ShareSoc Company Webinar

6 December 2022

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Presentation team

Dr Arron Tolley
CEO

- Co-founded Aptamer Group in 2008
- Globally-recognised technical & commercial leader in aptamers
- Delivered several patent-pending process and product developments
- Ph.D. Structural & Molecular Biology

Jenny Cutler
Interim CFO

- Over 20 years of finance leadership experience, including AIM and main listed companies
- Chartered Accountant
- Joined Aptamer Group in 2022

Dr David Bunka
CTO

- Co-founded Aptamer Group in 2008
- Globally-recognised aptamer expert
- Pioneered automated in-house aptamer discovery platform
- Ph.D. Molecular Biology

Business snapshot

- **Solve intractable problems** for biotech and big pharma by developing Optimer® binders, which are a disruptive technology with key advantages over antibodies and other alternatives
- Disrupting the market with a proprietary, **scalable, automated platform** for rapid binder discovery tailored for **higher project success rates**
- Blue-chip customer base with **75% of global top 20 pharma** companies
- **£10.8m raised at IPO in December 2021**, meaning the Company is well-funded to execute its growth plans
- **Increased revenue in FY22 by 152% to £4.0m** in line with expectations
- **Cash balance at 30 June 2022 of £6.7m** (2021: £0.4m)
- Relocated to larger premises to allow increased capacity and service
- **Increased headcount by 44%** to meet the increased demand for Optimer® binders
- Making headway with the **development of next generation Optimer®+** affinity ligands

Service level agreements and licence deals with large stakeholders across life sciences

Cancer Research UK, AstraZeneca, DeepVerge, WuXi AppTec 药明康德, PinotBio, Bio-Works, ValitaCell, Wave Life Sciences, Figura Analytics, ProAxsis, Bioliquid

Introduction to Aptamer Group

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Alternative binder technologies are a rapidly growing segment of the affinity ligand market

- Target binding molecules are used in a wide range of applications in the life sciences
- These binders are known as 'affinity ligands' and represent a market worth **>$US 145.7bn** with **CAGR c.11.3%**
- Historically, this market has been dominated by antibodies
- More recently, alternative affinity ligands have emerged to address needs that antibodies cannot fulfil

Traditional Antibodies	Recombinant Antibodies *(synthetic)*	Protein Scaffolds *(synthetic)*	Nucleic Acid *(synthetic)*

Aptamers are an important disruptive platform within the affinity ligand space, with an existing market of US$2.5bn growing at ~20% CAGR due to attractive characteristics

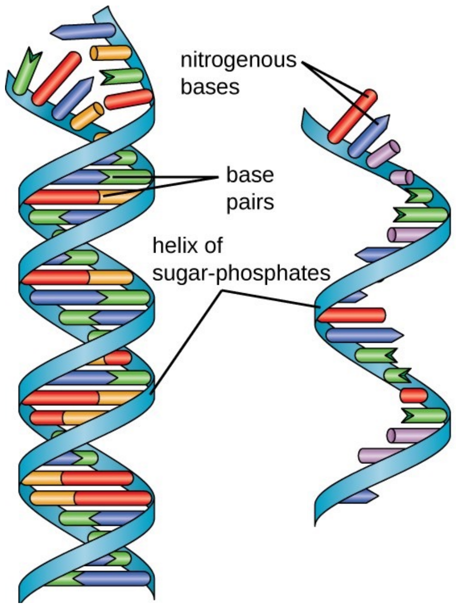
Growth drivers for aptamers

- Increasing acceptance of aptamer technology as alternative to failed antibody projects
- Increased need for drug targeting to improve efficacy of drugs
- Increased investment as benefits and superiority of aptamers over antibodies better understood

What is an aptamer?

