

**Stock Data**

Share Price:	0.28p
Market Cap.:	£5.29m <sup>1</sup>
Shares in issue:	1,890.34m <sup>1</sup>
52 week high/low:	8.50p/0.25p

<sup>1</sup>Post placing and subscription numbers

**Company Profile**

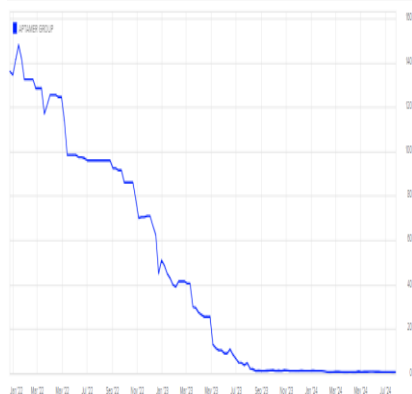
Sector:	Health Care
Ticker:	APTA
Exchange:	AIM

**Activities**

Aptamer Group plc ('APTA', 'Aptamer' 'the Group') is a leading provider of custom aptamer selection and development services for a wide range of research, diagnostic and therapeutic applications.

[www.aptagroup.com](http://www.aptagroup.com)

**Share price performance since Admission<sup>2</sup>**



<sup>2</sup>22 December 2021

Source: [LSE](https://www.lse.com)

Past performance is not an indication of future performance.

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# Aptamer Group plc

Aptamer has undertaken a firm and conditional equity placing and subscription ('the Placing'), raising £2.83m (gross) funding through placement of 1,415m new ordinary shares priced at 0.2p each. This follows the recent flurry of high margin Fee-For-Service ('FFS') contracts with Big Pharma and a major consumer goods company which have pushed the Group's order book up to c.£1.8m, while its pipeline of further opportunities has risen to c.£2.1m. Accompanying this improved momentum, the Group is now also proposing Boardroom changes that will be ratified at the forthcoming General Meeting ('GM'). This will see its co-founder and current CTO reassume the role of CEO, with ambition to place increased focus back on asset development and licensing in anticipation of crystallising much higher-value inflection points for shareholders. Changing emphasis away from relatively predictable FFS operations will, of course, raise Aptamer's risk profile, although Directors stress a good level of confidence in its ability to capture significantly greater, highly visible longer-term returns through accrual of downstream milestone payments, licensing fees and/or royalties as partnered projects approach and achieve commercialisation. With a number of major development partners, including Unilever, AstraZeneca NeuroBio and other Top Tier Pharmaceutical Groups, presently progressing products that utilise Aptamer's binders in order to target global market opportunities, it sees potential for collection of modest initial payments as early as this financial year, multiplying sharply thereafter. Seemingly unrecognised in the Group's current valuation, any such breakthrough adoption could offer transformative potential for the Group both financially and in terms of reputation. Based simply on the current trajectory of new FFS work being sustained along with expected scaling back of its cost base, the Board considers today's fundraise (plus annual R&D tax credit) will be sufficient to satisfy working capital needs for the coming 2 years to end-June 2026, by which time anticipated receipt of first licensing fees should enable the Group to become financially self-sustaining.

## Use of proceeds and settlement

Today's c.£2.5m (net) fund raise (plus existing cash) is projected to cover the Group's working capital requirements out to the end of FY 2025/26. It will enable continued expansion of the Group's FFS operations, while also progressing development of existing advanced-stage licensing opportunities toward fruition. Any surplus will be directed to (i) Delivering improvements to the Optimer®+ affinity ligand development platform and, (ii) Advancing the Group's precision Optimer® therapies as a delivery vehicle specific to fibrotic liver cells. In aggregate, Aptamer directors are investing £80,000 in the Placing. Settlement will be split between firm and conditional shares. First settlement will be on a T+3, basis, with the remainder subject to General Meeting ('GM') approval around 13 August 2024. Placing shares are expected to qualify for EIS/VCT relief.

