molecules and package their DNA code inside a virus. This gets around the problem of systemic toxicity as the immunotherapy molecule is produced only where the virus can replicate such as in tumours. This class of therapeutic is called an oncolytic virus because of its tumour tropic properties. Using this approach BA has validated several targets in vitro using human tumour cells. However, moving up to try them in the whole body of an animal is notoriously challenging. BA is now testing its molecules one by one in mouse models of cancer. Efficacy in these challenging models would give confidence that the approach will work in cancer patients. Efficacy has been shown in combination with monoclonal antibody therapy using an aggressive animal model of cancer so BA is busy putting together an investment case to take this forward to clinical studies.

Additionally Bioarchitech has developed a new type of RNA molecule called self-amplifying RNA, somewhat similar to the COVID vaccines but which can copy itself once inside cells. This is to be injected directly into tumours to shrink them and activate immune cells within the tumour as a treatment for early-stage cancers. This type of treatment would be cheap, fast and have mild side effects. This project is also undergoing assessment in mouse models of cancer, this work is slightly behind the oncolytic virus project because the animal models are more challenging but with readouts expected before the end of the year.

Bioarchitech currently has four full-time employees, all extremely talented lab-based scientists.

Financial Update

Bioarchitech has sufficient funds to cover the committed costs for the next 12 months and is currently preparing the end of year accounts, including R&D tax credits. Further and more substantial funding will be sought to scale up the manufacturing of its lead candidate and prepare for clinical trials. Bioarchitech is currently preparing the investment case utilising the data from recent animal studies.

ORBIT DISCOVERY

OrbitDiscovery.com

Orbit Investment History			
Date	**Amount**	**Share Price**	**Type**
Nov 2015	£100,000	£0.73	SEIS
Jul 2017	£38,245	£0.81	EIS

Company Valuation	Valuation Share Price	Fund Holding
£18.99m	£0.81	0.8%

Description of Business

Peptides are an increasingly popular class of pharmaceuticals, sitting in between conventional small molecules and biologics such as antibodies and proteins. They can be made chemically like small molecules, but confer significant enhancements in specificity akin to other biologics, such as antibodies.

The founders are Prof Graham Ogg and Prof Terence Rabbitts FRS from Oxford University's Weatherall Institute of Molecular Medicine. The technology enables the rapid selection of peptides that bind onto drug targets using a process that minimises unintended or non-specific binding. The underlying technology consists of creating millions of micron-sized beads each with a unique peptide attached and mixing them with a target molecule that may be associated with a disease state. The beads that bind can then be identified and larger quantities produced for further experimentation as therapeutic candidates. If necessary, iterative steps can be made where the technology is used to further enhance properties of the therapeutic candidates. A particular strong capability in Orbit is to be able to screen against cells for function. This enables the technology to be used for screening agonist peptides, or peptides that switch on specific functions within a cell, at very high throughput. These agonists are more difficult to find than peptides that block activity (antagonists), but have high utility in preventing disease.

Progress Since Investment

Orbit completed a funding round of £5.25m in May 2018. Now at the Oxford Science Park, the team expanded to 29 employees. Due to different interests among the major shareholders Orbit split into two companies. One company will focus on T Cells, and is called T-Cypher. T-Cypher currently shows Shareholders of Orbit will have the beneficial ownership of 1/9th of a share in T-Cypher for every share they currently hold in Orbit. T-Cypher currently has 12,401,540 fully diluted shares. In 2021 Orbit raised £5.8m and Neil Butt joined Orbit as CEO.

Recent Developments

Much like in the previous quarter there is progress in pipeline and projects, so much so that sales are up more than 100% since last year, but not much to communicate externally. A nice quote from a customer: " Orbit is the best thing for peptide discovery since sliced bread".

Summary

Again, steady year on year growth, Orbit is working towards a tipping point which will allow it to grow more quickly.

curileum discovery

Curileum.com

Company Valuation	Valuation Share Price	Fund Holding
£17.78m	£4.00	18.3%

Curileum Investment History

Date	Amount	Share Price	Type
Mar 2016	£75,000	£0.63	SEIS
May 2016	£25,950	£0.63	SEIS
Jul 2016	£20,000	£0.63	SEIS
Jul 2016	£20,000	£0.63	EIS
Oct 2016	£19,997	£0.31	EIS
Nov 2016	£20,002	£0.31	EIS
May 2017	£30,000	£0.31	EIS
Mar 2019	£106,349	£0.31	EIS
Mar 2020	£13,791	£1.00	EIS
Dec 2022	£29,656	£4.00	EIS

Description of Business

Dr Jeff Moore established Curileum Discovery in labs adjacent to St Mark's Hospital in London, one of the few hospitals in the world that specialises entirely in treating serious gastrointestinal diseases.

Curileum aims to discover drugs to intervene early with treatments to reduce disease progression in colorectal cancer and inflammatory bowel disease. The company generates "mini-gut" organoids from patient and healthy gut mucosa to discover and characterise drug candidates before testing in preclinical in vivo models. These gut organoids are microscopic three-dimensional cellular structures that mimic the structural and functional properties of the mucosal layer of the gut. From these studies, two novel drug candidates that the company discovered are in preclinical development for licensing to pharmaceutical companies.

Progress Since Investment

Curileum has continued to make excellent progress with its preclinical candidates since the investment in Q4 2021 and Q4 2022:

ULI-015 (ULI means powerful in Chinese) is a molecule that Curileum has found to make bowel polyps regress (disappear) in a pig model of FAP (familial adenomatous polyposis). As the pig has the identical mutation to human FAP patients it is believed that this will translate well to humans.

Curileum has discovered an adult stem cell in the lower region of the gastrointestinal tract that can produce a wide range of cell types in the culture dish. The company has tested the regenerative capacity of these stem cells in an in vivo preclinical fistula model. In two studies, these stem cells filled the fistula tract with healthy cells, effectively healing a fistula for the first time.

Recent Developments

Curileum has made important progress since the investment in Q1 2024:

The de novo synthesis of ULI-015, the novel small molecule the company isolated from traditional Chinese medicine, was completed on schedule and budget in H1 2024. The synthesised molecule, called ULI262, demonstrates the same activity as the native ULI-015 in cultures.

ULI262 is being scaled up to use as a reagent to identify how it interacts with precancerous cells to redirect cell production to healthy mucosa. This is the final step, along with drug synthesis and composition of matter patent application, that is required to attract licensing or investment from a global pharmaceutical company or venture capital investors.

In Q1 2024, the company filed 3 international patent applications for broad therapeutic uses of its adult stem cells isolated in the lower gastrointestinal tract, called ATZ stem cells. The applications are enabled by in vivo evidence in an animal model that ATZ stem cells engraft and produce mature pancreatic and liver cells without eliciting an immune response.

ActiveNeedle
Precision Targeting

ActiveNeedle.com

Company Valuation	Valuation Share Price	Fund Holding
£12.79m	£0.93	11.8%

Active Needle Investment History

Date	Amount	Share Price	Type
Apr 2016	£50,000	£0.12	SEIS
Aug 2016	£65,000	£0.19	EIS
Mar 2017	£19,000	£0.19	EIS
Mar 2017	£30,000	£0.19	EIS
Jan 2018	£28,000	£0.26	EIS
Mar 2019	£101,781	£0.35	EIS
Mar 2020	£32,122	£0.35	EIS
Mar 2021	£55,653	£0.42	EIS
Apr 2023	£7,728	£0.93	EIS

Description of Business

Doctors make use of long needles for taking biopsies or making deep injections, but the needles are difficult to see on ultrasound, and long thin needles often deflect and do not end up exactly where intended. Active Needle Technology provides minute longitudinal ultrasound movement to the needle. This results in the needle being very bright on the ultrasound (from all directions) and much less deflection. The ultrasound drive also has an additional benefit in that the force required to insert the needle is much reduced. In several studies, this has been shown to result in less pain upon insertion and less risk of overshoot.

Possible applications include:

- Biopsies - enabling surgeons to take biopsies (small samples of tissue) from tumours deep inside the body with much greater ease and with much greater accuracy. This application has regulatory approval (CE mark).
- Drug delivery - injecting a chemotherapy drug directly into a solid tumour much more effectively. The ultrasound signal used with a needle with holes in the side enables the drug to be dispersed throughout the tumour. One Professor of oncology said he has been "looking for this needle for 25 years". Active Needle is gaining wide interest on this application and is collaborating with a UK pharma company.
- Tattooing - Active Needle has developed a prototype tattooing system (branded as Tranquill) using the same ultrasound technology. A trial in volunteers has shown greatly reduced pain and skin trauma.

Recent Developments

Good progress from Active Needle, with the grant of patents in key areas and geography - most notably for tattoo in Europe.

Work on the licensed tattoo technology is progressing well. The project to develop devices by Active Needle's licensee, with the addition of their technology, is on track.

There continues to be interest from multiple sources in the drug delivery in a range of applications, in both human and non human healthcare. However these discussions are subject to NDAs, the company is unable to disclose.

Unfortunately, ANT was unsuccessful in obtaining a clinical trial grant for biopsy. With the feedback obtained from the reviewers, a reapplication will be made. The trial is planned to occur in Addenbrooke's Hospital, Cambridge.

Oxford Nanoimaging

ONI.bio

ONI Investment History			
Date	**Amount**	**Share Price**	**Type**
Apr 2016	£100,000	£0.02*	SEIS

*Adjusted for 1000:1 share split. EIS certificates remain valid.

Company Valuation	Valuation Share Price	Fund Holding
£129.65m	£0.21	0.8%

Description of Business

Oxford Nanoimaging is a spin out from the biological physics lab of Prof Achillefs Kapanidis at Oxford University. It specialises in super resolution microscopy, which refers to being able to resolve dimensions smaller than the wavelength of light. Prof Kapanidis, Robert Crawford and Bo Jing invented an optical assembly which allows a microscope to be shrunk from the size of a small car to the footprint of a tablet (with a PC sized box under the bench). This not only gives a big advantage in crowded and expensive laboratories, it also does away with many of the adjustments and control requirements of other super resolution microscopes, making it suitable for beginners and experts. With the microscope, it has been possible to image the processes of DNA repair in a cell. The expertise in the company is not only in the device, but also in the molecular biology techniques and the image processing. A bit like a smart phone, we expect there will be advances both in the hardware and in the applications that can run on it. The company is aiming for rapid expansion, with a distribution network being developed around the world. The company also has the backing of Oxford University Innovation and Oxford Science Innovation.

Progress Since Investment

Good initial progress was made with sales of nanoimagers exceeding expectations. In March 2017, the company raised £3m at £62.50 per share compared to the initial price of £20 per share to accelerate the rate of growth. In Q2 2018, the company raised $25m at £173.40 per share. The money came from existing shareholders, and from new shareholders from New York, China, Singapore and London.

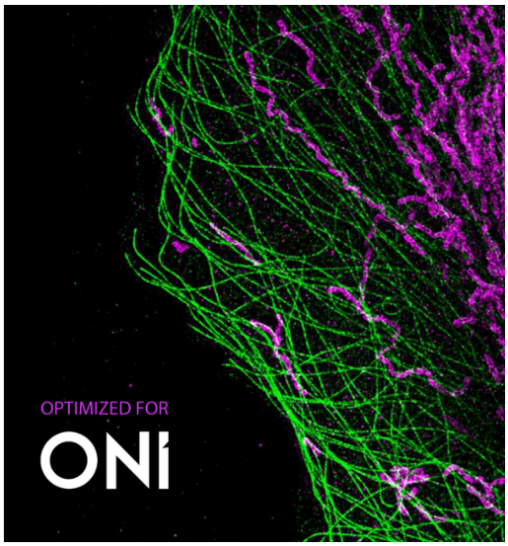
ONI moved its headquarters to San Diego. In Q1 22, ONI closed a fundraising of $75m at £0.21 per share, (a price after a 1,000:1 shares split, so equivalent to £210).

In Q1 2023 Paul Scagnetti joined as CEO. He was previously Vice President of Corporate and Business Development at Illumina and worked at FEI and Intel. Bo Jing, the founder and initial CEO ceased to be an employee in March 23 and ceased to be a director in May 2023.

You can see some of the images captured by ONI's microscopes here https://oni.bio/applications/gallery/.

Recent Developments

ONI recently launched the "stage top incubator" which controls temperature and CO2 for incubating cells on top of their imaging devices. This means scientists are able to look at super resolution images of living cells over longer periods of time. ONI also announced a collaboration to provide an easy to use solution called DNA-PAINT. Researchers will be able to add the DNA-PAINT reagent to existing antibodies and with the NanoImager immediately see where their antibodies are binding on cells.



entia

Entia.co

Company Valuation	Valuation Share Price	Fund Holding
£24.23m	£26.38	1.3%

Entia Investment History

Date	Amount	Share Price	Type
May 2016	£75,000	£14.78	SEIS
Oct 2016	£9,504	£14.78	EIS
Nov 2017	£48,554	£21.96	EIS
Feb 2019	£89,934	£31.79	EIS
Mar 2021	£26,017	£35.64	EIS

Description of Business

Entia was founded by Dr Toby Basey-Fisher in 2015. Entia is empowering cancer patients with greater freedom whilst also equipping healthcare professionals with the insights to make more informed and personalised clinical decisions regarding treatment toxicity. At the heart of Entia's approach is a novel and easy-to-use blood analyser that allows patients to perform a suite of blood tests in their own home. It can monitor haematological toxicity of cancer treatment via a patient's full blood count. Results are seamlessly shared with healthcare professionals via Entia's cloud network and integration tools. This approach creates new insights into how individuals are responding to care and subsequently may enable more personalised decisions to mitigate life-threatening complications.

Entia has also launched a home monitoring solution for anaemia of chronic kidney disease under its Luma brand (www.lumahealth.uk). The product and service, which is similar to the upcoming Liberty solution, has been very well received with 100% patient preference over previous care pathways.

Progress Since Investment

Home monitoring has become the main focus for Entia, with multiple large pharma companies partnering with Entia to deliver the company's virtual solutions as part of blockbuster therapies. Entia's main focus is currently to bring its virtual oncology solution, Liberty, to market. The name reflects the freedom given to patients to be at home or at work rather than travelling to hospital for routine blood tests required to monitor the toxic side effects of cancer treatment.

The company now employs 28 people. To date, the company has raised over £35m through equity financing and £5m from government grants. This has allowed the company to develop a multi-award winning team, establish world-leading clinical and pharmaceutical partnerships and positively change patients lives with its innovative products.The company's management systems have achieved accreditation against ISO 13485 and ISO 27001. The company also CE marked and launched Luma in 2020 for managing anaemia of chronic kidney disease, but discontinued the programme to focus on Oncology.

Recent Developments

Pfizer has now started to deploy Entia's Liberty to 12 centres. The Clatterbridge Cancer centre has joined the trial. The Clatterbridge Cancer centre was opened in Liverpool in 2020 and is now the third largest cancer centre in the UK.

Entia has started preparing for FDA trials which require data to be captured to different standards.

Summary

All looking good for Entia.

Covatic.com

Company Valuation	Valuation Share Price	Fund Holding
£5.15m	£4.64	2.1%

Covatic Investment History

Date	Amount	Share Price	Type
Feb 2017	£39,776	£8.00	SEIS
Feb 2017	£60,224	£8.00	EIS
Feb 2018	£30,000	£16.00	EIS
Mar 2021	£67,997	£9.41	EIS
Apr 2022	£37,926	£18.00	EIS

Description of Business

For the past 20 years, Google and Apple and other tech companies have gathered and sold data about their users' browsing habits, via cookies, and sold this data to advertisers. This has now become unacceptable and Apple have given people the ability to opt out. 85 % have done so, and advertising revenues have slumped.

Covatic has developed a set of tools, now branded 'A-Type' which sits on a user's phone (within the client's apps) and gathers data about a user and can then categorise the user into one of 1,000 types. So a particular user might be female, aged 30-35, with two young children, a car and a weekly shopping bill of £50-£75. The app might be able to offer 105,000 of this category to an advertiser who could then advertise nappies. But the user's data never leaves her phone and is unknown to the advertiser.

'A type' is now being deployed by an increasing number of the world's largest broadcasting organisations.

In Q1 2023, Covatic completed a fundraising of $3m at a disappointingly low share price of £9. But it was hoped that the fact that Comcast, one of the largest broadcasting companies and an active user of Covatic, was investing $1.5m of the total would be helpful in bringing other customers on board.

Nick Pinks, co-founder and CEO of Covatic sent an update in Q4 23, saying that revenue was approximately £980k in the year to Dec 23, up from £150k the previous year.

Recent Developments

Having heard almost nothing from the company for many months, there was an out-of-the-blue communication from the company at the end of Q3 saying that they had run out of money, that Comcast were not proceeding in the way originally envisaged and that an emergency fundraising of about £650,000 had been secured from the VC investors at a further greatly reduced share price of £4.64. The business angel investors would be offered the opportunity to invest at this price and information would be sent. The monthly run rate had increased from £38k in January to £85k in September, which was a rare piece of hard news. At the time of writing this information is awaited.

Process Vision

ProcessVision.com

Company Valuation	Valuation Share Price	Fund Holding
£11.04m	£3.00	1.9%

Process Vision Investment History

Date	Amount	Share Price	Type
Mar 2017	£99,999	£3.00	SEIS
Jun 2018	£3,000	£3.00	EIS
Mar 2021	£68,494	£2.00	EIS
Dec 2023	£6,858	£3.00	EIS

Description of Business

Process Vision Ltd has developed an inspection system for gas pipelines. Paul Stockwell, the founder, worked for many years in the field of sensors for the gas and oil industry and became acutely aware of the requirement for detecting and measuring liquids in gas pipelines. Gas pipelines should transport clean, dry gas, but PV's initial product, LineVu, reveals that there are often liquids present in the gas.

Progress Since Investment

It took a long time to get started - like other industries, the gas industry is conservative - but over the last couple of years, things have started to accelerate. There are currently 7 Line Vu systems in use.