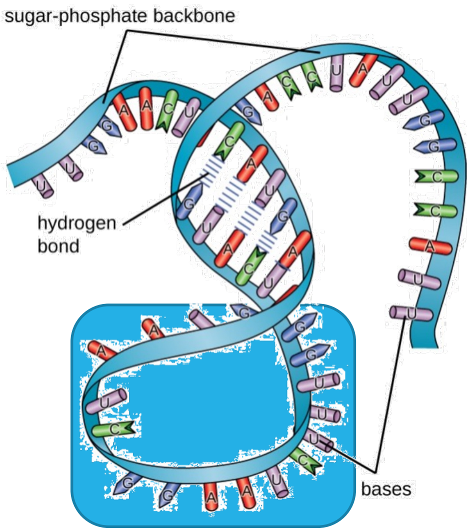
An aptamer is a short, synthetic piece of DNA (or RNA) that has been isolated from a library of 10^{14} different sequences, based on its ability to bind to a target of interest (a small molecule, protein or cell/tissue)

DNA is not just a double-stranded structure connected through base pairs



Analogous to strips of Velcro

Single-stranded DNA can form base pairs within the same strand to give a range of shapes



Most shapes have unpaired loops where the 'Velcro hooks' are available to bind to other molecules

These folded DNA structures can interact with other molecules e.g. a disease associated protein

The aptamer can be used in a variety of applications – from research assays and diagnostics, to biologic purification and as next-gen therapeutics

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Enabling the life science industry with the Optimer® platform

What we do

- We **discover and develop custom affinity binders** using our proprietary Optimer® platform to generate tools to enable new approaches in therapeutics, diagnostics and research applications
- We strive to deliver **transformational solutions that use Optimer® binders** to remove the scientific limits of researchers and developers across the life sciences

Why we do it

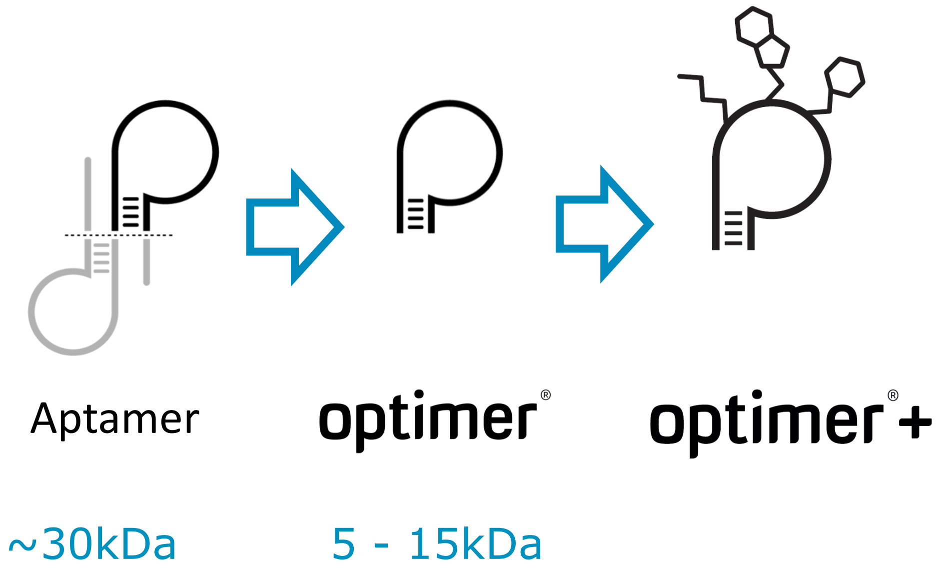
- 50% of research antibodies fail to meet the required performance standards
- Antibodies cannot be developed to some targets, limiting innovation and slowing progress in the life science industry
- Antibodies are expensive, unethical and expensive to manufacture, transport and store

The Optimer® platform

- The Optimer® platform is a **high-throughput, automated platform** for the development of Optimer® binders enabling:
  - **new targets** to be pursued that have proven intractable with alternative technologies
  - **new and improved applications** such as more accurate diagnostics, better drug development processes, new therapeutics, new QC reagents
  - **ethical compliance** with animal-free discovery, development and manufacture
  - **faster timelines** compared to traditional antibody development