### Abbreviated Expected Timetable of Principal Events

• Placing announcement	24 <sup>th</sup> July
• Circular posted	24 <sup>th</sup> July
• Firm Placing Admission	29 <sup>th</sup> July
• General Meeting	13 <sup>th</sup> August
• Conditional Placing Admission & Settlement	14 <sup>th</sup> August

## Aiming to crystallise significant value inflection points

Aptamer has updated its business model with a view to maximising shareholder value. This includes reversion of its principal focus back on asset development and prospective licensing in order to crystallise high-value inflection point(s) generated through exploitation of unique assets developed both with major partners and internally using its proprietary Optimer®/Optimer®+ platforms. In the lead-up to such realisations, the Group is minimising its cost base, while seeking increased momentum through its specialised, horizon-scanning and door-opening FFS contract work, to achieve EDITDA breakeven. Based on the recent inflow of such work, it appears reasonable to assume that this would be possible within the coming two years. The Group's refocused operations are illustrated below:

### Aptamer Proposes to Refocus on Asset Development & Licensing in Order to Crystallise Value



Source: Aptamer, Investor Presentation July 2024

In support of this move, the Group has proposed a revised Board of Directors. Having successfully overseen its recovery, the Group's Exec. Chairman, Stephen Hull, and Non-Exec. Director ('NED'), Dean Fielding, have both proposed to step down upon completion of the current fundraising. The Group's other NED, Dr. Adam Hargreaves, will then step up to the Chair in a Non-Exec. capacity. The Board has also requested that the current Chief Technical Officer ('CTO'), Dr Arron Tolley, return to the Chief Executive Officer ('CEO') role that he held in December 2021 when the Group was first Admitted to trading on AIM with a business model which then focussed on collection of milestones, licensing and royalties through partnered developments, as opposed to being heavily reliant on the aptamer-based FFS contract work that more recently has dominated its operations. Andrew Rapson, the current Chief Financial Officer, is also proposed for appointment to the Board. These appointments are expected to be approved at the forthcoming GM. The search for a second NED, ideally sector-experienced with a strong financial background and commercial contacts, is now said to be in its advanced stages.

### Aptamer Group – Proposed Board of Directors

**Proposed\* Board**

Member	Title	Key Experience
Dr Adam Hargreaves	Non-exec Chair*	<ul style="list-style-type: none"> <li>– Founder &amp; Director of drug dev CRD Pathcelerate Ltd</li> <li>– Large pharma experience</li> <li>– FRCPath &amp; DipAVCP</li> <li>– Chairman designate, currently NED</li> </ul>
Dr Arron Tolley	Chief Executive Officer*	<ul style="list-style-type: none"> <li>– Co-founder &amp; established leader in aptamers</li> <li>– Returning as CEO following stabilisation of business after leading 2023 refinancing and focussing on the pre-IPO strategy to crystallise licensing opportunities</li> </ul>
Dr David Bunka	Chief Scientific Officer	<ul style="list-style-type: none"> <li>– Co-founder &amp; globally recognised aptamer expert</li> <li>– Delivered several patent &amp; patent-pending processes and products</li> <li>– Pioneered automated, in-house, discovery platform</li> </ul>
Andrew Rapson	Director and Chief Financial Officer*	<ul style="list-style-type: none"> <li>– Over 20 years finance experience, including AIM listed companies</li> <li>– Chartered Accountant</li> <li>– Moving to PLC Board from non-board role</li> </ul>
TBC	NED*	

\* Proposed board changes conditioned on completion of fundraising

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Source: Aptamer, Investor Presentation July 2024