Recent Developments

Everything is beginning to come together for Process Vision. The position at the end of Q3 is as follows:

LineVu systems

	Installed	Survey LVs installed ($15k per month)	Survey LV orders ($15k per month)	LV Survey orders expected
Q2	1	3	2	6
Q3	7	2	4	10

The new sales strategy is to sell a LineVu system to do a survey. The cost is $15k per month. Partly because this does not involve an up-front capital cost, this has proved popular, especially in the US. It lets engineers see what is happening inside their pipes for the first time. Experience shows that traditional methods are unreliable, and the engineers are often surprised by the findings. Their first gas network in the USA (Enbridge) is starting to use 3 LineVu systems to move around supply points to their network. They would like to increase this to 5-10 systems. If they find liquids from the supplier on 2 occasions, they will request that the supplier fit a permanent LineVu system. These systems will be on a recurring revenue basis. Other USA-based Midstream companies are expected to follow on with similar requirements, and LNG plants are also coming onstream with one that would like 3-12 systems.

The Middle East markets are also beginning to come on stream, with the first 2 systems shipped to ADNOC in UAE and the Survey with Saudi Aramco coming to a successful conclusion.

PV has now started manufacturing a batch of 25 LV systems and is also trying to accelerate certification of the new LineVu300 for the USA/Canadian Market.

GRIPABLE

Gripable.co

Company Valuation	Valuation Share Price	Fund Holding
£18.92m	£4.00	1.4%

Gripable Investment History

Date	Amount	Share Price	Type
Sep 2017	£49,999	£2.27*	SEIS
Feb 2019	£106,934	£4.21*	EIS
Dec 2020	£33,219	£5.47	EIS
Mar 2022	£69,682	£5.47	EIS

*Adjusted for 100:1 share split. EIS certificates remain valid.

Description of Business

Worldwide some 430m people suffer with hand and arm disabilities. At the time of the investment, the treatment for people who had lost the use of a hand following a stroke was to squeeze a ball, repeatedly maybe for up to 8 hours. This is extremely boring. Dr Paul Rinne, a doctor who had been doing research at Imperial College on the rehabilitation of stroke patients, and Mike Mace, a robotics engineer at Imperial, developed an intelligent variable strength grip, which incorporates accelerometers and wi-fi. This means that a patient is able to play computer games which makes life much more interesting and with the result that patients enjoy their therapy and recover much more quickly. The founders have developed a range of games whose difficulty can be increased to match the returning dexterity of the patient. The brain is extremely plastic, and although a stroke may have destroyed the areas previously responsible for hand operation, given the right feedback the brain is able to relearn how to control hands, using entirely new areas.

Progress Since Investment

ISO 9001 and 13485 have been awarded. The team has expanded and is working on the software which is not just standalone games, but also a framework which tracks the patient's progress. One of the key features of Gripable is the possibility to interact at a distance with other patients or relatives. It can also distinguish between situations where activities are limited by physical capability and those where mental abilities are holding back progress. The trainers who make use of Gripable particularly like the ease with which Gripable can be set up and used. A study at Imperial showed a vast increase in exercise among patients given the opportunity to use the device. An example of the benefits of Gripable can be seen in a case study of a stroke patient. His grip strength rose from 0.8kg to 12kg. This was achieved by the patient spending 160hrs over 30 weeks with the device. With a normal therapist that might have cost £15,000 and in normal unassisted care, a patient might only average 200 reps rather than the 10,000 reps the patient achieved. In 2022 Gripable raised £8.3m investment in order to push forward the US and closed a distribution deal with Medline who is the US's largest privately held manufacturer and distributor of medical supplies.

Recent Developments

Following the good results of working with Kinetec in Europe and the UK, Gripable has joined forces with Kinetec in the US on the rehabilitation side of the business. This has allowed Gripable to reduce in-house costs by releasing some sales staff in the US and extend the runway. At the same time, Grip strength measurement has continued to drive business for Gripable. Under the Able Care name, Gripable is providing remote, accurate and appropriate grip strength measurement (and other measurement functions). 29,190 grip strength measurements had already been accumulated by mid September and the number is rising very quickly. Loss of grip strength is strongly associated with many conditions both chronic and acute and research in this area is growing rapidly. Gait speed and balance can also be measured by Gripable and provide a complete set of the most requested measurements.

Summary

While rehabilitation continues to be a useful Gripable has added grip strength measurement as a separate product and it seems to be going well. Only time will tell quite how well but the start has been very encouraging, with Mt. Sinai, Mass General and their first CRO/Pharma customer Lindus Health signing with the Company in Sept.

Darkbeam

Darkbeam.com

Exit Value	Exit Share Price	Multiple
Up to $11m	£0.90*	Up to 3.5x**

Darkbeam Investment History

Date	Amount	Share Price	Type
Oct 2017	£50,000	£1.00	SEIS
Feb 2018	£25,000	£1.00	SEIS
Feb 2018	£10,000	£1.00	SEIS
Mar 2018	£18,200	£1.00	EIS
Sep 2018	£50,000	£0.50	EIS

*We judge that 90p is the fair value of the shares, including probability-adjusted milestone payments. With tax reliefs accounted for, the value is approx. £1.20

**Depending on the investment round, assuming full options conversion and that all milestones are met.
The multiple is calculated in respect to the net cost of investment, i.e. includes tax reliefs.

Description of Business

Lots of bad things happen on the web, which has become so large (>1bn servers) that it has become difficult for law enforcement agencies to track. Darkbeam has developed a suite of cyber security technologies that deliver clients real time supply chain situational awareness. This involves the integration of supplier vulnerability detection and real time cyber threat intelligence through darkweb monitoring abilities and to take action to prevent their data and IP from being stolen.

Progress Since Investment

Having had a challenging first year, which resulted in a change of managing director, Darkbeam is now positioned as a supply chain cyber risk management system. There are three main planks in one simple-to-use offering:

- Cyber Vulnerability Intelligence: this is the real time mapping, classification and prioritisation of a company's digital footprint and vulnerabilities on the open web – including the dark web.
- Cyber Threat Intelligence: the real-time monitoring of hackers and their behaviours.
- Cyber Vulnerability + Threat Intelligence = Darkbeam's Cyber Score

These variables roll up into the Darkbeam score (1 low – 999 high risk) which provides an analyst a predictive indicator as to the vulnerability of a company. This is important in insurance and supply chain circles. The Darkbeam score for any company can be obtained in seconds.

During 2023 Darkbeam saw a material increase in hostile activity in supply chains. Darkbeam enabled clients to respond to a growing number of threats at a speed and scale they would not have been able to do using traditional approaches. The most recent being the MOVEit vulnerability which has seen some of the largest companies in the UK announce ransoms. Darkbeam developed a scan for this vulnerability in a matter of a day which was deployed across all its clients, providing them immediate visibility of those suppliers that may be vulnerable. They were able to engage them and ensure that gaps were instantly closed.

In 2023, DarkBeam was sold sold to US company Apex Analytics, a leading supplier of supply chain risk management, data software and services. Apex Analytics is majority owned by investment company KKR. In Q4 23, shareholders received an initial payment of approx. 63p per share. There are possible future milestone payments which are larger. Through the acquisition DarkBeam's technology is available to customers of Apex.

Recent Developments

The team remains focused on supporting Apex to deploy the Darkbeam capability across its client base. Activity levels are brisk and good contract wins have been announced in the last quarter. It is too early to forecast what the year holds for but the team is focused on doing whatever it can to meet the milestones for further earn-out payments.

ATELERIX

Atelerix.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£2.23m	£0.2225	3.1%

Atelerix Investment History

Date	Amount	Share Price	Type
Jan 2018	£50,000	£0.82	SEIS
Apr 2019	£133,187	£1.70	EIS
Mar 2020	£196,851	£1.95	EIS
Jun 2021	£44,767	£0.80	EIS
Nov 2022	£11,099	£0.90	EIS

Atelerix addresses the cryopreservation headache with a gel that doesn't need to be cold. Setting cells, tissues, and viruses free from traditional storage and shipping methods, Atelerix works towards the future of bioscience where storage is easy, and cells are always fresh.

Business Growth and Sales Success

Atelerix has demonstrated significant progress in the current fiscal year. The sales pipeline for the next 12 months is robust, valued at £3.0m at the end of Q2. This is partly driven by a free sample campaign for qualified prospects, we are excited to see potential larger orders across our product ranges materialise in H2 from this new customer campaign.

Strategic Partnerships and Market Expansion

Atelerix has established validation projects with leading Contract Research Organizations (CROs) such as Crown Biosciences, LabCorp, and Charles River, setting the stage for potential lucrative deals and enhanced market penetration. These partnerships underscore the strategic Each one of these large CRO's could be worth £100k+ per month and likely to come to full fruition in 2025.

Innovations and Technological Integration

The Atelerix technology has been successfully integrated into the clinical trial supply chain, evidenced by positive outcomes in a first-in-man clinical trial. In Q2 Atelerix won a £200k IUK Biomedical Catalyst grant, enabling further product development.

Recent Fundraising

In Q3 Atelerix successfully raised £750,000 at a £2.25 million pre-money valuation. This funding round was led by Sunil Shah of O2H and ACF, with support from Cambridge Angels, Cambridge Capital Group, and existing shareholders.

Strategic Partnerships and Market Expansion

Ongoing projects with leading Contract Research Organizations (CROs) such as Crown Biosciences, LabCorp, and Charles River are progressing positively. The company expects to receive validation data for these projects in Q4 2024 and Q1 2025. Atelerix has secured co-marketing rights with this data and will receive support to incorporate its shipping method as a preferred option in these companies' Standard Operating Procedures (SOPs). Notably, LabCorp alone has a requirement for millions of units per annum. CROs, biopharmaceutical companies, and key opinion leaders in academia remain the company's core focus. The team has developed a sales pipeline with a total 12-month value of £3.35 million. It is important to note that these figures are conservative, reflecting potential delays in clients adopting the full product range.

Sales & Marketing

With the recent infusion of capital, Atelerix is initiating an exhibition roadshow, beginning with the ELRIG Drug Discovery 2024 conference in London this October. In November, the team will be in Houston, Texas, at a major immunotherapy conference, followed by an exhibition in Denmark to influence market demand among governments and UN agencies. In 2025, the team plans to exhibit at 6-10 conferences and attend an equal number. The company's focus remains on getting its products into as many hands as possible, raising significant awareness, and ultimately becoming the standard shipping method for the industry. Atelerix is in the final stages of hiring a Sales Manager, anticipated to start in Q4 2024. This individual will be responsible for spearheading revenue generation, working closely with Steve, co-founder and Chief Scientific Officer (CSO), and Alastair, Chief Executive Officer (CEO), to exceed expectations.

Refeyn.com

Company Valuation	Valuation Share Price	Fund Holding
£207.59m	£5.00	1.4%

Refeyn Investment History

Date	Amount	Share Price	Type
Jun 2018	£66,240	£0.40*	SEIS
Jun 2018	£33,760	£0.40*	EIS
Jan 2019	£121,851	£0.64*	EIS
Jul 2019	£67,468	£0.64*	EIS

*Adjusted for 100:1 share split. EIS certificates remain valid.

Description of Business

Refeyn (named for the physicist Richard Feynman) was previously called Arago Biosciences. Refeyn is a spin-out from the University of Oxford that has developed an optical technology able to determine the mass of individual molecules in the range from 40 kDa to >5 MDa (Daltons is another name for Atomic Mass Units). This range encompasses most proteins and assemblies of interest to medicine. The measurement can take place in solutions with a wide range of biologically relevant concentrations and is rapid, with only a few minutes being enough to collect high quality data. A very helpful animation has been added to the Refeyn website (www.refeyn.com) showing how the device works.

Refeyn now highlights 4 key applications of its technology: determining sample composition and purity; the assembly of protein complexes; the measurement of complex biomolecules; and understanding protein-protein interactions. Refeyn is developing and manufacturing a range of devices with different capabilities, from quality-control type instruments to full-blown research tools.

Progress Since Investment

In 2019 Refeyn won 3 top awards for innovation from the Royal Society of Chemistry, R&D magazine and The Scientist. In Nov 2020 Refeyn raised £18m. Philipp Kukura moved back to the university and remains closely involved with Refeyn as a non-executive director. Part way through 2021 Refeyn launched the Refeyn TwoMP which has replaced the OneMP. In 2022 they launched the SamuxMP to measure the full empty ratio of Adeno-associated virus (AAVs - viruses used in cell and gene therapy). These have now been joined by the TwoMP Auto which as the name suggests allows automation of certain functions and allows the user to walk away from the instrument and then return to a set of results. In 2021 Refeyn made its second move, to a new building in Littlemoore, Oxford to enable it to expand manufacturing and operations. Refeyn is now also able to carry out extensive demonstration and testing work with companies without having to use university labs. Manufacturing pace has increased and sales numbers have increased satisfactorily. Refeyn now has offices in the UK, US and Japan.

Recent Developments

Refeyn continues to do well in what has been a tough sales environment for research equipment manufacturers.

New US headquarters in Waltham Massachusetts were inaugurated in early June.

The company is continuing to focus on the protein and cell and gene markets with each of those taking a similar share.

Thus far the total number of Refeyn related publications is 982 of which 270 in 2024. Of those 121 were TwoMP. It is very satisfying to see the continued acceleration in the production of scientific papers using both the OneMP and TwoMP.

Summary

Refeyn is doing very well.

Cytecom

Cytecom.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£2.41m	£2.34	17.3%

Cytecom Investment History

Date	Amount	Share Price	Type
Jul 2018	£100,440	£1.55	SEIS
Nov 2019	£55,000	£1.55	EIS
Dec 2020	£84,021	£1.55	EIS
Mar 2021	£53,986	£2.23	EIS

Description of Business

Many people all over the world need to test for the presence of live bacteria, for example hospitals and the water, food and brewing industries. Currently, the procedure is to place the sample, diluted by a suitable factor, in a media-containing dish and then wait for several days while cultures develop which can then be counted and analysed. Cytecom has developed and patented a technology in which a fluorescent dye is added to a sample, which is then placed between electrodes and a voltage shock applied. The electric shock alters the cell membranes so that living cells take up the fluorescent dye at an increased rate. Dead cells will not take up the fluorescent dye. Measuring the change in fluorescence over the few seconds after the shock gives a count of the living cells. Cytecom is a spinout from Warwick University. Before the initial investment, Cytecom was awarded an Innovate UK grant of £230,000 which officially started in November 2018.

Progress Since Investment

CyteCount is a stand-alone device about the size of a small shoebox. It contains proprietary electronics, optics and software to count the number of live cells in a sample. Users simply have to place a sample on the special slide (which contains the electrodes for administering the shock), and CyteCount will then carry out the procedures automatically to give the user a readout of the number of live cells in each sample. CyteCount was demonstrated publicly for the first time at Lab Innovations at the NEC in October 2019, where there was interest from various industries. The first sale was achieved in Q1 2021. In that quarter, the company also raised £150,000 at £2.23 per share to further develop the device and hire a distribution team. Dr Magdalena Karlikowska, microbiologist and ex-PHE clinical scientist, joined Cytecom as CEO in April 2022 to lead the expansion into new geographies and sectors.

At the beginning of Q1 2024, Cytecom raised £100k to support an award of £1.5m award, which will be spent over the next three years. The award comes directly from the UK Government (The Department of Health and Social Care) and the reason for the award is that the govt appreciates the growing problem of antimicrobial resistance and wants to see Cytecom's technology developed into a practical solution which could be deployed in the NHS to help tackle the problem. In January, Cytecom achieved the first major milestone by installing their prototype device in the first NHS diagnostic lab in Leicester.

In Q1 24, as part of their internationalisation efforts, Magda, representing Cytecom, travelled to Switzerland with a UK delegation organised by Innovate UK. The visit yielded promising leads for future collaborative projects and strategic partnerships.

Recent Developments

There was a mixture of good and bad news during the quarter. Cytecom won a number of prizes and awards, some of which came with small cash injections. One award was worth £150,000 to help with product development. This was from the West Midlands Health Tech and Innovation Accelerator. But technical work then had to stop due to technical problems with the CyteCount device. The team has concentrated on identifying and resolving the route cause, resuming experimental work at the end of September. Although this delayed the collection of concordance data, the team successfully completed all other deliverables under the government contract. This was satisfactory to the funder, who approved and released the Q3 stage-gate payment. More work is required on resolving the CyteCount technical issue long-term and Cytecom is working on a new design for manufacture of their prototype device. Progress was made with filing various patent applications, with the Japanese application being granted.

POLYCAT

PolyCAT.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£5.14m	£0.25	14.3%

PolyCAT Investment History

Date	Amount	Share Price	Type
Oct 2018	£50,002	£0.03*	SEIS
Mar 2019	£22,058	£0.13*	SEIS
Mar 2020	£11,985	£0.13*	SEIS
Dec 2020	£112,998	£0.19	EIS
Feb 2021	£11,784	£0.19	EIS
Apr 2022	£60,350	£0.25	EIS

*Adjusted for 1000:1 share split. EIS certificates remain valid.

Description of Business

PolyCAT has developed an economic, scalable process to produce metal nanoparticles on polymer substrates. These then act as catalyst to drive various chemical reactions. PolyCAT's first launch product is Spill-CAT, which encompasses a range of catalysts to degrade chemical warfare agents discovered in old munitions dumps or during counter terrorism operations. This has now been demonstrated to be effective against all the main classes of agents (Mustards, Tabun, Sarin, and VX). During Q4 2023, PolyCAT had a rights issue at 25p per share to raise capital to support Spill-CAT marketing and sales. This was oversubscribed and closed with £350k having been raised.

Progress since Investment

The company formally announced the first versions of Spill-CAT in December 2023. Much of 2024 has been spent arranging demonstrations and attending conferences and trade shows targeting German, Japanese, Dutch, Belgian, French, US, and UK end users.

Recent Developments

US – Bulk agent verification in the US involving bulk quantities of mustard gas, sarin, and VX, has started and the first round of tests are complete. These were very successful and all the agents were destroyed, but final tests of litre quantities of agents have been pushed into Q4 due to scheduling issues. PolyCAT is currently signing up its first US distributor, and will shortly know if the target customers who have expressed an interest will make first orders without having the litre quantity tests in place. Alongside the bulk agent destruction kits, PolyCAT has been entered into an evaluation program with the same US government agency for the next generation of troop protection products. This is a much larger volume product, and PolyCAT expects the development phase to take most of 2025.

Germany/Japan/Belgium/Netherlands/France – As reported last quarter, a huge dump of old munitions in Germany is in line to be dismantled shortly and PolyCAT has been asked to demonstrate its solution to the national authority (GEKA) charged with clean-up of the site and wider area. This is snowballing into a much larger event as GEKA work closely with the Japanese government which has >100,000 munitions still to clean up in China. This is a wonderful opportunity since Spill-CAT is particularly suited to the types of problem that GEKA and the Japanese deal with, and could save huge amounts of time and money for both countries.