The Optimer® platform

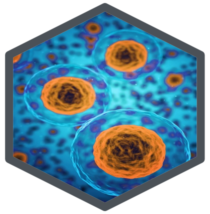
- An Optimer® is the **minimal aptamer sequence** which retains the ability to bind to the target
- Optimer® binders have a **more stable structure** than the parental aptamer which results in **improved binding properties**
- **Smaller molecular size** (<15 kDa compared to ~30 kDa for parent aptamer)
    - More cost-effective production
    - Greater yield during synthesis
    - Increased tissue penetration for targeted therapeutics
    - Interactions are closer to sensor surfaces giving better response in biosensors

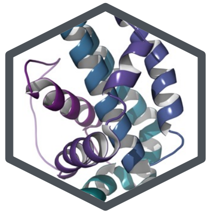


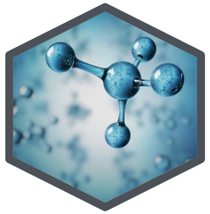
A full-length aptamer (left) contains the target binding region (dark) and unnecessary sequences e.g. primers (pale). Removal of these unnecessary sequences leaves only the Optimer® (centre).
Next-Generation Optimers with protein-like properties are in development (right)

USP: Automated high-throughput discovery platform

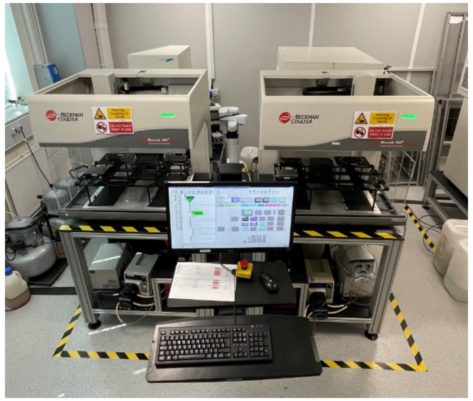
Tailored selection strategies, optimised for different target classes and applications, increases the potential for success in each Optimer® discovery campaign.







- Teams of specialists, with distinct processes to address different target types (proteins, small molecules, cells etc.) = **broader process application**
- Incorporation of customers' end application conditions increases likelihood that **aptamers will perform as required**
- Automation removes human error and variability from aptamer development = **increased reliability** and **higher success rates**
- Parallel processing under different conditions increases likelihood of identifying aptamers = **improved success rates (>70%)**
- Proprietary automated aptamer development platforms enable high-throughput processing = **rapid turnaround** and **high capacity**
- Bespoke integrated automation platform is **difficult and expensive for others to replicate**
- Processes are protected through **proprietary know-how**
- Modular automated platforms can be **readily scaled to increase capacity**



Aptamers are applicable in multiple verticals within the life sciences

The aptamer platform technology has demonstrated long-term value generation in several key verticals in the life sciences market, with high value opportunistic diagnostic and therapeutic licensing and milestone-based deals

Competitive Landscape

Company	Platform	Research reagents	Bioprocess	Diagnostics	Therapeutics
abcam	Antibody	✓		✓	✓
argenx	Camelid antibody fragment				✓
bicycle therapeutics	Bicycle				✓
Avacta	Affimer			✓	✓
Molecular partners	Darpin				✓
aptamer group	**Aptamers & Optimer®**	✓	✓	✓	✓

Bioprocessing tools and diagnostic reagents have **faster route to market**

Enabling therapeutics programs offers **high long-term value**

Aptamer Group business units

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- **Contract research services**
  - Global research antibody market valued at $3.6bn in 2020
  - Generating revenues
  - Optimer®-based affinity purification
  - Optimer® CMC / QC release reagents
  - Optimer® research reagents
  - Horizon scanning
- **Revenue model:** fee-for-service and licensing model
  - Early-stage revenue
  - We are not exposed to customers' R&D risk
  - We retain IP, which locks in downstream value

aptamer DIAGNOSTICS

- **Enabling Diagnostics**
  - Global diagnostic speciality antibodies market valued at $19.9bn in 2020
  - Optimer® lateral flow devices (LFD)
  - Optimer® biosensor reagents
  - Optimer®-based immuno-assays (e.g., ELISA)
  - Applications across human health, environmental and agri-food
- **Revenue model:** fee-for-service, royalties and licensing fee
  - IP transfer/success fees
  - Revenue layers-up
  - Very high margin licence and royalty
  - 1-2 years conversion timeframe

aptamer THERAPEUTICS

- **Enabling Therapeutics**
  - Global antibody therapeutic market worth in excess of $114.2bn in 2021
  - Optimer®-drug conjugate (ODC)
  - Optimer®-enabled delivery of gene therapies
  - Optimer® agonist/antagonists
- **Revenue model:** fee-for-service, royalties and licensing fee
  - IP transfer/success fees
  - Revenue layers-up
  - Very high margin licence fees
  - 2-3 years conversion timeframe

Unique platform technology driving three business models generating revenue in the near-term, with potential for substantial value creation in the longer term

Operational review & progress since IPO

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A clear strategy to grow in action

Underpinned by £10.8m IPO fundraise, Aptamer Group has accelerated growth and increased value capacity over multiple verticals to deliver more solutions and higher value engagements

Scale-up & Automation

Increasing the capacity, enabling simultaneous handling of hundreds of targets for increase throughput and handling large projects

Platform innovation

Developing our proprietary scaffold technologies & protection of these technologies via patents

Commercial expansion and service development

Accelerating commercial expansion, service development and upgrade systems & IT in line with expanded business' requirements

Working Capital

Working capital during expansion & delivery of strategic plan

Progress: Scale up – business relocation

- Scaling of current Optimer® development platform to service expected demand
    - Scale-up includes expanding automation systems and increasing capacity of the current platform
    - Additional equipment has been purchased and is being integrated into the platform to remove process bottlenecks
- Post-year end in October 2022, the planned relocation to larger (~18,000 sqft) purpose-built laboratories was completed
    - This will allow Aptamer to scale its automation and operational efficiency and service the increase in demand for Optimer® binders

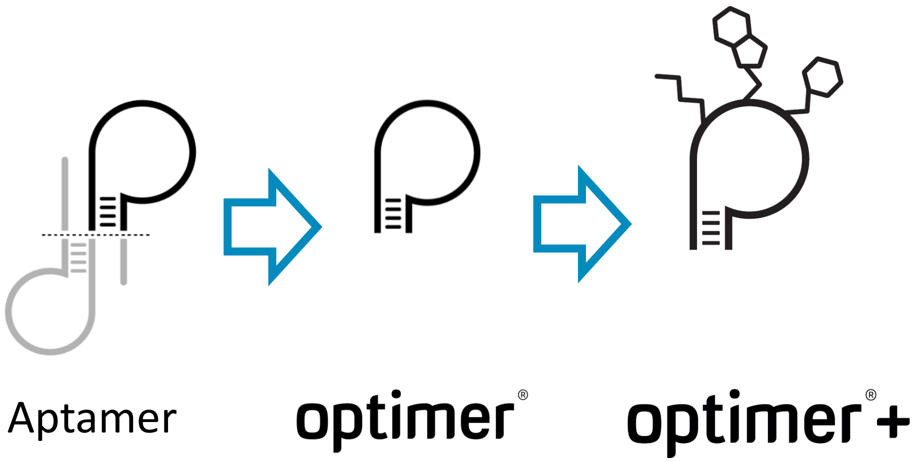


Progress: Commercial expansion

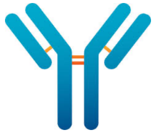
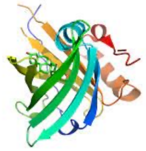
- Appointment of Jenny Cutler as Interim Chief Financial Officer
- Appointment of Alastair Fleming as Chief Operating Officer
- Headcount and expertise increasing, with 44% increase to 49 employees during FY22, increased to 54 since year end
- Increased sales and marketing team to 10 people, covering all major territories
- Passed ISO:9001 audit and expanded Quality team
- Continue to grow assay development team to demonstrate Optimer® function; providing turn-key solutions for current and future customers as an additional service offering
- Appointment of Dr Shozo Fujita, international expert and developer of novel nucleotide chemistries, to Scientific Advisory Board, assisting with implementation of next generation Optimer®+ platform