UK – There have been no important updates during Q3 from the UK authorities. Once the Germany demonstration is complete and well-rehearsed, we expect to run a similar event in the UK in Q1 2025.

North Sea – An opportunity to pitch for a large sea dumped munition clearance project emerged unexpectedly during September. PolyCAT is busy putting together a small consortium of companies with expertise in different areas to pitch for this business and is optimistic that it can deliver a game changing solution that could be highly profitable. We expect to report more in Q4 as this opportunity progresses.

OXWASH

OxWash.com

Company Valuation	Valuation Share Price	Fund Holding
£6.91m	£0.05	0.1%

OxWash Investment History

Date	Amount	Share Price	Type
Mar 2019	£50,000	£1.13	SEIS
Mar 2019	£50,000	£1.13	EIS
Nov 2019	£54,679	£2.45	EIS
May 2021	£36,069	£3.58	EIS

Description of Business

Kyle Grant, an ex-NASA scientist, aims to transform the laundry and washing market. The original idea was to have a commercial and hyper-sustainable laundry in a shipping container style box or disused commercial unit. The laundry could be placed anywhere and could be operational within hours. The laundry would be primarily for contracted regular B2B customers such as organisations who run multiple Airbnb units. They need to wash tablecloths, sheets and towels in volume and on short notice. These modules could be bolted together to make a larger unit. The Oxwash system is as energy efficient as possible. Washing is at as low a temperature as possible. The main oxidising (deodourising and disinfectant) agent is Ozone, generated on site. Water is recirculated as much as possible as is heat. All microplastics are filtered out and so do not end up in the oceans, as is the case with most other laundries.

Progress Since Investment

The first unit, in Oxford, became operational in Q3 2019. The plan was to open more units, starting in the UK but expanding globally. The first units were in Oxford, Cambridge and London. Covid was damaging to Oxwash, with universities closed.

During 2022 Oxwash changed strategy and began to implement this strategy in 2023. The strategy is to create a large super-efficient laundry on an industrial estate and to have daily deliveries to and from this laundry via electric vehicles. Known as 'Big Blue' this is steadily coming into operation in Swindon. The existing small laundries have been closed, becoming collection hubs. Big Blue was able to process .25 tonnes of laundry /hour by the start of 2024.

At the end of Q2, shareholders received an 'out-of-the-blue' and embarrassed email from Kyle, saying that the company had unexpectedly run out of money and needed to raise £5m by the end of June. The reason was that the installation of the new equipment had taken longer and cost more than expected so that the many new contracts that had been won could not be started. The FD had not been properly on top of the cash flow and has been replaced. Therefore it had been decided to raise £5m by means of an equity raise at 5p per share, meaning that those who did not participate would be wiped out. In the event this fundraising was oversubscribed with many shareholders taking up their rights and oversubscribing, while others decided not to invest more. Shareholders in the latter group will be able to claim loss relief on their original investment.

Recent Developments

The business model is now to undertake long term laundry contracts, in which for example Oxwash undertakes to do all the laundry for a hotel group for the next 3 years for a monthly fee of £10,000, collecting and delivering sheets, uniforms, tablecloths etc daily. Many such contracts are now being won. Driver GPS has been implemented which enables Oxwash to identify strategic sales opportunities along existing routes, optimising market penetration. The shift reporting system has been updated to reflect 12-hour day and night shifts, enhancing the accuracy of the operational data. Preparation is being made for the introduction of some much larger contracts.

The HydRO system, developed in partnership with Christeyns, should go live in Q4. This innovative water reclamation technology is expected to achieve an 80% water recycling rate. significantly reducing environmental impact. In summary, Oxwash is making encouraging progress and has been well supported by its shareholders.

THE SMARTER FOOD COMPANY

SmarterNaturally.com

TSFC Investment History			
Date	**Amount**	**Share Price**	**Type**
Apr 2019	£89,998	£1.97	SEIS
Mar 2021	£96,058	£2.70	EIS

Company Valuation	Valuation Share Price	Fund Holding
£2.76m	£3.00	8.8%

Description of Business and Progress

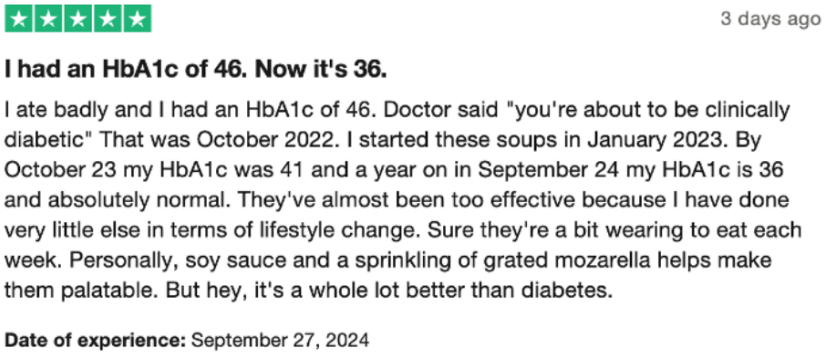
The Smarter Food Company t/a SmarterNaturally launched its instant soup for metabolic health and, in particular, to lower high blood sugar in the summer of 2022, selling D2C via its website SmarterNaturally.com. This was done with very small budgets to explore the opportunities for its unique broccoli material. Selling D2C without a large marketing budget, particularly to an older audience has been very challenging. Subscriptions for its consumer product, in its current format, are not being replaced at the same rate as people are cancelling. Subscription levels are now at 750 but the company is also selling product as a single purchase but this route does not make-up the revenue shortfall for falling subscriptions. None the less the company continues to get new customers, good reviews and great case studies on the efficacy of the product (see below its most recent review on TrustPilot at the time of writing this update, currently the company has a rating of 4.5/5).

Further research to demonstrate efficacy is highly desirable and the team is now working with the NHS's research arm, the National Institute of Health and Care Research, to link it up with research groups that would like to use its material to demonstrate efficacy in specific cohorts. The business is also in discussions with one of the academic leads of the NHS's Soups and Shakes Diet, Pathway to Remission for T2 Diabetes, where there is interest to use the broccoli soup in a new study, funded by Diabetes UK, starting in December of this year.

The company has had some grant success, securing £250k for R+D to produce a mass appeal product for the T2 Diabetic market. It has also been awarded two small grants to develop a coating with its material for nuts and seeds, to make a very healthy snack and a small human study to explore the material's possible impact on athletic performance.

Running alongside this grant activity the company is working with Mission Ventures to support the grant delivery and to explore whether the company should focus in areas beyond T2 Diabetes to achieve a significant return on investment. This work will cover size of market, its accessibility, consumer trends, suitable product categories, distribution and scale of potential upside. This work will be completed by the end of January 2025 together with introductions to prospective investors for further funding in 2025.

If you would like to help please become a subscriber, if you're not already. The soup is a healthy meal alternative as well as offering the potential to do you some good. If subscribing isn't for you please mention the product to others that may benefit including those with anti-inflammatory conditions such as arthritis and neurodegenerative disorders, various cancers (particularly prostate and breast cancer) as well as cholesterol and blood glucose conditions. Eating one portion per week is such an easy thing to incorporate into one's diet and lifestyle.



ConnexinTX.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£1.42m	£7.00	4.7%

Connexin Investment History

Date	Amount	Share Price	Type
Apr 2019	£66,325	£7.00	SEIS

Description of Business

There are over 60 million glaucoma cases globally and up to 40% of the patients will be severely visually impaired in one eye. Existing drugs can slow the disease progression, but are not protective. There are no drugs in development with any demonstrated ability to protect retinal cells and prevent vision loss in patients with glaucoma. Connexin Therapeutics is developing novel drugs to protect vision and prevent blindness.

In glaucoma, increased intraocular pressure causes cell death, which by "Bystander Effect" causes death of the neighbouring cells, so cell death proliferates, which leads to vision loss. By blocking the correct connexins (an ion channel) in the retina, it is possible to block the Bystander Effect and preserve vision. Connexin 36 (Cx36) is a protein found in the retina. By blocking Cx36, the Bystander Effect is prevented, thereby preserving neighbouring retinal cells and preserving vision in glaucoma. It is known that there are some molecules that have some effect but safer, more specific Cx36 inhibitors are needed. Connexin Therapeutics wants to create patentable drug candidates which are highly selective for Cx36. The international team will create, screen, and test Cx36 inhibitors to find novel, patentable compounds. Within 24 months from investment, it will hopefully have enough data to start filing provisional patents on compounds.

This should interest pharmaceutical partners and/or the investment community. Roche has stated, "In Glaucoma we are particularly interested in therapies that have demonstrated the ability to protect retinal neurons compared to intraocular pressure lowering therapies." and Bayer has stated, "[We] are focused on identifying innovative partnering opportunities for retinal disorders to help improve or prevent loss of vision".

Progress Since Investment

The research programme has started and the first experiments are complete. The new compounds are based on a molecule which has already demonstrated efficacy in mouse models of glaucoma. They are being synthesised and tested as novel small molecules in animal models of glaucoma. Chemical modification enhances specificity, makes administration and delivery easier, and will allow Connexin Tx to get composition of matter patents.

Working with Cambridge-based o2h Discovery, Connexin Tx designed and tested three novel derivatives of meclofenamic acid. Some blocked gap junctions in a dose-dependent manner and others didn't, so Connexin learned a great deal about the structural requirements for blocking retinal connexins. This helps direct further chemical development work. Covid slowed work down, but it has all restarted.

Recent Developments

Connexin and Leeds university are now waiting to hear about the outcome of their joint grant application.

Connexin's fundraising discussions are progressing.

Cytoswim.com

Company Valuation	Valuation Share Price	Fund Holding
£1.94m	£6.18	18.5%

CytoSwim Investment History

Date	Amount	Share Price	Type
Apr 2019	£100,274	£2.44	SEIS
Sep 2021	£11,489	£6.18	SEIS
Sep 2021	£59,038	£6.18	EIS
Apr 2022	£34,194	£6.18	EIS

Description of Business

Invitro fertilisation (IVF) is a large and rapidly growing market. An ever increasing number of couples are having trouble conceiving. One of the critical steps in all IVF and other assisted reproduction technologies is the preparation of the sperm sample. For the best outcomes one wants sperm cells that swim rapidly and in straight lines, and are present with minimal structural deformations and in high concentration. Based on years of fundamental biophysics research CytoSwim has developed a biomimetic microstructure inspired by the microstructures that guide and enhance conception in nature. This has been developed into an easy-to-use chip which functions essentially as an obstacle course for sperm separating out the high quality cells from the poor ones.

IVF currently has a success rate of around 30%, a figure which has seen no improvement over the last few years. Globally, more than 5 million cycles of IVF are carried out each year. With an average cycle cost of £3,500, the total financial cost is many £bns, on top of which is the human cost associated with failed pregnancies. CytoSwim believes that its technology can improve sperm motility to nearly 100%, and reduce DNA damage in the sperm by over 95%. It is hoped that these significant improvements in sperm quality will lead to better outcomes for both the clinics and the patients.

Progress Since Investment

Since the initial investment, CytoSwim has developed a method to injection mould its device. Pre-clinical trials are ongoing, and sperm samples have shown significant improvements in sperm quality and DNA integrity. Logixx Pharma, a major UK distributor of fertility products, invested £250,000 in q2 2022 and followed up with a further £250,000 in convertible loans in 2023 alongside an additional £100,000 in equity investment from angel investors. The director of Logixx, Michael Close, has served as non-exec director since his investment, and his sector expertise and network has proved to be invaluable to the company.

CytoSwim's first product for sperm separation received approval for use from the FDA in March 24. With this clearance in hand, the commercialisation of this product can now be started. In Q2 24, the company concluded the Stage 2 audit for BSI and ISO 13485, and certification will follow. But, as so many others have found, the certification process in the UK moves at snail's pace. Full EU-wide CE mark approval for sale is expected before the end of the year. With these milestones finally achieved, there are now no more blockers for the company to achieve first commercial sales of its medical device this year.

Recent Developments

In Q3, the company secured a £30,000 grant to fund 4 trips to the USA over the next 6 months to identify and recruit its first US customers.

In August CytoSwim visited US fertility clinics in Austin and New York. After the visit, CytoSwim had a follow-up meeting with USFertility (a major supplier of IVF) senior management and expects to commence clinical evaluations soon. A CytoSwim delegate attended ACE 2024 (Association of Clinical Embryologists) in the last week of September in Pune, India.

CytoSwim will attend ASRM in the third week of Oct in Denver Colorado, the premier US embryology conference. It will be a great opportunity to meet the US KOLs, decision-makers and competitors. CytoSwim is also progressing evaluation of the device with US bovine IVF giant Vytelle.

Nikalyte.com

Company Valuation	Valuation Share Price	Fund Holding
£1.54m	£1.60	25.0%

Nikalyte Investment History

Date	Amount	Share Price	Type
Aug 2019	£49,738	£0.95	SEIS
Feb 2020	£16,152	£0.95	SEIS
Oct 2020	£77,886	£0.95	EIS
Dec 2021	£44,987	£0.95	EIS
Feb 2023	£60,000	£1.50	EIS
Apr 2024	£2,316	£1.60	EIS

Description of Business

Nikalyte was founded by Dr Alistair Kean, Dave Mason and Srinivasa Saranu who have spent years working in the specialised coatings industry, particularly in methods for producing metal nanoparticles. They provided the IP for a company, Mantis Deposition Ltd, which developed a range of instruments for producing nanoparticles and laying these down on a substrate. But although this company was a technical success, its instruments were expensive (many >£200,000) and mostly one-off designs for particular applications, and the company ultimately failed. The objective of Nikalyte is to develop a nanoparticle generator, which will be priced at less than £100,000 and enable researchers to produce nanoparticles of almost any metal or alloy on almost any substrate via a user-friendly interface. Metal nanoparticles are being ever more widely used, in a growing number of applications, including cancer therapies/diagnostics, catalysis, metamaterials, photonics, electrochemistry and batteries. Nanoparticles are of huge interest to the life science research community in areas such as cell binding and drug delivery. Presently there is no clean, non-chemical method of depositing pure, non-agglomerated nanoparticles onto a substrate such as an agar plate.

Progress Since Investment

The first benchtop nanoparticle system, known as the NL50, became operational in Q2 2020. A demonstration of the machine in action can be seen at shorturl.at/qsHRT. Nikalyte has expanded its product portfolio to include the NL-UHV nanoparticle source, and also has the capability to build custom systems. Nikalyte also operates its own fully functional nanoparticle deposition system. By changing the operating parameters of the instrument, primarily the voltages and currents used, it is possible to change and measure the mean particle size and the shape of the nanoparticle size distribution curve. Nikalyte uses this machine to provide consultancy and samples of nanoparticles on suitable substrates. Nikalyte also used its own instrument to produce SERS (Surface Enhanced Raman Spectroscopy) substrates which it has been selling via its website. SERS is widely used throughout the world to detect traces of drugs and explosives. Nikalyte is now a well-established supplier of economic and high-quality SERS substrates with around 70 customers worldwide. Volumes are starting to grow. In Q4 2023, Agilent Technologies, a global supplier of SERS spectrometers published a paper which showed the enhanced performance that can be obtained by using Nikalyte SERS substrates. As an example, the ability to detect the drug fentynal in a street sample rose from 5% to 65% by using a Nikalyte gold substrate. During Q1 2024, Nikalyte began working with Agilent Technologies customers in Australia, Canada, USA and Columbia. Agilent supply the ruggedised hand-held Raman spectrometer to customers and is building data libraries based upon Nikalyte's SERS sensor and recommends Nikalyte's technology to its customers. Nikalyte's SERS customer base continues to grow, and the team has entered discussions with one customer to supply 10,000s of substrates per year.

Recent Developments

During Q3, Nikalyte was busy travelling to events promoting its new vacuum systems, nanoparticle instruments and SERS substrates. The team installed another nanoparticle source at Diamond Light Source in Harwell, where the instrument will be used by researchers visiting from all around the world to use the renowned beam line facility. At the start of September Hugh Lazenby joined the team as head of sales. Hugh is already forming a close working relationship with the agents, particularly the US agents ahead of the return to the Materials Research Society Fall exhibition in Boston in Dec 2024. In Q3 the team received an order from a fast-growing Scandinavian company for a £200,000 bespoke vacuum system. It will be delivered at the end of Q4 2024.

Date	SERS Sales
Q3 22	£472
Q4 22	£1,182
Q1 23	£2,274
Q2 23	£4,781
Q3 23	£860
Q4 23	£2,800
Q1 24	£3,780
Q2 24	£3,452
Q3 24	£1,440

Etcembly.com

Company Valuation	Valuation Share Price	Fund Holding
£4.34m	£1.00	5.7%

Etcembly Investment History

Date	Amount	Share Price	Type
Jan 2020	£70,588	£0.40	SEIS
Nov 2020	£20,587	£1.58	SEIS
Nov 2020	£49,411	£1.58	EIS
Feb 2021	£17,677	£1.58	EIS
Apr 2022	£42,444	£3.00	EIS

Description of Business

Etcembly uses its own AI platform to anaylse and understand TCRs (T Cell Receptors), an important component of the immune system's function. The immune system is very complex and has long been an inspiration for pharmaceutical development. Curing diseases using biologic agents derived from components of the immune system has saved countless lives and is a multi-billion dollar success story.

Etcembly is a true 21st-century drug discovery company. It uses informatics from its machine learning platform EMLy™ (Etcembly Machine Learning) to understand and exploit the immune system by observing the TCR repertoire as it responds to health and disease. It is these differences in the TCR repertoire of individuals which may explain why people react so differently to viral infection and cancer. Some people throw off the infection and develop immunity with no symptoms at all; others die.

Just as computers are now able to play chess better than humans, so Etcembly aims to bring its machine learning platform, EMLy™, to bear on the immune system. Etcembly has created a massive database of TCR sequences (in order of hundreds millions) and uses machine learning to understand the rules of target engagement and specificity. The aim is to shorten drug development timescales cycles, lower drug development costs and potentially to create new TCRs.

Progress Since Investment

£5.2m was raised in Q4 2022 at £6.00 a share.