Progress: Platform innovation

- Building exemplification data of Optimer® binders to support application across the life sciences
- Optimer® +
  - Work to integrate our novel nucleotide chemistry platform is underway
  - Will broaden applications and improve the performance of existing Optimer® technology
  - Be a strong differentiator to enter new markets, address new targets and give us a proprietary position
  - Give us an increased share of the affinity ligand market
  - We aim to evaluate the performance of this technology over the coming months
- Our R&D developments underpin our existing strong intellectual property position



Optimer®+ a 3rd generation affinity ligand

	Challenges that new affinity ligands seek to address	**1st Gen** Antibodies	**2nd Gen** Protein scaffolds	**2nd Gen** Optimer®	**3rd Gen** Optimer® +	Optimer® + advantages
						
Targets (pathogens or disease biomarkers)	• Only ~15% human proteins studied with current affinity ligands • Large opportunity for new affinity ligands to create new products	◔	◑	◑	●	• New targets enable new applications in Tx and Dx
Discovery & development	• Process of discovering and validating Tx and Dx targets	◑	◑	◕	●	• Synthetic, readily-functionalised, high affinity reagents • Single pass discovery • 4 weeks
Manufacture	• Challenges to scale and consistently manufacture	◑	◑	●	●	• Solid phase synthesis • Known sequence is retained for security of supply and robust manufacture
Deployment	• Cold-chain logistics, storage & shelf-life limit distribution	○	○	●	●	• No requirement for cold chain logistics increases breadth of distribution

Key highlights for FY22 (18 October)

Aptamer Group

- Raised gross proceeds of £10.8 million in conjunction with AIM listing on 22 December 2021

Aptamer Solutions

- Contract secured with a top five global pharma company to develop Optimer® binders as QC reagents for a novel neurodegenerative disease vaccine (Jul)
- Two large commercial agreements signed with public life science companies to develop Optimer® ligands for use on proteomic and multiplex platforms (Aug, Oct)
- Agreement with Bio-Works Technologies to co-develop a new Optimer®-based affinity purification resins for improved purification of gene therapy vector manufacturing (Aug)

Aptamer Diagnostics

- Entered a partnership with ProAxsis to develop Optimer® binders to replace the antibodies in their respiratory diagnostic assays (Aug)
- Continued expansion of partnership with DeepVerge, with Optimer®-enabled Microtox®PD systems installed at multiple sites across the UK as part of the Environmental Monitoring for Health Protection (EMHP) program for SARS-CoV-2 monitoring (Nov, Mar)
- Agreement with precision oncology company to develop a companion diagnostic assay to support novel therapeutic development (Mar)

Aptamer Therapeutics

- Signed a research collaboration with WuXi AppTec Research Services Division to identify new Optimer®-enabled therapeutics (Jul)
- Continued collaboration with AstraZeneca, supporting the development of Optimer® binders as next-generation drug delivery vehicles in kidney disease (Mar)
- Extension of collaboration with PinotBio identifying Optimer® against several targets to develop targeted chemotherapeutic Optimer-drug conjugates (May)

Post-year end highlights (as at 18 October)

Aptamer Group

- In October 2022, the planned relocation to larger purpose-built laboratories was completed. This will allow Aptamer to scale its automation and operational efficiency and service the increasing demand for Optimer® binders

Aptamer Solutions

- Multiple contracts signed with a top ten pharmaceutical company to develop Optimer® binders for bioprocessing to support the purification of novel therapeutics
- Agreement with leading US-based biotech company for the development of Optimer® binders to remove bioprocessing contaminants during therapeutic production
- Contract signed with a top ten pharmaceutical company to develop Optimer® binders as immunohistochemistry reagents to support pipeline assets and early discovery targets
- Contract signed with a multinational consumer goods company for the development of Optimer® binders as novel solutions in personal care

Aptamer Diagnostics

- Contract signed with Bioliquid Innovative Genetics to support Optimer® development for a novel prenatal and placental diagnostic platform

AGM Statement contract wins (01 December)

Aptamer Therapeutics

- Second phase of our collaboration with Cancer Research UK to develop the delivery vehicle portion of the bispecific therapeutic Optimer® binder for the treatment of Chronic Myelomonocytic Leukaemia (CMML) and other myeloid malignancies
- Signed an early-stage deal to develop Optimer® binders to block the activity of naturally occurring antibodies within the body for use as a potential therapy to prevent transplant rejection

Aptamer Solutions

- Deal with a biomarker services company to develop Optimer® binders to support multiplex biomarker assays for mass spectrometry analysis to deliver increased sensitivity in the identification and analysis of neurodegenerative disease biomarkers
- Signed a deal with Novavax, a vaccine developer, to improve the selectivity of their assays

Financial review – FY22

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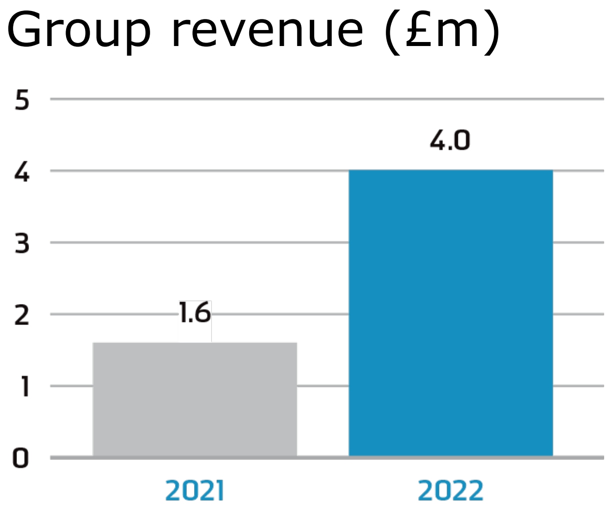
FY22 Income statement

- Group revenue of £4.0m (YoY increase of 152%)
- Gross profit margin improvement
- Adjusted EBITDA* loss of £1.7m, reduced from £2.4m in 2021
- Headcount at 30 June 2022 of 49 (34 at 30 June 2021)



	Year ended 30 Jun 22 £'000	15 mths ended 30 Jun 21 £'000
Revenue	**4,036**	**1,600**
Cost of Sales	(1,351)	(927)
Gross Profit	**2,685**	**673**
GP margin	67%	42%
Administrative expenses	(4,352)	(3,126)
Other operating income	3	5
Adjusted EBITDA*	**(1,664)**	**(2,448)**
PBT	(2,638)	(2,910)
PAT	(2,093)	(2,312)
EPS loss	3.24p	3.92p

*Adjusted EBITDA is PBT before depreciation, finance costs, amortisation and share-based payments

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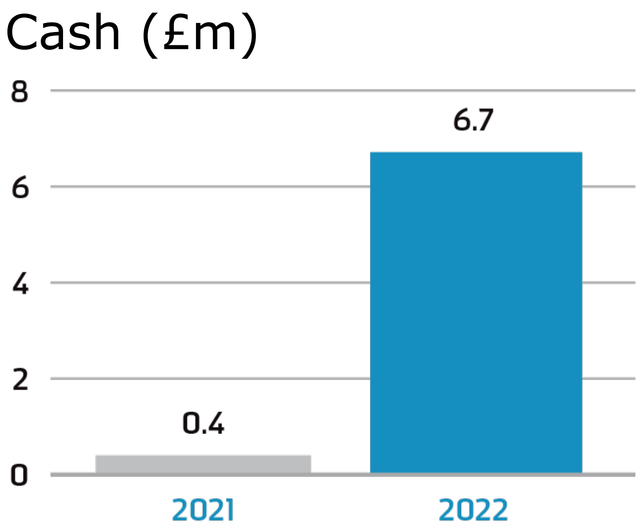
FY22 Balance sheet