In Q2 2023 Etcembly achieved a notable success when it designed a TCR, known as ETC-101, manufactured in silico in its lab, and demonstrated binding with low picomolar affinity of ETC-101. Focus is now on testing and optimising the bispecific therapeutic, ETCer (Etcembly's T cell engaging receptors). This lays the groundwork to develop a best-in-class therapy which will be able to treat a wide range of cancer types and has a very well-supported business case.

Etcembly had a very positive response to their press release on ETC-101, highlights include reporting in Forbes - Breakthrough In Cancer Treatment: The Role Of Generative AI In Drug Development.

Effective target identification for TCRs is a challenge for the whole field. To meet this, Etcembly is developing a new program with academic collaborators looking in the blood and tumours of patients who survive cancer and do well. This new program may reveal the next generation of targets and TCRs.

Recent Developments

Despite having had an offer of $30m towards a $60m funding round since January, Etcembly has been unable to obtain offers for the balance of $30m. Therefore in September, there was a change in strategy and Etcembly raised £6m at a very low valuation to keep the lights on. The price of the last fundraising in 2022 was at £6 per share, but the new £6m, almost all of which was subscribed by existing shareholders was at £1 per share with a liquidation preference of £1, meaning that the investors in this round would recover their investment before anyone else was paid. All existing shareholders through OT(S)EIS were offered the chance to participate in this fundraising. Some did, but others chose not to invest more.

FLARE BRIGHT

FlareBright.com

Company Valuation	Valuation Share Price	Fund Holding
£2.30m	£1.00	1.3%

Flare Bright Investment History

Date	Amount	Share Price	Type
Sep 2020	£29,000	£1.00*	SEIS

*Adjusted for 100:1 share split. EIS certificates remain valid.

Description of Business

FlareBright is developing systems to enable drones to fly safely even if they lose radio contact with their controller or lose GPS signal. At the moment, a drone which loses contact could fly out of control and crash, which is hampering obtaining full regulatory approval, particularly in Beyond Visual Line of Sight operations. The founders of FlareBright are Kelvin Hamilton, Conrad Rider and Chris Daniels, all seasoned technical entrepreneurs.

Progress Since Investment

FlareBright has made excellent progress, and a large MOD contract, which started in April 2024, has permitted it to expand even further. On that contract alone, Flare Bright has billed £2.9m across 11 deliverables. This contract is focused on cheap smaller drones for operational theatres, where FlareBright is the Prime, and so is subcontracting various elements of this contract to other small suppliers. This is likely to lead directly to follow-up MOD contracts, and the company has seen enormous interest from established companies in this area.

By the close of the Financial Year on 30 Sept 2024, Flare Bright will have made approximately £5m in total revenues - and this stems from almost a dozen defence contracts as well as four UKRI grants to develop its systems. Staff numbers have increased to from 3 to almost 30 and FlareBright is becoming a recognised “go to” name in the defence and UAV sector and is now regularly asked to speak at conferences and has a decent amount of name recognition within the industry.

FlareBright continues with a new 3-year Research & Development contract with the US Navy's Office of Naval Research to deliver a subsea version of its software navigation. Although a relatively small contract, this is strategically important. And it has a number of other ongoing small contracts with Prime defence contractors.

Flare Bright exhibited at the main aerospace industry conference of the year, the Farnborough Airshow and was visited by the new Defence Secretay, John Healey, as well as the Head of the US Air Force. The company is a regular attendee at invite-only MOD events, especially those associated with solving challenges stemming from Eastern European learnings.

In summary, FlareBright continues to make excellent progress.

Cryologyx.com

Company Valuation	Valuation Share Price	Fund Holding
£5.13m	£15.55	10.4%

Cryologyx Investment History

Date	Amount	Share Price	Type
Mar 2021	£75,000	£3.34	SEIS
Mar 2023	£86,336	£8.00	EIS
Feb 2024	£15,083	£15.55	EIS

Description of Business

CryoLogyx provides cryopreserved biological cell-based products and services to the Life Sciences, Healthcare and related industries. Its proprietary and patented cryoprotectant, CryoShield, combines with deep expertise in cryopreservation to provide unique and valuable protocols for freezing and thawing cells, attracting commercial interest from major organisations such as Astra Zeneca, MOD, Charles River and ATCC. The company is co-founded by Dr Tom Congdon, CEO, and Professor Matthew Gibson based on globally leading research into Macromolecular cryoprotectants.

The company is commercialising three main offerings:

Assay Ready Cells - a growing catalogue of mammalian cells is being developed in frozen plated and suspension formats to 'thaw-and-go'. The offering is targeted at large Pharma, biotech, CROs and formulation companies that use cells in plated format for early-stage research and high throughput screening. The global assay-ready market is growing 10%+ CAGR and CryoShield plates can reduce cell culturing times by up to 90%, with an 80%+ reduction in single-use plastic and accelerated research outcomes. Five cell lines have been developed for production in the UK lab with more in the pipeline.

CustomReady Product Development - changes in FDA regulations and a shift away from animal testing are putting increasing emphasis on early-stage in-vitro cell experimentation and testing. CustomReady is a service-based offering leveraging the unique IP and expertise from decades of cryopreservation research to solve complex problems in the preparation of cell-based assays. Through this offering, CryoLogyx engages industry leaders to provide cryopreservation solutions for various cell lines, in varied plate formats, such as 384 well and increasingly into growth areas such as transwell plates and 3D models with spheroids and organoids.

CryoShield Red - CryoLogyx has DASA funding sponsored by the MOD to freeze bags of blood for flexible storage and transportation to near the front line, for rapid thaw and use within 15 minutes. As the war in Ukraine has highlighted, around 50% of deaths on the front line are caused by haemorrhage. The MOD is putting together a funding programme for 'blood-on-tap' in response to medical lessons learned from Ukraine. CryoLogyx has been funded with £450k provided by dstl so far with a significant increase expected later in 2024 based on strong results achieved to date in the lab.

Recent Developments

CryoLogyx has reached the final stage of a NATO-backed accelerator programme, which would provide around 400k EUR in 2025. Improvements in the frozen blood banking technology are progressing well, with the penultimate milestone in the MOD-funded development project delivered. Sales of the assay ready R+D products have been growing with new customers in the US and UK. The lab team have expanded the freezing technology to work on the latest formats of drug screening technology, with results to be presented at a large UK conference in October.

Zayndu.com

Company Valuation	Valuation Share Price	Fund Holding
£7.44m	£0.106**	4.4%**

Zayndu Investment History

Date	Amount	Share Price	Type
Mar 2021	£133,505	£0.062*	EIS
Apr 2022	£83,029	£0.158*	EIS
Sep 2022	£51,548	£0.30	EIS
Feb 2023	£66,562	£0.33	EIS

*Adjusted for 1000:1 share split. EIS certificates remain valid.

**While the latest investment price is 19p/share, we reduce our share price and our fund's holding to take into account the unfavourable participating preference rights of the incoming investors' shares.

Description of Business

Zayndu uses plasma to treat seeds before planting. The benefits are far-reaching; more seeds germinate, fewer seedlings are lost to fungus or disease, and typically many crops see yields increased by 15-25%. The process is entirely dry, using only a very small amount of electricity and air.

The founders of Zayndu are Ralph Weir and Dr Felipe Iza. Felipe developed the technology at Loughborough University, which is also a shareholder in the business. Zayndu attracted much interest from indoor growers, particularly in the US where the culture is more open to trying new ideas. The original investment (which also secured a £700,000 Innovate Loan), enabled the company to produce the first commercial product and to make first sales. The business model is subscription; customers pay a monthly fee for the service, which includes provision of machines and the recipes for each seed type. (The treatments required to produce the best results for each crop vary.) The machine is cloud-connected and obtains the protocols and licences it needs for each run from Zayndu's database in the cloud.

Meanwhile the ongoing practical research in the biology lab (lead by Dr Alberto Campanaro) is steadily building a database of optimised protocols for each individual seed variety, building a treatment library which will be a core part of Zayndu's IP. Protocols from this library can be downloaded/upgraded to an individual machine using the company's SeedCloud management system.

Despite the potential of the business and the good results in the lab, Zayndu's customers have wanted to conduct paid-for trials and it has taken much longer than originally hoped for contracts to be placed.

Recent Developments

Zayndu is making slower commercial progress than hoped due to a long sales cycle. At the end of Q3 there were 11 trials committed or in progress and it is hoped that at least 5 will convert to multi-year contracts by the end of Q4.

Mach42

Mach42.ai

Company Valuation	Valuation Share Price	Fund Holding
£12.72m	£10.54	1.5%

Mach42 Investment History

Date	Amount	Share Price	Type
Mar 2021	£74,999	£4.77	SEIS
Jul 2023	£28,996	£10.54	EIS

Description of Business

Mach42, previously known as Machine Discovery, is a verification acceleration company delivering significant ROI benefits with its AI-powered verification solution. Mach42 is an ambitious, early-stage software company developing state-of-the-art machine learning and Artificial Intelligence technology to simplify, automate, and accelerate simulation tasks. Currently, the company is addressing two market needs: Fusion Energy and Semiconductor design. The vision is that by 2027 (the next three years), Mach42 will cut the product design development cycle in half, leveraging its proprietary AI technology.

Other investors at the start included BGF, East Innovate, Foresight WAE Technology Funds, UK Innovation and Science Seed Fund (UKI2S).

Progress Since Investment

Mach42 is applying its expertise in two areas to start with; Fusion and Chip Design.

In May 2023, the company announced First Light Fusion, the University of Oxford, the University of York, Imperial College London, and Mach42 would collaborate under a £12 million grant award from UK Research and Innovation's Prosperity Partnership program (details https://mach42.ai/resource-grant.html). Mach42's solution was selected to support the above consortium. The consortium has adopted the Mach42 platform to address challenges associated with most compute-intensive tasks.

In Chip Design, Mach42 remains on target with its plans to achieve cut the design development cycle by half by leveraging the company's proprietary AI technology.

In September 2023, the company closed its pre-series A funding of £4.5m at a higher valuation to accelerate the delivery of AI tools for semiconductor designs. The first core application is analog semiconductor design, delivering instant prediction capability for integrated circuit design as a companion to existing tools and simulators. The investment round was led by BGF, one of the UK's most prominent investors, and East Innovate, alongside Foresight WAE Technology Funds, UK Innovation and Science Seed Fund (UKI2S), independently managed by Future Planet Capital (Ventures) Ltd and Oxford Technology.

Recent Developments

On September 23, 2024, the company announced the formation of an AI advisory board to accelerate semiconductor design tool innovations. Dr. Antun Domic, previously CTO at Synopsys, and Prof. Yarin Gal, professor of AI at the University of Oxford, will jointly lead the advisory board charter.

Mach42 is currently in detailed conversations/trials with several key top 10 semiconductor companies. Details are confidential.

HydregenOxford.com

Company Valuation	Valuation Share Price	Fund Holding
£6.61m	£27.98	3.8%

Hydregen Investment History

Date	Amount	Share Price	Type
Mar 2021	£100,005	£15.00	EIS
Mar 2023	£63,000	£27.98	EIS

Description of Business

One of the most common reactions in organic chemistry is hydrogenation which represents 14% of all organic chemistry reactions. 20% of drugs, for example, have chiral alcohol groups in them which are frequently created by hydrogenation of aldehydes or ketones. To date, there were two main methods of hydrogenation: high temperature catalysis using metals - which had disadvantages of non specific reactions, high energy use and expense of the metals, and enzymatic biocatalysis typically using glucose as the fuel to drive the reaction - which has the downside of large amounts of waste and not being suited to flow reactors. Hydregen has developed a third method, which consists of combining separate enzymes on a carbon particle, and using gaseous hydrogen as the source of hydrogen and energy so that at the end of the reaction there is no waste to dispose of. The Hydregen method is fast, clean and accurate. Furthermore it is easy to integrate into flow chemistry and should scale very well from lab to large scale.

The three key people in Hydregen at the start were CEO Holly Reeve, scientific founder Kylie Vincent and CSO Sarah Cleary, with the support of experienced chairman Will Barton.

Hydregen was set up with £200k in funding of which half came from OT(S)EIS, to support an Innovate UK grant to help develop and market test small flow reactors packed with their proprietary enzyme beads to which customers will be able to add their enzyme of choice and their reagents.

In March 2023 Hydregen raised £2.6m.

Recent Developments

In Q3, Hydregen has focused on demonstrating more than 16 commercially-competitive Bio2Amine processes for nitro-to-amine conversions across pharmaceutical, specialty and bulk chemical sectors. The team has also shown an 18-fold improvement in manufacturing of the key enzyme, improving the company's cost-competitiveness across the chemicals sector. The team has invested in new reactors for higher TRL showcases in its own labs to aid preparation of chemical product samples for customers and to facilitate tech transfer to partner labs.

OxVent.org

Company Valuation	Valuation Share Price	Fund Holding
£1.53m	£0.002	9.1%

OxVent Investment History

Date	Amount	Share Price	Type
Apr 2021	£79,124	£0.002	SEIS
Apr 2022	£60,000	£0.002	EIS

Description of Business

OxVent was created to exploit the ventilator designs developed at the beginning of the Covid crisis by Kings College and Oxford. It was founded by Profs Mark Thompson, Federico Formenti, Sebastien Ourselin, Andrew Farmery together with CEO Peter Phillips. The UK govt placed an order for 3,000 ventilators and agreed to purchase the parts. In the event the order was cancelled, but the purchased parts were given to OxVent. The original ventilator has not been built and to accelerate the commercial side of the company, OxVent closed a contract with The Ventilator Partnership in Boston and acquired all rights to its AIRA ventilator. It is a more sophisticated device with a higher price-point and a wider range of features than the OxVent device. Importantly, it already has Emergency Use Authorisation from the FDA which meant it could be sold in a number of countries with minimal additional regulatory barriers.

OxVent has been certified to the ISO 13485 quality standard for design, manufacture and distribution of ventilators and this qualification would allow the AIRA ventilator to be manufactured by OxVent in compliance with FDA requirements.

The OxVent was designed at breakneck speed in Spring 2020 but in the following months the academics at Oxford, having thought more about ventilators, have since come up with what is believed to be an altogether better and simpler design, the OxVent P: Patents are in application and the potential for licensing to other manufacturers as well as in house exploitation is very real.

Recent Developments

A working prototype of the basic OxVent P design has been made with control circuitry. It produces well controlled flow with accurately controlled pressure. It is currently undergoing tests with a model lung, with which it is possible to simulate many different lung types and conditions. OxVent is awaiting the outcome of a grant application. If it is successful it will be raising money to undertake the next steps.

OXcan
Oxford Cancer Analytics

OxCan.org

Company Valuation	Valuation Share Price	Fund Holding
£16.61m	£102.96	1.7%

OXcan Investment History

Date	Amount	Share Price	Type
Jun 2021	£50,000	£40.00	SEIS
Jul 2021	£50,000	£40.00	EIS
Jul 2022	£28,314	£102.96	EIS

Description of Business

OXcan was founded by Peter Liu and Andreas Halner, two Oxford DPhil researchers with medical training. They have developed machine learning algorithms to detect early stage lung cancer with 85% sensitivity and specificity over 99%. They are focusing on recurrent lung cancer as the first niche. Lung cancer is usually detected quite late and while it is often curable by surgery in stage 1, once it has reached stage 3 or 4 the prognosis is much worse. When we first met them they had recently completed a study comparing the performance of their algorithms with those published by Johns Hopkins University. With the same specificity they were able to detect double the number of early (stage 1) lung cancers. The test is based on a liquid biopsy, where a blood sample is taken and genetic, protein and epigenetic information is collected. We participated in a £1.2m investment round led by Chinese lab robotics company MegaRobo

Progress Since Investment

Since our initial investment, OXcan has rapidly scaled to a team of 13, adding expertise in Machine Learning, Liquid Biopsy, Business Development, and Regulatory Affairs. They have also taken on three employees via the Government Kickstart scheme, helping to get disadvantaged young people into work during these challenging times. The company has now raised over £5m. In 2023 results on a large 600 patient cohort showed 86% sensitivity and 99% specificity for early stage lung cancer detection.

Prof. Heinrich Roder joined OXcan as a full-time employee. He is a Rhodes Scholar from Oxford and Founder of Biodesix, a Nasdaq listed liquid biopsy company

On the pipeline front, OXcan has further expanded on the multi-cancer aspects of data and samples, with over 1,000 samples secured for multi-cancer in addition to lung cancer, and 300 esophageal cancer samples are currently being analysed in the lab in Oxford. Together these account for over half of the most prevalent and deadliest cancers in the US and worldwide for further market size expansion.

Recent Updates

In Q2-Q3 OXcan agreed to terms for a $10m+ series A funding round which is currently in the final phase of being closed.

Summary

OXcan is looking to expand its indications and provide a research-as-a-service combining its proteomics and machine learning capabilities.

MitoRxTherapeutics.com

Company Valuation	Valuation Share Price	Fund Holding
£10.13m	£1.2421	3.3%

MitoRx Investment History

Date	Amount	Share Price	Type
Nov 2021	£60,000	£0.75*	SEIS
Nov 2021	£12,450	£0.75*	EIS
Jan 2022	£9,750	£0.75*	EIS
Dec 2022	£112,920	£1.2421	EIS
Feb 2023	£52,803	£1.2421	EIS
Oct 2023	£31,602	£1.2421	EIS

*Adjusted for 100:1 share split. SEIS/EIS certificates remain valid.

Description of Business

On the early Earth, 1.5 billion years ago, there was little oxygen in the atmosphere and certain bacteria evolved ways of using sulfide as a source of energy. Our ancient cellular ancestors formed a mutually beneficial relationship with these sulfide-utilizing bacteria, which were incorporated into our ancestral cells as our mitochondria. The mitochondria of every living thing on the planet (humans, animals, plants) still use this sulfide chemistry to regulate metabolism by making sulfide signals. When something goes wrong with this sulfide signalling, then a diseased state emerges. In particular, cells cannot then mount protective responses to disease stress. MitoRx (Mx) believes that this is a fundamental cause of pathology in several diseases and that by fixing this fundamental problem, the course of many progressive degenerative diseases that currently blight patients, their families, and society can be alleviated. MitoRx was founded by Prof Matt Whiteman (CSO), Jon Rees (CEO) and Norman Law (CTO / Head of IP). The list of diseases which may be treated by targeted sulfide delivery is very long, based on results in animal models in the company and in academia. The list includes obesity, muscle diseases, lung inflammatory diseases, genetic diseases and neurodegenerative diseases. MitoRx's focus is currently on proving their technology in obesity and muscular dystrophy.

Progress Since Investment

MitoRx completed its seed round investment in late April 2022 and it has since been topped up. Glyn Edwards MBE joined as chairperson of the company after inception while physician and venture expert Dr. David Holbrook joined as Independent NED in September 2024. The technology development has been going well so far and there has been increasing interest in the company and its programmes from pharma especially around metabolic diseases including obesity. This resulted from data generated in an academic collaboration in which it was discovered that the Mx approach was useful in metabolic disease, alleviating the severity of obesity in an animal model. Mx has filed a family of five patents, four of which were filed in 2023/24. Five world-class clinicians and academics joined Mx's scientific advisory board during 2024. Several highly skilled drug development experts have joined the team as consultants, adding over a century of big pharma experience to the team

Recent Developments

MitoRx is about to initiate confirmatory animal studies in obesity and also muscular dystrophy models. Recent results have shown that the Mx approach is anti-fibrotic in a severe muscular dystrophy model, which is a good sign. In the muscular dystrophy field several potential competitors have failed in clinical trials. However, there has been a somewhat controversial approval of a gene therapy and the approval of a repurposed cancer drug. MitoRx has built on earlier progress with the formulation of their potential drug and has a promising lead compound which they are continuing to profile, as they look for the compound to take into clinical trials. MitoRx recently received results showing that this compound was sufficiently bioavailable to achieve target tissue concentrations when injected subcutaneously, which is how the majority of obesity medicines are currently given. The size of the obesity pharmaceuticals market is expected to exceed $130bn by 2028, and MitoRx thinks that their combination of muscle-protection and antiobesogenic activity may be attractive as a key consequence of market-leading GLP-1 medicines unfortunately including loss of lean mass in many patients.

Summary

MitoRx is making excellent progress on technical aspects and is responding to pharma interest.

OVO BIOMANUFACTURING

OVOBiomanufacturing.com

Company Valuation	Valuation Share Price	Fund Holding
£2.54m	£15.00	11.8%

OVO Investment History

Date	Amount	Share Price	Type
Nov 2021	£90,799	£10.99	SEIS
Mar 2023	£176,355	£15.00	EIS

Description of Business

When viruses replicate, they create lots of imperfect copies of themselves. It is this quality of viruses that enables them to mutate and create variants. Vaccines are manufactured using viruses which have been engineered to include the genetic code of the vaccine, so that when the viruses replicate they produce the vaccine. However as well as copies of the vaccine, the viruses also produce variants which in turn go on to reproduce. So after a number of generations the mixture will contain all sorts of other material as well as the desired vaccine. As well as particles with minor deficiencies, the vaccines also produce much smaller particles maybe with only 20% of the mass of the original vaccine. But if these smaller particles, known as DIPs (Defective Interfering Particles) also have the correct starting and ending codons, they will also take over the replication mechanism of the cell and replicate. As they are much shorter, they will replicate faster than the original virus. In this case, after a few generations, the mixture will be composed almost entirely of DIPS because of their much shorter reproduction time. OVO Biomanufacturing is a spin-out from Warwick and Coventry Universities aiming to control/exploit DIP production. There are two strands to OVO's technology:

1. Vaccine Optimisation Platform: Manufacturers of virus-based vaccines culture the vaccine in eggs. The vaccine enters the cells in the eggs and there takes over the reproduction mechanism, so that each infected cell then produces 1000's of copies of the vaccine. But manufacturing efficiency may be hampered by the production of DIPs at the same time. OVO's software platform can estimate what will happen to the rate of future vaccine production given the mix of vaccine and the various DIPs at an early stage of the production process. The aim here is to maximise the output of vaccine. OVO believes that it can approximately halve the annual $1bn cost of vaccine production.

2. Novel Antiviral Therapies: OVO aims to create therapeutics using DIPs to outcompete and inhibit the reproduction of the real virus.

Progress Since Investment

On the Vaccine Platform side, OVO felt that they could provide some form of benefit for vaccine manufacturers at the technology's initial stage of development. OVO has been in discussion with several vaccine manufacturers since the outset. The aim is to enable these manufacturers to reduce their manufacturing costs by many £m pa, by using OVO's technology.

Recent Developments

Development of the vaccine platform is progressing well with the technology at the MVP stage of development. OVO has successfully showcased its technology to a major manufacturer who wishes to take it to the next stage of testing. They are now in the process of negotiating a fee for this next phase, which should begin in Q4. This will allow OVO to begin generating revenue. OVO is also approaching other vaccine manufacturers, to expand the number of clients with whom OVO is testing the technology.

Whilst the main focus for this quarter has been on the project with the major vaccine manufacturer, development of the antiviral platform technology is progressing. OVO is in the process of spinning out the technology into a separate entity due to the different risk profiles associated with each technology. Additionally, OVO is in the process of acquiring an additional DIP antiviral platform through a licensing arrangement to expand the portfolio. OVO is also exploring the use of the technology for use in animal treatments.

digiLab Solutions

Digilab.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£7.15m	£0.51	8.2%

digiLab Investment History

Date	Amount	Share Price	Type
Dec 2021	£75,000	£0.075*	SEIS
Aug 2022	£75,001	£0.51	EIS

*Adjusted for 1000:1 share split. EIS certificates remain valid.

Description of Business

digiLab is a spinout building on the work of Prof Tim Dodwell (CTO), who leads the Data Centric Engineering Group at Exeter University and holds a prestigious Turing AI Fellowship. Heading up the company as CEO is one of Prof Dodwell's former PhD students, Anhad Sandhu; supporting them on the board are two experienced directors in Paul Garman (Chairman) and Dan Hatfield, both of whom we know from Cryologyx. OT helped to seed digiLab with a 75k investment.

Many companies generate lots of data about their systems, but don't know what to do with it. Companies in sectors with difficult operating environments also suffer from highly variable data quality, with the result that existing ML/AI solutions would suffer from the "Garbage In, Garbage Out" phenomenon. digilab is harnessing these big, but variable quality, data sets to improve decision intelligence. Their algorithmic models can learn from the time series data produced by real world sensors, in order to build a virtual system; this virtual system can then predict what those sensors will say in the future, or even what they would say if certain conditions were to occur.

Progress Since Investment

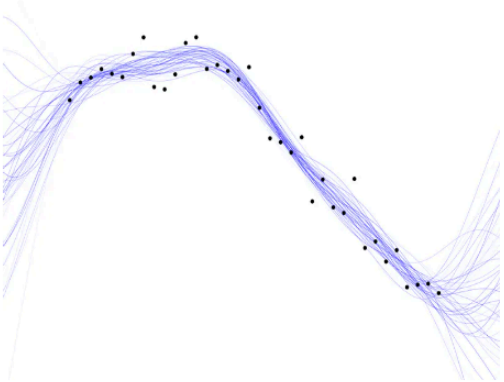
digiLab has been working with the UK Atomic Energy Authority, Jacobs Engineering, and South West Water, as well as other unnamed clients. Delivering on the above contracts should validate its industry-agnostic approach.

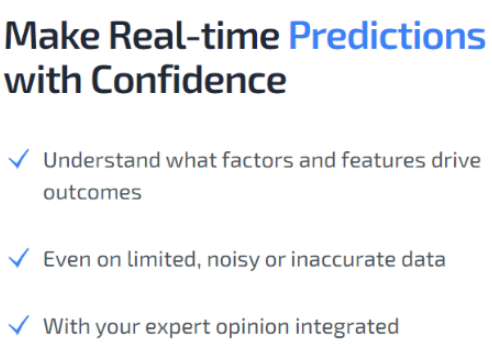
One of digiLab's key tasks has been to figure out how to distil its academic knowledge into scalable, widely-deployable software tools. The company has identified the need for three core, interoperable modules: a data cleaning tool, an emulator tool to accelerate existing simulators, and an easy-to-use intelligence tool on the front-end, for controlling workflows and understanding data.

Recent Developments

We could recycle most of last quarter's report as "digiLab sales continue to grow". Fusion and utilities are still two big markets, but large engineering companies are joining the customer list. We have seen a preview of the user interface which will further reduce the amount of coding that will be needed to implement the TwinLab solutions.

digiLab is working on the details of the investment round. The OT(S)EIS fund will be participating.





Neuroute.co

Neuroute Investment History			
Date	**Amount**	**Share Price**	**Type**
Jan 2022	£55,813	£1.89	SEIS
Jan 2022	£24,185	£1.89	EIS

Company Valuation	Share Price	Fund Holding
£0.00	£0.53*	2.5%

*Share price above represents avg loss relief per share applicable only to the shares acquired via the EIS investment.

Description of the business

Neuroute (formerly Neucruit) provides software to accelerate clinical trial recruitment and planning, by aggregating real-time data from over 25 million health-related conversations initiated online everyday. This helps sponsors and investigators pick the best trial locations, optimise their recruitment process, and access hard-to-reach demographics.

Founder Livia Ng introduced the company with the following question: "Could you imagine being locked down for 12 years?" That's how long it takes, on average, for a life-changing therapy to reach vulnerable patients. Clinical trials take up the majority of those 12 years, and over 86% of them are delayed by at least 6 months, costing the pharmaceutical industry more than $500bn a year. Finding the right patients in the right places is tough. Our hope with Neuroute is for synergies across the portfolio: many of our companies have been hit by difficulties and delays with trials.

For instance, Neuroute can virtualise the screening process by using chatbots to select which patients are eligible. By providing a patient registry that fulfils a study's eligibility criteria, the platform has reduced some RCTs' enrolment timelines by ~90%.

Progress Since Investment

Neuroute closed 14 contracts in 2022 (13 companies and one CRO) of which 60% were medical devices, 15% digital therapeutics and 25% traditional therapeutics.

In 2023 Neuroute closed a £1.1m funding round as an ASA (convertible at a discount of 20% to the next round) which included Swiss pharma company Debiopharm and a number of funds. Despite may requests, we continue to hear nothing meaningful from the company. But right at the end of the quarter we received information from another shareholder who is on the Board, indicating that there are "issues." We shall see.

Recent Developments

At the start of Q3 a Zoom conference call was held by the largest investor, a Spanish VC who have been on the Board since the start. At this call we learned that the founder had been having personal mental health problems and wanted to abandon the business. So although some investors were furious and wanted legal action to be taken, the reality is that this is likely to be fruitless since it would be expensive with any proceeds unlikely to cover the costs.

Worse, it also appears that the SEIS and EIS shares may have been issued on the same day by inexperienced accountants and this, in turn, may jeopardise the SEIS tax reliefs. Since we were not directors of the company, HMRC won't talk to us. So we are not yet aware of the details of the problem, but some investors have been asked to repay their SEIS tax reliefs. The Spanish VC who was a director at the time of the investment (although he has since resigned) is now endeavouring to find out from HMRC what the issue is. The original idea was good, and the investment was made in good faith.

Theraport Investment History

Date	Amount	Share Price	Type
Aug 2022	£10,004	£7.41	SEIS
Aug 2023	£30,000	£20.00	SEIS

Company Valuation	Valuation Share Price	Fund Holding
£0.24m	£20.00	23.9%

Description of the business

Theraport was set up by Anne Thomas, Travis Prescod and Anna Huhn, all still currently studying at Oxford. The founders are developing methods to increase and improve the loading of drugs into exosomes, vesicles and other small hollow targeted drug carriers.

Exosomes are one of the ways in which cells in the body communicate with each other. Proteins or other payloads are wrapped up in small bits of lipid bilayer with appropriate receptors and ligands on their surface so they are taken up by the right cells.

The possibility of directing more of a drug to the cells that need it by using exosomes is being developed, but one of the bottlenecks is the consistent and sufficient filling of the exosomes.

Although we can't say how Theraport achieves this, the first proof of concept experiments show positive results.

Theraport won an Innovate grant to help with further development of its technology. Experiments have given mixed results.

Recent Developments

Theraport has been waiting for a VAT refund to be able to finish off the key experiments they want to conduct. In the meantime the team have respectively started (Travis) and finished (Anna) their DPhils.

Scintam.com

Scintam Investment History			
Date	**Amount**	**Share Price**	**Type**
Oct 2022	£100,002	£7.00	SEIS
Dec 2023	£100,000	£10.00	EIS

Company Valuation	Valuation Share Price	Fund Holding
£1.77m	£10.00	13.7%

Description of the business

When expensive mechanical machinery has been in service for many years, often in hostile environments such as seawater or steam, it is often necessary to do repairs and maintenance and, in many cases, to replace certain parts. Often the original fixings, frequently bolts or nuts, will have become corroded so severely that they cannot be removed by conventional means. Another example is jet engines which require inspection and maintenance after 8,000 hours of flight. By effectively dissolving metallic fasteners, Scintam eliminates the need for drilling, grinding and heating processes that are hazardous for the operator and the component.

Scintam was founded by three young engineers who have developed a spark erosion machine which is designed especially for this task. The machine has a hand-held erosion head, which may be fitted with a head which fits snugly over the particular bolt/fixing which is to be removed. The operator can set the precise depth to which the erosion is to happen, and can then squeeze a trigger to carry out the process. In the case of an aircraft engine, Scintam believes that using its device will reduce the time taken to separate an engine from its casing from 30 hours to 2. That would result in a saving of about £1.96m over the lifetime of the engine. The initial target markets will be aerospace, wind turbines, remanufacturing, and nuclear decommissioning.

The company filed patents in August 22. The original research was done at the University of Nottingham, sponsored by Rolls Royce, who are aware of the need. During Q4 23 Scintam received its first major order worth £137,000, due to be delivered in summer 24. The order is for a system, known as the ARTES automated manufacturing system, which will remove corroded bolts used in auto turbochargers so that they can be remanufactured. The machine was developed with the aid of a £450,000 Innovate UK grant. In Dec 23 Scintam sought to raise an additional £300,000 at an enhanced share price. £200,000 of this was committed by existing investors, including £100k from OT(S)EIS. Scintam presented to WOTAN on the first Thursday of December 23 and had raised £110,000 by the end of the day. The Board decided to accept the extra £10,000.

Recent Developments

Scintam continues to make excellent progress. The second 'FastEDR' portable EDM system has been delivered to the customer in Switzerland (shipped under proforma invoice to be paid pending successful demonstration). Commissioning of the machine, demonstration, and training of the operators is due to take place in mid-October. This represents the launch of a “product platform”; the FastEDR system is combined with custom fixturing for alignment on a particular fastener type. This platform can be marketed to a wide range of aerospace gas turbine MRO shops as a turn-key solution that they hope will shorten sales cycles in this sector.

The first ARTES system was delivered in Q3 and will be used to remove seized screws from automotive turbochargers to enable more efficient remanufacturing. This sale is a key milestone for Scintam as it now has two distinct product lines serving two high-value engineering sectors.

A grant application has been made in the Aerospace Technology Institute (ATI) SME Programme. This application aims to deliver enhancements to the FastEDR platform for gas turbine engines that increase usability, boost accuracy, and widen the target audience. This is a relatively small grant request (~£320k project over 18-months) but will enable Scintam to develop a product that can be marketed to solve a particular problem that is known to be widespread. This should prevent the need for involving custom design work each time that a new customer is engaged. The outcome of the grant will be known by December 17th.

Genevation.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£2.00m	£1.60	32.5%

Genevation Investment History

Date	Amount	Share Price	Type
Jan 2023	£100,000	£0.40	SEIS
Nov 2023	£100,000	£0.80	SEIS
May 2024	£50,000	£1.60	EIS

Description of the business

Genevation was founded by Dr Prasun Chakraboty, a former Research Fellow at Dana Farber Cancer Institute, Harvard University and University of Dundee, with over 10 years of experience in RNA, cancer, molecular and cell biology and biochemistry. He previously raised more than £1m for research in the role of mRNA in cancer.

Genevation aims to be able to take a sample of healthy tissue from a patient, and also a sample of a tumour, and then, in a period of weeks, to produce an mRNA vaccine which will destroy the tumour. The first step is to demonstrate that this works in mice. The investment is to enable this first step, and the hope at the time of investment, was is that this would be completed by the end of 2023.

Genevation is now based at the Stevenage Biocatalyst Catalyst.

The sequencing of the normal vs the tumour samples from lung, colorectal and skin cancer was completed in Dec 23. There was then a delay caused by a password not being supplied and the researcher in question being on holiday. But work started again in early January.

At the start of Q2, Prasun gave a WOTAN presentation seeking to raise £150,000 to match an additional £50,000 from OT(S)EIS and was oversubscribed. This money, together with the capital which remained from the initial investment from OT(S)EIS should fund the company until mid 2025.

The plan remains to inject the vaccines into the mice, which have skin, colon and lung cancer, hoping to cure all three. It had been hoped that this would have been achieved by the end of Q2, but there were various delays and the initial batch of one of the vaccines did not pass the quality control checks. Genevation will get only one shot at this so it is very important that it is done as well as possible to give it the greatest chance of success.

Recent Developments

The good news is that the vaccines have now been made and at the time of writing (18 Sep) and have been safely received at the Charles River lab in North Carolina. The mice are now being prepared and, all being well will receive their vaccine injections around the end of September with a read-out from the trial in early November. There has been lots of interest from investors, potential partners , and also grant-giving bodies in all this, but everyone wants to see the results of the trial. Prasun is the only employee at the moment so the costs are low and Genevation has adequate cash reserves to fund most of the next 12 months if necessary.

AscendBio
PIONEERING CELL THERAPY CURES

Ascendbiotx.com

Company Valuation	Valuation Share Price	Fund Holding
£0.69m	£0.25	21.8%

AscendBio Investment History

Date	Amount	Share Price	Type
Mar 2023	£100,000	£0.25	SEIS
Sep 2023	£75,000	£0.50	SEIS
Nov 2023	£25,000	£0.50	EIS

Description of the business

AscendBio was founded by Marcus Yeo and Prof Ludovic Vallier. The company will develop cells from different organs based on induced pluripotent stem cells. Marcus was previously CEO of Definigen, a Cambridge University company providing stem cells for research based on Prof Vallier's research. Ludovic now serves as Professor of Stem Cells in Regenerative Therapies at the Berlin Institute of Health at Charité (BIH). His group, based at the BIH Centre for Regenerative Therapies, employs human stem cells to generate cells with a clinical interest for disease modelling and cell-based therapy. Some of his lab remain at the Cambridge Stem Cell Institute.