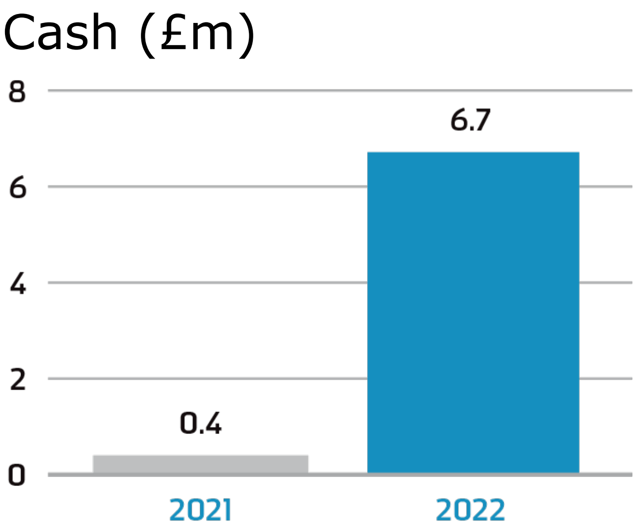
- Cash of £6.7m reflecting the funds raised on placing; £9.6m net proceeds
- Additional right of use asset arising from the signing of the new lease at York Science Park
    - Corresponding liability is included in interest bearing loans and borrowings
- Other increases in inventories and receivables in line with increased sales activity



	30 Jun 22 £'000	30 Jun 21 £'000
Other intangible assets	341	222
Property, plant & equipment	483	284
Right-of-use assets	1,340	235
Other receivables	379	0
Inventories	420	90
Trade & other receivables	1,866	864
Cash & cash equivalents	6,691	369
Total assets	**11,520**	**2,064**
Trade & other payables	(853)	(640)
Accruals	(959)	(543)
Deferred income	(314)	(496)
Interest bearing loans & borrowings	(1,308)	(254)
Provisions	(35)	(26)
Total liabilities	**(3,469)**	**(1,959)**
Net assets	**8,051**	**105**

FY22 Cash flow

- Net cash outflow from operations of £2.4m (2021: £1.4m)
- £0.4m investment in tangible and intangible assets (2021: £0.4m)
- £9.6m net proceeds from the placing
- £0.5m lease payments (2021: £0.2m)



	Year ended 30 Jun 22 £'000	15 mths ended 30 Jun 21 £'000
Cash used in operations	(2,973)	(1,641)
Income tax received	598	267
Net cash used in operations	**(2,375)**	**(1,374)**
Purchase of assets	(418)	(424)
Issue of share capital net of costs	9,582	2,116
Servicing of borrowing	(467)	(242)
Net increase in cash	**6,322**	**76**
Opening cash balance	369	293
Closing cash balance	6,691	369

Summary & outlook

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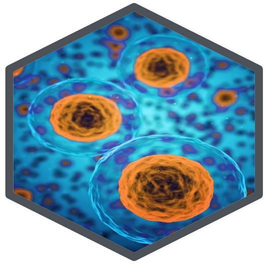
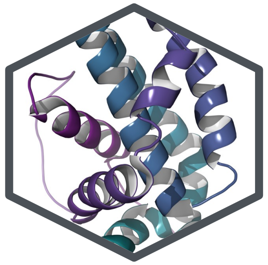
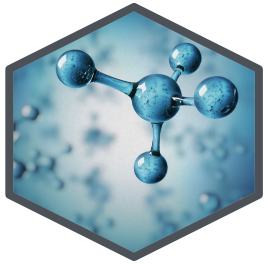
Outlook

- Continuing to deliver **new contracts signed, repeat business** across all business units with large global players
- Revenue **in line with expectations** for FY23
- We expect **growth to come from dedicated commercial focus** building traction in Europe, USA, and APAC
- **Development of Optimer®+ is underway** and will underpin future increased service offering and market share
- Development of **exemplification data to demonstrate the performance of lead candidate Optimer® binders** as therapeutic delivery vehicles







Summary

- **Relocated to larger premises** to scale automation and built **state of the art laboratories** gaining operational efficiencies to service the increased demand for Optimer® binders
- **Increased headcount by 44%** to support expansion, develop new service offerings and increase expertise
- Continuing to deliver **new contracts signed** across all business units with the commercial traction building in Europe, USA, and APAC
- Capacity expansion of current Optimer® platform and **development of Optimer®+ has started** to support a future increased service offering and market share
- Development of **exemplification data to demonstrate the performance of lead candidate Optimer® binders** as therapeutic delivery vehicles

Service level agreements and licence deals with large stakeholders across life sciences

Thank you

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