The first cell products that AscendBio will be developing are pancreatic cells, but there are more than 40 cell types which can be developed based on the technology and they will be used for research and also for clinical applications. The idea is to put the pancreatic cells in a matrix in the body so that they will produce insulin in response to rising blood sugar levels and in this way provide a treatment for diabetes.

OT(S)EIS invested £100k to get the company started.

AscendBio has set up in the Oxford BioEscalator which is optimally located to access Oxford Centre for Diabetes, Endocrinology and Metabolism (ODEM) expertise and University of Oxford Old Road campus platform scientific services. Human pancreatic beta cells with a physiologically relevant glucose sensitive insulin response were generated and the company then planned commencing its full seed round raise of £4.5m in July 2023 with a forecast autumn close. To accelerate commercial development the company has also engaged with corporate partners to leverage its platform technology in key areas of the fast-growing stem cell industrial sector.

In Q3 2023, Ascend Bio raised £175,000 of which £100,000 came from OT(S)EIS. This was in the form of an Advanced Subscription Agreement which would convert at a discount of 20% to the price at which the next larger round of capital would be raised, with a fallback conversion price of 50p per share by 31 March 2024. This should provide a runway until summer 2024.

No new capital had been raised by 31 March so the ASA duly converted at 50p per share.

Recent Developments

Negotiations with funders have continued during Q3 and will likely continue after this, but no offers of investment have been received. So it is likely that there will now be a change and that a new plan will be developed to launch a much smaller new company probably specialising in just one particular cell type and aiming to cure a particular disease. It has been agreed that the investors in Ascend Bio will receive some kind of involvement in this company in recognition of the financial support they provided to Ascend Bio.

In the light of the fact that an investor for AscendBio has not yet been found, we have reduced the valuation by 50%.

Company Valuation	Valuation Share Price	Fund Holding
£3.17m	£2.37	21.7%

Chambertech Investment History

Date	Amount	Share Price	Type
Mar 2023	£80,000	£0.42	SEIS
Nov 2023	£55,000	£0.71	SEIS
Feb 2024	£46,260	£2.37	SEIS
Apr 2024	£6,337	£2.37	EIS

Description of the business

Richard Chambers, an Oxford graduate in exercise physiology, has a distinguished career specialising in the measurement of electrical signals that cause atrial fibrillation (AF). With experience in over 3,000 cases, Richard identified significant shortcomings in current arrhythmia treatments: long, high-risk open-heart surgeries and often unsuccessful cardiac ablation procedures. In response, he has developed a revolutionary process and associated device for atrial ablation, expected to halve procedure duration and significantly improve success rates. Currently, around 1 million AF procedures are performed annually in the US and Europe.

Recent Developments

ChamberTech is very well organised and has made good progress in Q3 across three main areas: team building, product development, and setting up a Quality Management System (QMS).

Team Building

- Contracted a team of leading experts in cardiology and MedTech.
- Formed an Advisory Board of clinical and commercial specialists.
- Secured a Steering Committee of six influential electrophysiologists.
- Partnered with the London Institute of Healthcare Economics (LIHE), providing access to central London headquarters and MedTech expertise.

Product Development

- Transitioned to Pulsed Field Ablation (PFA) for greater safety and market alignment.
- Streamlined the catheter, reducing components from 80 to 20.
- Added an alignment system to enhance ease of placement.
- Sanford & Colb are exploring patent opportunities for our latest enhancements.

Quality Management System (QMS)

- Established a QMS framework with clear documentation, aligned with ISO 13485.
- Implemented policies and resources to support QMS governance.
- Initiated internal audits to monitor QMS processes and ensure product quality.

Looking Ahead

- Animal study is being planned for May 2025.
- LinkedIn profile established and website development ongoing.

Funding to Date

- Pre-seed funding: £135,000 (spent on prototype and testing).
- Biomedical Catalyst Grant: £1.55 million awarded.
- Private Investment: £210k raised, SEIS/EIS certificates are expected by December 2024.
- Year 2 funding opens June 2025, targeting £300k.

Surreyh2.com

Company Valuation	Valuation Share Price	Fund Holding
£3.68m	£2.15	7.4%

SurreyH2 Investment History

Date	Amount	Share Price	Type
Mar 2023	£75,000	£1.26	SEIS
Apr 2023	£25,000	£1.26	SEIS
May 2024	£100,008	£2.1484	EIS

Description of the business

SurreyH2 (legal name Clean Hydrogen Ltd) is developing a technology for very cost-effective production of green hydrogen. The patented technology was developed by Dr Bahman Horri of the University of Surrey. The CEO is Dan Somers who has a background in spinouts and chemical engineering.

The technology makes use of two parallel processes joined together with a 'chemical loop'. The first process is a standard alkaline electrolysis process (splitting water into hydrogen and oxygen using electricity). The second process is a thermochemical process whereby a cheap metal catalyst is oxidised in water to generate hydrogen, and the metal oxide solution 'loops' into the electrolyser where it is reduced back to metallic powder. This two step process allows for a very high rate of hydrogen production relative to the energy inputted.

The technology is very cost-effective for locations where hydrogen is required and where cheap, though variable, electrical energy from renewable sources such as wind or solar is available.

OT(S)EIS invested £100k as an SEIS investment as part of a £175k round.

In Q1 SurreyH2 has been awarded a £450k Innovate grant to make the next step in the development of the technology. In addition SurreyH2 was awarded £100k grant from TechX, part of the Net Zero Technology Centre accelerator programme which has been expanding connectivity particularly in Scotland.

In Q2 SurreyH2 raised capital to match the various grants (including £165,000 as a result of a WOTAN presentation) bringing the total capital raised to £1.3m.

Recent Developments

This was an active quarter for SurreyH2. The medium term plan is to build a 25kW system to demonstrate the technology and then to scale up to a 250kW system, hopefully for a commercial customer. The 25kW system is made up of about 25 small cells and the first step is to build and test the first of these. There was a difference of views about exactly how the project should proceed, but it seems that by the end of Q3, a good way forward has been found. An experienced project engineer is being appointed who will work with the academics to oversee the design, build and test of the first cell.

Revolutionary Concepts

Revolutionaryconcepts.co.uk

RCL Investment History			
Date	**Amount**	**Share Price**	**Type**
May 2023	£60,000	£0.34	SEIS
Dec 2023	£40,000	£0.68	SEIS

Company Valuation	Valuation Share Price	Fund Holding
£0.84m	£0.68	19.0%

Description of the business

Gas Boilers are likely to be outlawed in new build houses in the UK from 2025. While water heating can be provided by electricity, one gets out only the heat one puts in. But a heat pump will give 8 kW of heat out for 3 kW of electrical energy in. But existing air-source heat pumps are too large to fit inside the average house. Will Spain has established RCL to design an improved heat pump, which should be smaller and more efficient than anything currently available.

The basic idea is to draw air in from outside the house and then to compress it whereupon it becomes hot. The hot compressed air will then have its heat extracted through a heat exchanger and the low pressure warm air, or warm water (several possibilities exist) will then be ducted as necessary to provide space heating for the house. The now-cold compressed air will then be expanded through a second turbine, on the same shaft as the original compressor and helping to drive it, and will cool as it expands, finally leaving the house at maybe -15C.

The theoretical calculations show that 3 kW of electrical energy in may provide 8 kW of space heating for the house. The actual numbers will depend on the temperature of the external air on the day and the desired house temperature. Unlike conventional air-source heat pumps, the RCL compressor will be a much smaller unit and will be much the same size as a conventional boiler, and able to fit in a small cupboard. Additionally, there is no requirement for external components or refrigerants which reduces installation cost and complexity.

Progress Since Investment

Since the investment, Will, and his fellow engineer Simon Bainbridge have been working on the design, and completed the first prototype in Q1 24. This failed to achieve the 8 kW of heat output for 3 kW of energy in, due to a mismatch between compressor and turbine which prevented the system from operating at the expected pressures. Trials to fully understand this system behaviour continued, and feedback from these trials was fed into the next prototype (P2) which was finished in Q3. This was an improvement of P1, but also had some problems.

Recent Developments

P3 is under construction (awaiting the arrival of a particular motor) and should be ready for testing in Q4.

While waiting for parts for P3, RCL has also begun work of the design of a large scale industrial compressor, such as is used by thousands of factories worldwide to produce compressed air (often using £300,000 of electricity per year). The RCL design, based on the patent owned by BAE filed by Will while he worked there and to which he has access, should be about 20% more efficient than existing designs. So the cost-saving should make this an easy sale.

During the quarter RCL received the first advance payment from the company which is negotiating a manufacturing licence deal.

All in all, RCL is continuing to make very encouraging progress.

my celsius

Mycelsius.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£1.16m	£4.68	11.6%

Celsius Investment History

Date	Amount	Share Price	Type
Oct 2023	£67,504	£4.68	SEIS
Jul 2024	£67,500	£4.68	SEIS

Description of the business

The objective of Celsius (t/a MyCelsius) is to provide women going through menopause with a practical and easy-to-use device which will enable them to get relief from hot and cold flushes, which, in many cases, cause women significant distress. The Celsius device is worn on the wrist, where the skin is particularly thermally sensitive. When a woman feels a hot flush coming on, she presses a button and a battery activates a Peltier cooling block, giving her a cold pulse on her wrist. Preliminary tests have shown that in many cases this is sufficient to reduce the hot flush severity or interrupt it entirely if activated early enough.

The objective of the investment is to build and test more prototypes, to further improve the device efficiency and reduce its size. Thereafter, the goal is to build interest from customers and make the device available for pre-order on the Celsius website. (Both Tesla and the Brompton Bicycle company financed their initial production runs, by precisely this means. Experience showed that customers were prepared to pay in advance and also to wait a considerable time for delivery). Celsius is exploring whether this could also be applicable here.

The founders of Celsius are Maxime Kryvian, who had the initial idea and who will lead the marketing and commercial development, and Aonghus O'Donovan who is doing the engineering and design. Celsius is considering the potential for a patent.

Recent Developments

By the end of Q3, Celsius had a working and saleable device and the first production batch has been ordered and should be available for sale in Q1 25. At the end of Q3 it was possible to pay a deposit via the MyCelsius website to receive one of the first units when these become available at a significant discount to the £199.99 retail price.

In the meanwhile the founders have been steadily building their contacts in the field and attending conferences devoted to Women's health and particularly to the problems of menopause.

Matilda Investment History			
Date	**Amount**	**Share Price**	**Type**
Mar 2024	£60,000	£1.69	SEIS

Matilda.technology

Company Valuation	Valuation Share Price	Fund Holding
£0.60m	£1.69	10.0%

Description of the business

Matilda is a spin-out from Oxford University and the University has a 5% shareholding. The three founders, two of whom have PhDs have developed a device which sits behind the ears like a hearing aid and which displays the brainwaves of the users on a screen. AI is then used to analyse the waves which the user is also able to influence by thinking different thoughts.

After the investment the founders screened 25 users, each spending 90 minutes on the test. During the test they had to play a simple computer game, while also counting down from 1,000 in 7s. At other times they had to do more complicated tasks and at other times simply think pleasant thoughts. AI was used to analyse this data. It was possible to deduce the 'state of mind'

The first commercial targets are Egamers who can earn up to £3m pa. It is hoped that they will be able to use Matilda to ensure that they are at maximum concentration before a game, and therefore more likely to do well. Egaming is a very large global business with thousands of teams from university teams to national teams. In April it was announced that the total prize money at the Esports World Cup which will take place in Riyadh in Saudi Arabia, starting in July, would be $60m.

In Q2, Matilda started to manufacture the first version of its device in Shenzhen, China and began developing relations with commercial teams in the APAC-region where Gaming & Esports continues to be a flourishing high-growth sector.

Recent Developments

In Q3 the team secured a £22k grant from Innovate UK Department for Culture, Media and Sport (DCMS) to develop games and brain training exercises for the device. Also, Matilda has achieved its first commercial milestone by selling a package of the device and support to the Malta National Team in a prestigious International Esports Federation Tournament, scheduled to take place in November. At the end of Q3, modifications were being made to the hardware which is being manufactured in China.

Matilda has also applied for a £100k NATO grant. NATO is interested in several areas where Matilda might be able to help. NATO operations almost always involve teams of many people. In practice some people contribute more to the success of the team than others. NATO might like a way of knowing in real time who is focusing on the task in hand and so likely to contribute to the team and who isn't. Another area of interest is the performance of astronauts who might spend a long time in space and to be able to determine their state of mind in real time.

METACARPAL

Metacarpal Investment History			
Date	**Amount**	**Share Price**	**Type**
Apr 2024	£87,098	£1.98	SEIS

Metacarpal.co.uk

Company Valuation	Valuation Share Price	Fund Holding
£3.18m	£1.98	2.7%

Description of the business

Fergal Mackie is the founder and CEO of Metacarpal. He is an Enterprise Fellow of the Royal Academy of Engineering 1851 Royal Commission. With Metacarpal he has designed a body powered hand that as well as being strong and light, has fingers which individually adapt to the shape of the object being held.

Despite the development of robotic hand controlled by muscles on the amputated hand, there is a lot of benefit to a body controlled hand. It is instant in response, it provides feedback regarding the amount of force being exerted and is lighter than the robotic hands. The immediacy of response is very useful when learning to use the hands and people using the most recent prototypes were able to do things like catch and throw within a few hours of use.

A prosthetic hand has a price of roughly $10,000.

Oxford Technology invested £87k in a larger round of £783k which is aimed at getting the hand into production and onto the market, starting in the US. In the US roughly half the hands are mechanical and most of those are the original hook design from the early 1900's.

Recent Developments

The company has added Hugh Gill to the team as a Technical Manager from June until the year end. Hugh has been the managing director of Touch Bionics, and following their acquisition by Icelandic firm Ossur was Vice President of R&D Upper Extremity Prosthetics. He brings a wealth of experience in developing medical devices, and lots of connections across the industry.

Hugh has helped to manage progress toward a major milestone - the second design freeze. Following the arrival of the parts, these will go through verification and validation testing, and if they pass, the first orders for sale will be made. A Manufacture & Design Engineer, Stephen Pemberton, and an intern have also been added, bringing the team total to 7 now.

Following much debate Metacarpal has determined that since the US presents the best opportunity for fast growth for Metacarpal, it will focus the sales effort entirely on North America for the first 12 months using a direct approach. The company is currently hiring for this position.

MetalloBio

Metallobio.com

Company Valuation	Valuation Share Price	Fund Holding
£4.83m	£3.477	1.1%

Metallobio Investment History

Date	Amount	Share Price	Type
Apr 2024	£54,999	£3.477	SEIS

Description of the business

MetalloBio is developing new types of antibiotic molecules based around ruthenium cores. It is unusual in that they are not of natural origin. The MetalloBio molecules kill bacteria in a variety of different ways and thus far no genetic antibiotic resistance has surfaced, despite lengthy testing. Despite their potency, thus far toxicity has not been seen at the concentration required for anti-bacterial activity.

The MetalloBio compounds are broad-acting molecules able to tackle a very wide range of bacteria, especially infectious pathogens of particular concern to the World Health Organisation (WHO).

Although the development focus for MetalloBio is for systemic antibiotics, it is also working with companies to produce antibiotic surfaces for products such as catheters.

There is a steady rise in antibiotic resistance and governments are looking at different ways of encouraging the development of new antibiotics. It remains to be seen how these new approaches will benefit MetalloBio, but we think that there will be plenty of opportunities to make profits using the traditional approaches too.

The company is headed up by Dr Mike Murray and is based on technology developed by co-founders, Professor Jim Thomas and Dr Kirsty Smitten (deceased), out of The University of Sheffield.

In Q2 2024, MetalloBio completed a strategically important £420,000 investment into the company. A key microbiological study of 240 clinical isolates, composed of 60 examples of each of four bacterial pathogens involved in complicated urinary tract infections (cUTIs), showed that all 240 bacterial isolates are susceptible to KLS-116, MetalloBio's lead antibiotic drug candidate, across a range of concentrations which include those that would be expected to work in human patients in due course.

Recent Progress

Crucial experiments in support of the lead drug candidate, KLS-116's, were carried out this quarter. These indicated that KLS-116, in a new formulation, is well-tolerated and does not cause detectable toxicity or adverse effects when exposed in the metabolism of mice for up to 48 hours.

Due to the nature of antibiotics (which are aimed at bacteria) there is always a concern that this class of drugs may have an adverse effect on mitochondria – originally evolved from from bacteria – that are found in human and animal cells. If antibiotics can kill or disrupt pathogenic bacteria, then the same agents may perturb or ablate mitochondrial function; and this may prove to be a serious form of toxicity to human or animal patients. Experiments commissioned by MetalloBio show that KLS-219, the lead antimicrobial coatings candidate, is no more toxic than at least three other classes of existing antibiotics; in more detail, KLS-219 shows an acceptable level of impact on mitochondrial function. KLS-116 will be tested in the coming quarter.

In summary, MetalloBio is making encouraging progress.

Digistain.co.uk

Digistain Investment History			
Date	**Amount**	**Share Price**	**Type**
Apr 2024	£69,821	£0.36	SEIS

Company Valuation	Valuation Share Price	Fund Holding
£9.22m	£0.64	1.6%

Description of the business

Dr Hemmel Amrania is a physicist and clinical scientist specialising in spectroscopy of cancer. He is a Y Combinator alumnus equipped with a unique blend of both academic and commercial experience. After his PhD he ran a successful marketing consultancy after qualifying as a Google Partner where he was able to exploit his data analysis experience in the field of data driven marketing. Within the first 18 months he had accumulated over £3m in sales. Driven by a desire to translate his academic research to the clinic he started Digistain - a technology company which makes use of infrared spectroscopy to provide a rapid answer for a very difficult clinical question:

Should this patient who has breast cancer, receive chemotherapy or not.

Chemotherapy is implicated in 25% of breast cancer related deaths so avoiding it if possible is an important decision to make. Digistain takes a thin slice from the tumour that has been removed and analyses the mid-infrared spectrum. This is analysed to determine the degree of aneuploidy - (poor copying of DNA in cell division) in the cells. This in turn is combined with other data from the patient to provide a risk score that is unique to the biology of the patient. A score above 1 means a >10% likelihood of recurrence within 10 years, which is often taken as the cut-off for giving chemotherapy. Digistain enables the doctors to correctly identify the 49% of patients who don't need adjuvant chemotherapy. The technology was validated with 801 breast cancer patients.

Digistain is on the cusp of commercialisation. It has just received all the approvals it needs and is providing a service to oncologists around the world. It is much quicker and less expensive than incumbent genetic risk profiling and more than doubles the performance of the current gold standard NPI (Nottingham Prognostic Index).

Progress Since Investment

Digistain has signed a deal with Bupa to supply the service to Bupa patients. The kick off meeting was on the 25th of April. In Q2, Digistain's lab was inspected and ISO 13485 certified. Digistain entered the EIT healthech catapult. There were more than 300 entries and Digistain was in the top 4 and was awarded a prize which includes a pilot in Portugal.

Recent Developments

Sales have grown rapidly (shown in $)

Feb 24	3k
Mar 24	4k
Apr 24	11k
May 24	17k
Jun 24	15k
Jul 24	27k
Aug 24	35k

Full and Partial Exits

Name of Company	Description of Business	Date of (Initial) Investment	Total Paid for Shares Sold	Tax Reliefs (1)	Net Cost of Investment (2)	Date of Exit	Payout	Gain (3)	Cash Due and Fair Value of Milestones	Multiple (4)	Potential Further Milestones
Full Exits (all figures in £000)											
Ducentis Biotherapeutics	Immune modulation therapeutics	Jul 2015	£339	£118	£221	Sep 2022	£1,385	£1,164	£3,254 (5)	29.99	£33,264
Dark Beam	Web data security	Oct 2017	£153	£63	£90	Oct 2023	£128	£38	£55 (6)	2.03	£335
Partial Exits (all figures in £000)											
Animal Dynamics	Animal-inspired drones/robots	Jun 2015	£35	£18	£17	Mar 2019	£244	£227	-	14.35	-
Refeyn	Imaging Biomolecular Interactions	Jun 2018	£128	£47	£81	Sep 2022	£893	£812	-	11.02	-
Covatic	Personalised media feed	Feb 2017	£9	£3	£6	Sep 2022	£18	£12	-	3.00	-
Oxwash	Hyper-sustainable laundry	Mar 2019	£13	£8	£5	Oct 2023	£56	£51	-	11.2	-
		TOTALS	**£677**	**£257**	**£420**	-	**£2,724**	**£2,304**	**£3,309**	-	**£33,599**
Exits in Process (all figures in £000)											
Lightpoint	Real-time imaging for cancer surgery	Jun 2013	£471	£156	£315	*TBC (7)*	*£1,282*	*£967*	*£560*	*5.85*	-

(1) Assuming 40% taxpayer and ignoring any reliefs on capital gains tax which will have applied to investors with capital gains tax to pay.

(2) Calculated as Total Paid for Shares Sold minus Tax Reliefs.

(3) Calculated as Payout minus Total Net Cost of Investments. This does not take into account fees.

(4) Calculated as total of Payout, Cash Due and Fair Value of Future Milestones divided by the Net Cost of Investment. This does not take into account fees.

(5) Cash Due in the Ducentis exit includes cash held in escrow and the value of Arcutis shares, and the Fair Value of Future Milestones we calculate, after probability-adjusting, as approx. 9% of all potential future milestone payments.

(6) We calculate the sum of Cash Due in the Dark Beam exit (money held in a retention account) and the probability-adjusted Fair Value of Future Milestones to be 14% of all potential future payments.

(7) Potential Payout (£1,282,000) and Future Milestone payments (£560,000) in the Lightpoint exit will be held in escrow and released once all payments have been received and the company is liquidated (approximately 3 years). The values in italics are projections.

Investee companies no longer in the portfolio

Name of Company	Description of Business	Date of initial investment	Initial investment (£000)	Follow-on Investment (£000)	Total Investment (£000)	Date of closure	Total tax relief (1) (2) (£000)	Net loss after tax relief (1) (£000)
Message Missile	Mobile phone app	May 2013	£16	£25	£41	Jan 2016	£29	£12
Ibexis	Remote data loggers	May 2013	£50		£50	Feb 2017	£29	£21
Abgentis	Improved antibiotics	Mar2014	£42		£42	Jul 2019	£29	£13
Power OLEDs	Improved OLED technology	Dec 2013	£75	£178	£253	Dec 2020	£156	£97
Animal Dynamics	Animal-inspired drones/robots	Jun 2015	£75	£53	£128	Sep 2023	£94	£34 (3)
Lupe Technology	Better vacuum cleaner	Feb 2017	£51	£345	£396	Sep 2023	£236	£160
Electrowinning Technologies	Electrical metals capture	Feb 2017	£25	£35	£60	Sep 2023	£42	£18
Asymmetric Suzuki Reactions	Synthesising chiral molecules	Mar 2019	£65		£65	Sep 2023	£45	£20
Spendology	Mail-ordering foreign currency	Apr 2016	£38	£160	£198	Jun 2024	£119	£79
LRESystem	Lateral resurfacing elbow replacement	Jan 2018	£50	£75	£125	Jun 2024	£78	£47
Biomoti	Improved cancer drugs	Jan 2013	£75	£115	£190	Jun 2024	£119	£71
Molecular Warehouse	Proteins for diagnostics and therapeutics	Apr 2015	£75	£167	£242	Sep 2024	£149	£93
		Totals	**£637**	**£1,153**	**£1,790**	-	**£1,125**	**£665**

(1) Assuming 40% taxpayer and ignoring any reliefs on capital gains tax which will have applied to investors with capital gains tax to pay.

(2) Investors in the closed companies have received emails about how they can claim loss relief.

(3) Animal Dynamics shareholders had the option to sell, and those who took this option made a return of just under 14x on the after-tax share price of their shares.

Brief notes on the closed companies (i)

Message Missile was founded by a pre-university student and the aim was to enable Tesco, the first customer, to be able to alert all those within 200 yards of a particular store to the fact that there was a deal on bananas. Although he went to university to read computer science, the app never worked adequately.

Ibexis - this was a small investment in remote data loggers. For example, one system was installed in the middle of a lake, powered by solar panels. It sent back real time data about the salinity of the lake. Other system, in mountains, collected real time data about snowfall. The data was returned by satellite link. But orders were insufficient to justify further investment.

Abgentis was established by a distinguished biochemist to modify a known antibiotic to increase its effectiveness. Quite early on it was discovered that there was a technical reason why the original idea could not work and the project was abandoned.

PowerOLEDs was an investment into a new class of Organic LED materials with high efficiency and durability. Despite interest from several large players no deal was struck before the founder became ill and then passed away.

Animal Dynamics was a spin-out from the Zoology Department at Oxford. The company sought to use its insights into nature to design more efficient flying and swimming machines. The company did very well from a technical viewpoint and won a number of lucrative defence contracts from both the UK and US defence departments to build various devices, including a Dragon Fly drone, a swimming device based on a ray, and an autonomous paraglider, known as Stork which could carry 135kg for 400 km. The company raised additional capital in 2019 and the early investors were offered the opportunity to sell their shares at 14x the after tax cost. About 50% opted to do this. But a major problem was that OSE had not brought in other investors and ended by owning well over 99% of the company. When a manufacturing facility was set up to manufacture Stork, the monthly costs greatly increased and OSE were unable to find other investors to come in. BAE eventually acquired the company for £1 and took over the manufacturing facility.

Lupe Technology was set up by two engineers who had previously worked on the design team at Dyson. Their aim was to design and manufacture what would be the world's best cordless vacuum, which would also be green and designed to last with replaceable parts, unlike today's throw-away products. In this aim, they succeeded brilliantly. The Lupe, which was manufactured in China by a manufacturer whose owner invested was rated as much the best cordless vacuum cleaner in the world by Vacuum Wars, who rated the top 50 brands. They do this very thoroughly, for example by putting 100 gm of sand on a deep pile carpet and weighing how much each brand picks up. Lupe was the winner by a large margin. Sadly, however, having a great product is not quite enough and although Lupe made good sales, aided by rave reviews, especially in the US, the sales were not quite enough to generate enough cash to replace the stock. Lupe sought to raise a larger sum - maybe £2m - to finance new stock and marketing to build the brand, but was not able to find an investor. One of the founders, who has invested heavily himself is still selling the remaining stock and still hopes to find a way forward.

Brief notes on the closed companies (ii)

Electrowinning Technologies was founded by Duncan Grant an expert on electric circuits both for handling high and low powers. He had designed the worlds lowest power consuming Radio which used 1/10 of the power of the next least power-hungry radio. The initial objective of EWT was to improve the quality and quantity of copper produced by companies which produce copper by controlling the very large (000s of amps) currents which these plants use more precisely. EWT was awarded a contract to install a system in one cell of such a plant, but, having spent the money to build the equipment, the contract was cancelled at the last minute without explanation so that the technology was never tried. A greatest shame, since, in theory at least, a large quantity of energy could be saved. Finally, EWT had a patent on how to inject a ⅙ harmonic waveform into the National Grid, which, in theory would enable the grid to transmit about 30% more power over the existing infrastructure. With the growth of electric cars, the grid will need a major upgrade over the next ten years. This idea could help. However, nothing has happened so far and it was decided to close the company.

Asymmetric Suzuki Reactions was a small investment in a spin-out from the Chemistry department at Oxford. The founder, working with the professor while doing her DPhil, had discovered a better method of achieving Suzuki reactions, a particular class of reactions used for producing chiral chemicals and used in the pharmaceutical industry. In theory using her technology could reduce costs and improve output for pharma companies. However, although interest was shown by one pharma company in Switzerland. In the end no paying customers were found and the company was wound up. The net loss was £19,512.

Spendology developed a SaaS system to enable tour operators and others to deliver foreign currency to customers by post before they go on holiday. This remains a big global need despite the use of cards. Many people like to have foreign currency in their wallets when the arrive in a foreign country. Spendology was just getting going when Covid struck and global travel ceased. This could hardly have been worse for Spendology, which then became loss-making and had to raise more capital to survive. In Q2 22 the £23bn international travel conglomerate, Internova, signed a franchise deal with Spendology for the US market. However, there were numerous delays in getting this deal live. In particular, various licences were required for regulatory reasons. Then, just before the launch, scheduled for 31 Oct 23, the launch was halted due to an audit by the state of California. At the start of Q1, it transpired that Internova had decided to use another company entirely (actually a company that was introduced to Internova by Spendology to help with the regulatory issues) and cancelled the deal with Spendology. In the light of all this, it was decided to close the business and the shares have nil value.

LRESystem. Joe Pooley, an orthopaedic surgeon invented the LRE (Lateral Resurfacing Elbow) in the late 1990s to meet the need of the patients on whom he operated. The product was a great success, and in the period from 2000 to about 2015 was installed in more than 1,000 patients. The company which manufactured and had the IP rights to the LRE was then sold, and, for technical reasons, the rights to the LRE then reverted to Joe Pooley, who then appointed his brother as the CEO to take over the commercial aspects. They owned the new company, 50/50 to start with. We invested to help get the company restarted. Despite the fact that the LRE had already been installed in 1,000 patients and that follow-up studies had been done with no adverse effects being found, it was necessary to apply for a new CE mark. This was a hugely bureaucratic and expensive process. Worse, the brothers fell out and a legal action was started by one of them to oust the other. The vote was put to the shareholders who, in the end, voted that both brothers should remain as directors. It was a recipe for disaster. Then Covid effectively provided the final blow. As the CE mark having finally been obtained and sales were just starting (19 LREs were sold in 2020 at a price of £6,000 each), all elective surgery ceased in Europe and no LREs at all were sold in 2021. A long time was spent negotiating with a company which distributes similar products to take over ownership of the product, but in the end this too came to nothing and the decision was taken to close the company in Q1 2024. A very sad end.

Brief notes on the closed companies (iii)

Biomoti - developed a coating for micron sized particles that would then be taken up by cancer cells and provide a depot of chemotherapy to increase the effectiveness of the cancer treatment. The results of tests carried out by a pharma company were very good. Unfortunately the pharma partner reorganised and stopped exploring the oncology market. Biomoti did not manage to get early stage interest from pharma nor did it manage to raise enough money to get the project to a stage where less adventurous pharma companies would be interested. The rise of cancer immunotherapy may have contributed to this. A real pity because the early in-vivo results were very good.

Molecular Warehouse - had a design of biosensor which would help create a platform of fast, cheap and accurate measurements. In particular there would be an advantage measuring small molecules. The company set out to develop both the electronic hardware software combination and the biology to do this. The electronics and software (which were a predictable engineering development) were finished before the biology was able to deliver quick and reliable results. The capability was however very interesting and a large development project was agreed with a pharma company. If it had been successful the economics would have very attractive. Unfortunately the project had a particular difficulty (the measurement target was mostly inside blood cells) which meant the technology was not successful the first time round. The customer decided not to continue funding the project. The company never really recovered.

OT(S)EIS Fund Portfolio

18th October 2024

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Run 3D	3D Gait Analysis for Physiotherapy	£100,000	18/12/2012	SEIS	£50,000	£400,000	8.00	Latest Share Price
		£15,000	18/10/2013	SEIS	£7,500	£60,000	8.00	
		£10,000	18/10/2013	Non SEIS/EIS	£10,000	£40,000	4.00	
		£3,000	10/11/2017	EIS	£2,100	£6,000	2.86	
		£10,206	29/03/2019	EIS	£7,144	£13,608	1.90	
		£2,317	03/04/2024	EIS	£1,622	£2,317	1.43	
BioMoti	Improved Cancer Drugs	£74,998	08/01/2013	SEIS	£37,499	£15,000	0.40	Discounted to £0
		£40,000	28/05/2014	EIS	£28,000	£11,200	0.40	
		£74,661	31/03/2021	EIS	£52,263	£20,905	0.40	
Combat Medical	Bladder Cancer Treatment	£74,999	02/04/2013	SEIS	£37,500	£196,300	5.23	Latest Share Price
		£74,998	05/12/2013	EIS	£52,500	£178,400	3.40	
		£10,002	29/10/2014	EIS	£7,000	£22,700	3.24	
		£34,271	05/12/2014	EIS	£24,000	£77,700	3.24	
		£74,998	10/03/2016	EIS	£52,500	£60,000	1.14	
		£64,995	12/10/2016	EIS	£45,500	£65,000	1.43	
		£129,212	30/03/2017	EIS	£90,400	£103,400	1.14	
		£27,058	12/03/2018	EIS	£18,900	£21,600	1.14	
		£54,223	26/03/2021	EIS	£38,000	£54,200	1.43	
		£21,218	01/04/2022	EIS	£14,900	£21,200	1.43	
Message Missile	Mobile App Geo-location Notifications	£16,000	23/05/2013	SEIS	£8,000	£3,200	0.40	Discounted to £0
		£5,000	18/10/2013	SEIS	£2,500	£1,000	0.40	
		£20,000	19/06/2014	SEIS	£10,000	£4,000	0.40	

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Ibexis Technologies	Remote Datalogging	£50,000	24/05/2013	EIS	£35,000	£14,000	0.40	Discounted to £0
Lightpoint Medical	Real-time Imaging for Cancer Surgery	£74,999	04/06/2013	SEIS	£37,499	£1,008,384	26.89	Share Price Equivalent to Exit**
		£75,000	10/03/2014	EIS	£52,500	£250,783	4.78	
		£9,991	07/11/2014	EIS	£6,994	£26,868	3.84	
		£124,895	04/12/2014	EIS	£87,427	£335,852	3.84	
		£100,000	10/03/2016	EIS	£70,000	£125,736	1.80	
		£20,000	24/03/2016	EIS	£14,000	£25,147	1.80	
		£26,941	27/03/2019	EIS	£18,858	£26,368	1.40	
		£38,825	25/03/2020	EIS	£27,178	£38,000	1.40	
Metal Powder & Process	High Quality Metal Powder Production	£150,000	16/08/2013	SEIS	£75,000	£150,000	2.00	Latest Share Price
Power OLEDs	Improved OLED Technology	£75,000	11/12/2013	SEIS	£37,500	£15,000	0.40	Discounted to £0
		£25,000	18/07/2014	EIS	£17,500	£7,000	0.40	
		£30,000	27/04/2015	EIS	£21,000	£8,400	0.40	
		£30,000	04/09/2015	EIS	£21,000	£8,400	0.40	
		£60,065	05/04/2017	EIS	£42,000	£16,800	0.40	
		£33,332	08/03/2018	EIS	£23,300	£9,300	0.40	
Abgentis	Improved Antibiotics	£42,191	27/03/2014	SEIS	£21,100	£8,400	0.40	Discounted to £0

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

**Note: Lightpoint investments are valued based on the share price calculated as a fair equivalent of the exit arrangements.

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Designer Carbon Materials	Endohedral Fullerene Production	£75,000	03/04/2014	SEIS	£37,500	£125,000	3.33	Latest Share Price
Sasets	Software for Construction Industry	£75,000	30/07/2014	SEIS	£37,500	£37,500	1.00	Latest Share Price
		£75,000	22/01/2016	EIS	£52,500	£30,600	0.58	
Sime Clinical AI	Rapid Diagnostic to Protect Pre-term Baby Lungs	£75,000	04/09/2014	SEIS	£37,500	£297,200	7.92	Latest Share Price
		£100,000	07/04/2016	EIS	£70,000	£355,700	5.08	
		£25,040	12/11/2018	EIS	£17,500	£41,900	2.39	
Expend	Software to Reduce Paperwork for Expenses	£75,000	23/12/2014	SEIS	£37,500	£3,300,000	88.00	Latest Share Price
		£17,338	09/02/2017	EIS	£12,100	£62,814	5.18	
		£3,000	04/12/2017	EIS	£2,100	£4,125	1.96	
		£13,000	28/08/2018	EIS	£9,100	£28,600	3.14	
		£30,719	29/03/2019	EIS	£21,500	£67,581	3.14	
		£29,300	25/03/2020	EIS	£20,500	£64,461	3.14	
Molecular Warehouse	Proteins for Diagnostics and Therapeutics	£75,000	21/04/2015	SEIS	£37,500	£15,000	0.40	Discounted to £0
		£75,000	02/02/2016	EIS	£52,500	£21,000	0.40	
		£20,000	24/03/2016	EIS	£14,000	£5,600	0.40	
		£52,005	14/09/2016	EIS	£36,404	£14,561	0.40	
		£20,000	22/09/2017	EIS	£14,000	£5,600	0.40	
Animal Dynamics	Mechanical Engineering inspired by Animal Motion	£75,000	29/06/2015	SEIS	£37,500	£243,662	6.50	Proceeds From Sale & Discounted to £0**
		£35,220	27/11/2017	EIS	£24,654	£9,861	0.40	
		£3,001	30/07/2018	EIS	£2,100	£840	0.40	
		£14,391	30/03/2020	EIS	£10,074	£4,029	0.40	

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

**Note: Valuation of the first investment in Animal Dynamics is based on the proceeds from sale. The values of the remaining investments represent available loss relief.

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Ducentis Biotherapeutics	Immune Modulation Therapeutics	£50,000	13/07/2015	SEIS	£25,000	£1,429,186	57.17	Proceeds From Sale & Fair Future Milestones**
		£30,000	14/12/2015	SEIS	£15,000	£666,951	44.46	
		£160,275	30/03/2017	EIS	£112,193	£1,781,602	15.88	
		£45,314	29/03/2018	EIS	£31,720	£453,331	14.29	
		£53,820	13/03/2019	EIS	£37,674	£307,676	8.17	
Bioarchitech	Engineered Oncolytic Virus	£79,560	13/08/2015	SEIS	£39,800	£795,600	20.00	Latest Share Price
		£40,000	08/03/2016	SEIS	£20,000	£240,000	12.00	
		£16,200	07/07/2017	EIS	£11,300	£97,200	8.57	
		£29,000	12/10/2017	EIS	£20,300	£145,000	7.14	
		£89,674	29/03/2019	EIS	£62,800	£298,900	4.76	
		£4,637	19/12/2019	EIS	£3,200	£9,900	3.06	
		£36,758	25/03/2020	EIS	£25,700	£78,800	3.06	
		£69,804	31/03/2021	EIS	£48,900	£104,700	2.14	
Orbit Discovery	Peptide Drug Development	£100,000	27/11/2015	SEIS	£50,000	£111,200	2.22	Latest Share Price
		£38,245	07/07/2017	EIS	£26,800	£38,200	1.43	
Curileum Discovery	Intestinal Tract Therapies	£75,000	07/03/2016	SEIS	£37,500	£476,200	12.70	Latest Share Price
		£25,950	19/05/2016	SEIS	£13,000	£164,800	12.70	
		£20,000	15/07/2016	SEIS	£10,000	£127,000	12.70	
		£20,000	16/07/2016	EIS	£14,000	£127,000	9.07	
		£19,997	28/10/2016	EIS	£14,000	£258,000	18.43	
		£20,002	08/11/2016	EIS	£14,000	£258,000	18.43	
		£30,000	11/05/2017	EIS	£21,000	£387,100	18.43	
		£102,020	27/03/2019	EIS	£71,400	£1,316,400	18.43	
		£4,330	29/03/2019	EIS	£3,000	£55,900	18.43	
		£13,791	25/03/2020	EIS	£9,700	£55,200	5.71	
		£29,656	19/12/2022	EIS	£20,800	£29,700	1.43	

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

**Note: Valuation of Ducentis investments is based on the proceeds from sales (after the exit) and the fair value of future milestones (approx. 10% of the max potential milestones)

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Spendology	Online Financial Interface	£37,500	01/04/2016	SEIS	£18,750	£7,500	0.40	Discounted to £0
		£62,500	20/10/2016	EIS	£43,750	£17,500	0.40	
		£25,000	13/09/2017	EIS	£17,500	£7,000	0.40	
		£65,329	06/03/2023	EIS	£45,731	£18,293	0.40	
		£7,331	01/12/2023	EIS	£5,131	£2,053	0.40	
Active Needle Technology	Ultrasound Visible Needles	£50,000	05/04/2016	SEIS	£25,000	£375,580	15.02	Latest Share Price
		£65,000	23/08/2016	EIS	£45,500	£312,480	6.87	
		£19,000	07/03/2017	EIS	£13,300	£91,318	6.87	
		£30,000	29/03/2017	EIS	£21,000	£144,185	6.87	
		£28,000	02/01/2018	EIS	£19,600	£100,154	5.11	
		£101,781	18/03/2019	EIS	£71,200	£270,447	3.80	
		£32,122	25/03/2020	EIS	£22,500	£85,353	3.80	
		£55,653	24/03/2021	EIS	£39,000	£123,231	3.16	
		£7,728	03/04/2023	EIS	£5,410	£7,728	1.43	
Oxford Nanoimaging	Super-resolution Microscopes	£100,000	29/04/2016	SEIS	£50,000	£1,050,000	21.00	Latest Share Price
Entia	Portable Blood Analyser	£75,000	19/05/2016	SEIS	£37,500	£133,825	3.57	Latest Share Price
		£9,504	21/10/2016	EIS	£6,700	£16,962	2.55	
		£48,554	30/11/2017	EIS	£34,000	£58,326	1.72	
		£89,934	01/02/2019	EIS	£63,000	£74,629	1.19	
		£26,017	24/03/2021	EIS	£18,200	£19,257	1.06	
Covatic	Personalised Media Feed	£39,776	02/02/2017	SEIS	£19,888	£27,743	1.39	Latest Share Price
		£60,224	06/02/2017	EIS	£42,157	£41,796	0.99	
		£30,000	05/02/2018	EIS	£21,000	£14,965	0.71	
		£67,997	31/03/2021	EIS	£47,598	£39,156	0.82	
		£37,926	01/04/2022	EIS	£26,548	£16,485	0.62	

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Electrowinning Technologies EWT	Electrical Metals Capture	£25,000	06/02/2017	SEIS	£12,500	£5,000	0.40	Discounted to £0
		£35,000	29/09/2017	SEIS	£17,500	£7,000	0.40	
Lupe Technology lupe	Better Vacuum Cleaner	£51,000	20/02/2017	SEIS	£25,500	£10,200	0.40	Discounted to £0
		£30,000	22/02/2017	EIS	£21,000	£8,400	0.40	
		£51,000	12/03/2018	EIS	£35,700	£14,280	0.40	
		£37,001	12/03/2018	EIS	£25,900	£10,360	0.40	
		£9,999	27/03/2018	EIS	£6,999	£2,800	0.40	
		£138,719	25/03/2020	EIS	£97,103	£38,841	0.40	
		£50,243	12/03/2021	EIS	£35,170	£14,068	0.40	
		£27,864	01/04/2022	EIS	£19,505	£7,802	0.40	
Process Vision Process Vision	Gas Inspection Optics	£99,999	27/03/2017	SEIS	£50,000	£99,999	2.00	Latest Share Price
		£3,000	28/06/2018	EIS	£2,100	£3,000	1.43	
		£68,494	31/03/2021	EIS	£47,946	£102,741	2.14	
		£6,858	01/12/2023	EIS	£4,801	£6,858	1.43	
Gripable GRIPABLE	Mobile Rehab Technologies	£49,999	15/09/2017	SEIS	£25,000	£88,000	3.52	Latest Share Price
		£106,934	27/02/2019	EIS	£74,900	£101,600	1.36	
		£33,219	15/12/2020	EIS	£23,300	£24,292	1.04	
		£69,682	02/03/2022	EIS	£48,800	£50,956	1.04	
Dark Beam Darkbeam	Web Data Security	£50,000	06/10/2017	SEIS	£25,000	£45,000	1.80	Share Price Equivalent to Exit**
		£25,000	05/02/2018	SEIS	£12,500	£22,500	1.80	
		£10,000	09/02/2018	SEIS	£5,000	£9,000	1.80	
		£18,200	26/03/2018	EIS	£12,700	£16,380	1.29	
		£50,000	03/09/2018	EIS	£35,000	£90,000	2.57	

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

**Note: Dark Beam investments are valued based on the share price calculated as a fair equivalent of the exit arrangements.

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
LRESystem	Lateral Resurfacing Elbow Replacement	£50,000	12/01/2018	SEIS	£25,000	£10,000	0.40	Discounted to £0
		£75,050	21/01/2019	EIS	£52,535	£21,014	0.40	
Atelerix	Transport of Viable Cells	£50,000	22/01/2018	SEIS	£25,000	£18,164	0.73	Latest Share Price
		£133,186	03/04/2019	EIS	£93,231	£47,751	0.51	
		£196,851	30/03/2020	EIS	£137,795	£68,595	0.50	
		£44,767	04/06/2021	EIS	£31,337	£20,005	0.64	
		£11,100	29/11/2022	EIS	£7,770	£4,754	0.61	
Refeyn	Imaging Biomolecular Interactions	£66,240	26/06/2018	SEIS	£33,100	£840,300	25.37	Latest Share Price & Proceeds From Sale**
		£33,760	27/06/2018	EIS	£23,600	£422,500	17.88	
		£121,851	24/01/2019	EIS	£85,300	£955,900	11.21	
		£67,468	04/07/2019	EIS	£47,200	£528.600	11.19	
Cytecom	Detection of Bacteria Viability	£100,440	31/07/2018	SEIS	£50,200	£151,632	3.02	Latest Share Price
		£55,000	27/11/2019	EIS	£38,500	£83,033	2.16	
		£84,021	04/12/2020	EIS	£58,800	£126,844	2.16	
		£53,986	31/03/2021	EIS	£37,800	£56,649	1.50	
Polycat UK	Nanoparticle Polymer Catalysts	£50,002	05/10/2018	SEIS	£25,000	£441,300	17.65	Latest Share Price
		£22,058	29/03/2019	SEIS	£11,000	£43,300	3.92	
		£11,985	23/03/2020	SEIS	£6,000	£23,500	3.92	
		£112,998	16/12/2020	EIS	£79,100	£148,700	1.88	
		£11,784	10/02/2021	EIS	£8,200	£15,500	1.88	
		£60,350	19/04/2022	EIS	£42,200	£60,400	1.43	

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

**Note: Multiple = Valuation of Refeyn investments is based on the proceeds from sales (after the partial exit) and the latest share price for the shares remaining in the portfolio

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Asymmetric Suzuki Reactions	Synthesising Complex Chiral Molecules	£65,040	18/03/2019	SEIS	£32,520	£13,008	0.40	Discounted to £0
Oxwash	Hyper-sustainable Laundry	£50,000	15/03/2019	SEIS	£25,000	£26,883	1.08	Latest Share Price
		£50,000	22/03/2019	EIS	£35,000	£28,117	0.80	
		£54,679	07/11/2019	EIS	£38,275	£21,763	0.57	
		£36,069	12/05/2021	EIS	£25,248	£10,401	0.41	
The Smarter Food Company	Foods for Pre-diabetics	£89,998	03/04/2019	SEIS	£45,000	£136,900	3.04	Latest Share Price
		£96,058	31/03/2021	EIS	£67,200	£106,700	1.59	
Connexin Therapeutics	Glaucoma Treatment	£66,325	04/04/2019	SEIS	£33,200	£66,300	2.00	Latest Share Price
Cytoswim	Sperm Cell Separation	£100,274	04/04/2019	SEIS	£50,100	£254,000	5.07	Latest Share Price
		£11,489	16/09/2021	SEIS	£5,700	£11,500	2.00	
		£59,038	28/09/2021	EIS	£41,300	£59,000	1.43	
		£34,194	01/04/2022	EIS	£23,900	£34,200	1.43	
Nikalyte	Nanoparticle Generators	£49,738	06/08/2019	SEIS	£24,869	£83,770	3.37	Latest Share Price
		£16,152	24/02/2020	SEIS	£8,076	£27,203	3.37	
		£77,886	16/10/2020	EIS	£54,520	£131,176	2.41	
		£44,987	29/11/2021	EIS	£31,491	£75,768	2.41	
		£60,276	23/02/2023	EIS	£42,193	£64,294	1.52	
		£2,317	03/04/2024	EIS	£1,622	£2,317	1.43	

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For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Etcembly	Immune pattern recognition system	£70,588	21/01/2020	SEIS	£35,294	£176,471	5.00	Latest Share Price
		£20,587	16/11/2020	SEIS	£10,294	£13,030	1.27	
		£49,411	18/11/2020	EIS	£34,588	£32,599	0.94	
		£17,677	23/02/2021	EIS	£12,374	£11,662	0.94	
		£42,444	19/04/2022	EIS	£29,711	£20,373	0.69	
Flare Bright	Autonomous drones	£29,000	28/09/2020	SEIS	£14,500	£29,000	2.00	Latest Share Price
CryoLogyx	Cell cryopreservation	£75,000	12/03/2021	SEIS	£37,500	£349,175	9.31	Latest Share Price
		£86,336	29/03/2023	EIS	£60,435	£167,816	2.78	
		£15,083	22/02/2024	EIS	£10,558	£5,083	1.43	
Zayndu	Seed treatment	£133,505	26/03/2021	EIS	£93,453	£228,324	2.44	Latest Share Price
		£83,029	01/04/2022	EIS	£58,120	£56,765	0.98	
		£51,548	01/09/2022	EIS	£36,084	£25,362	0.70	
		£66,562	23/02/2023	EIS	£46,593	£31,466	0.68	
Mach42	Simulation Optimisation	£74,999	31/03/2021	SEIS	£37,500	£165,720	4.42	Latest Share Price
		£28,996	27/07/2023	EIS	£20,297	£28,996	1.43	
Hydregen	Biocatalysis	£100,005	31/03/2021	EIS	£70,004	£186,543	2.66	Latest Share Price
		£63,151	27/03/2023	EIS	£44,206	£63,151	1.43	
Oxvent	Low cost ventilator	£79,124	01/04/2021	SEIS	£39,600	£79,100	2.00	Latest Share Price
		£60,000	27/05/2022	EIS	£42,000	£60,000	1.43	

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For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
OxCan	Early cancer detection	£50,000	29/06/2021	SEIS	£25,000	£128,700	5.15	Latest Share Price
		£50,000	02/07/2021	EIS	£35,000	£128,700	3.68	
		£28,314	27/07/2021	EIS	£19,820	£28,300	1.43	
MitoRx Therapeutics	Therapeutics targeting Mitochondria	£60,000	16/11/2021	SEIS	£30,000	£99,288	3.31	Latest Share Price
		£12,450	18/11/2021	Non SEIS/EIS	£12,450	£20,602	1.66	
		£9,750	24/01/2022	EIS	£6,825	£16,134	2.37	
		£101,820	17/11/2022	EIS	£71,274	£101,820	1.43	
		£11,100	29/11/2022	EIS	£7,770	£11,100	1.43	
		£52,803	23/02/2023	EIS	£36,962	£52,803	1.43	
		£31,602	27/10/2023	EIS	£22,121	£31,602	1.43	
OVO BioManufacturing	Improving vaccine manufacturing and antivirals	£90,799	19/11/2021	SEIS	£45,400	£123,930	2.73	Latest Share Price
		£176,355	24/03/2023	EIS	£123,449	£176,355	1.43	
digiLab Solutions	Next-generation machine learning	£75,000	13/12/2021	SEIS	£37,500	£510,000	13.60	Latest Share Price
		£75,000	04/08/2022	EIS	£52,500	£75,000	1.43	
Neuroute	Making clinical trials easier	£55,813	26/01/2022	SEIS	£27,907	£0	0.00	Discounted to £0
		£24,185	02/02/2022	EIS	£16,929	£6,772	0.40	
Theraport	Exosome Loading Technology	£10,004	15/08/2022	SEIS	£5,002	£27,000	5.40	Latest Share Price
		£30,000	10/08/2023	SEIS	£15,000	£30,000	2.00	
Scintam	Spark erosion tooling	£100,002	07/10/2022	SEIS	£50,001	£142,860	2.86	Latest Share Price
		£100,000	01/12/2023	EIS	£70,000	£100,000	1.43	

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For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Genevation	Personalised mRNA cancer vaccines	£100,000	24/08/2023	SEIS	£50,000	£400,000	8.00	Latest Share Price
		£100,000	14/11/2023	SEIS	£50,000	£200,000	4.00	
		£50,000	24/05/2024	EIS	£35,000	£50,000	1.43	
AscendBio	Cell generation from human stem cells	£100,000	03/03/2023	SEIS	£50,000	£100,000	2.00	Latest Share Price
		£75,000	28/09/2023	SEIS	£37,500	£37,500	1.00	
		£25,000	09/11/2023	EIS	£17,500	£12,500	0.83	
Chambertech	Improving the treatment of heart arrhythmia	£80,000	15/08/2022	SEIS	£40,000	£451,430	11.29	Latest Share Price
		£55,000	17/11/2023	SEIS	£27,500	£183,592	6.68	
		£46,260	27/02/2024	SEIS	£23,130	£46,260	2.00	
		£6,337	03/04/2024	EIS	£4,436	£6,337	1.43	
SurreyH2	Cost efficient green hydrogen	£74,999	30/03/2023	SEIS	£37,499	£127,974	3.41	Latest Share Price
		£25,001	12/04/2023	SEIS	£12,500	£42,660	3.41	
		£100,008	21/05/2024	EIS	£70,506	£100,082	1.43	
RCL	Novel compressor heat pumps	£60,000	12/05/2023	SEIS	£30,000	£120,000	4.00	Latest Share Price
		£40,000	20/12/2023	SEIS	£20,000	£20,000	2.00	
Celsius Innovations	Relief for menopausal hot flushes	£67,504	25/10/2023	SEIS	£33,752	£67,504	2.00	Latest Share Price
		£67,500	30/07/2024	SEIS	£33,750	£67,500	2.00	

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.

Company	Business	Amount Invested	Date	SEIS/EIS	Net Cost	Fair Value	Multiple*	Method of Valuation
Matilda	Performance-enhancing neurofeedback wearable	£60,000	13/03/2024	SEIS	£30,000	£60,000	2.00	Latest Share Price
Metacarpal	Body-powered prosthetic hand	£87,098	04/04/2024	SEIS	£43,549	£87,098	2.00	Latest Share Price
Metallobio	New antibiotic molecules	£54,999	04/04/2024	SEIS	£27,499	£54,999	2.00	Latest Share Price
Digistain	Infrared spectroscopy of cancer	£69,821	05/04/2024	SEIS	£34,910	£143,241	4.10	Latest Share Price

*Note: Multiple = Fair Value/Net Cost, where Net Cost takes into account only the tax relief against income tax and Fair Value includes loss relief where applicable (and assumes a 40% taxpayer)

For those investors who also have capital gains tax to pay, there are further CGT reliefs (SEIS) or CGT deferrals (EIS) available.