## Recent upturn in trading activity

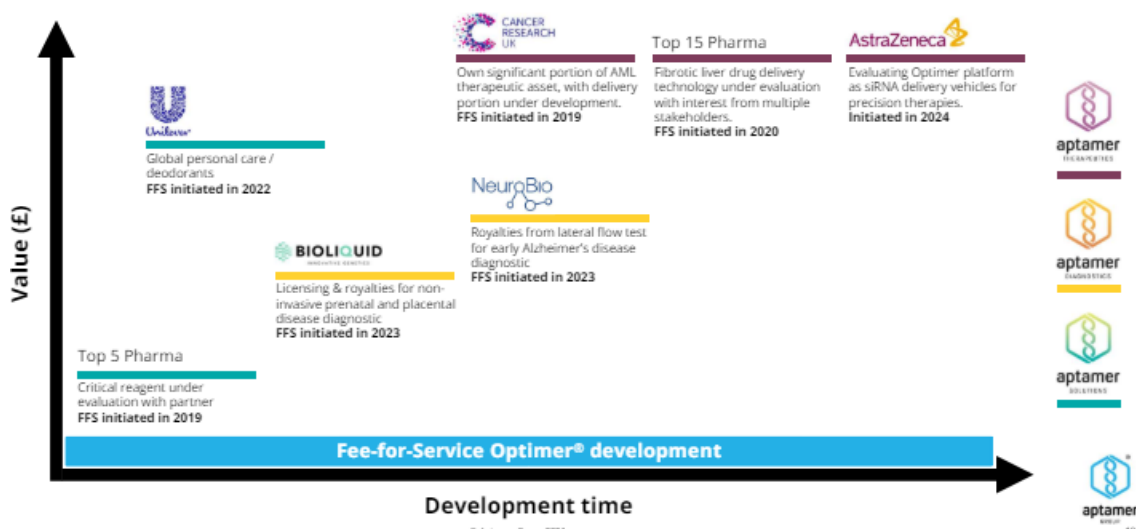
On 8 July 2024, Aptamer confirmed an upturn in its sales and order book had been seen during 2H FY 2023/24. Revenue for the full year is expected to be c.£0.85m, of which £0.55m was generated in the second half. This is below the c.£3m target suggested at the time of the Group's previous equity fund raising in July 2023 and has largely been attributed to the lull in customer confidence experienced due to publicised funding problems in H2 FY 2022/23, which took longer to rebuild than had been expected. The more recent flurry of new contracts and positive trading updates, however, suggests recovery is now underway, with expectation that FFS contract work will expand quite substantially during the current financial year. Some £0.98 million of orders were won in Q4 FY 2023/24 alone, pushing the present signed work in the laboratory or awaiting processing to £1.8m, in addition to which a good proportion of its advanced sales opportunities pipeline (that presently totals £2.1m) is also anticipated for collection. With such revenues expected to return to their historical inclined trend this financial year on a cost base that is expected to fall to c.£2.9m (FY 2023/24: c.£3.5m), EBITDA breakeven from the division's activities alone appear possible within 2 years. In addition to this, the Board also notes that despite completing only limited amounts of FFS work over the past 18 months, this nevertheless enabled internal development of a number of potentially high value strategic assets, each capable of delivering substantial longer-term value creation through prospective licensing, etc. The Board believes that focussing on exploitation of such opportunities will maximise shareholder value going forward.

## Developing high-value Optimer® assets

Aptamer's Board considers its leading position in the rapidly developing world of aptamer technologies ideally positions it to make significant inroads into the c.US\$170bn annual global affinity ligand market. Proceeds from Aptamer's £3.6m rescue fundraising of 31 July 2023 were successfully used to rebuild its pipeline of FFS work, while also supporting development of such strategic high value assets. In the proposed Board's opinion, continued development of these binders represents the greatest potential for enhanced shareholder value in the years ahead.

While the Group's business model continues to anticipate expansion of recurring FFS revenues across an ever-widening list of customers (that includes established relationships with all of the Top 10 Big Pharma and global FMCC players through to smaller innovative drug development companies), its intention now is to return closer to its pre-IPO business model that primarily leveraged higher value revenues through licensing of developed binders with commercial partners. These can be collected both in anticipation and upon commercialisation of assets developed using Aptamer's proprietary Optimer® platforms for automated discovery of antibody alternatives. Such incremental income is expected to accrue in the form of, milestone fees, licensing and/or royalty payments. The Board has pencilled in receipt of the first such returns by the end of the current financial year.

### Developing High Value Assets from a Fertile FFS base



Source: Aptamer, Investor Presentation July 2024

A selection of Aptamer's more advanced value assets, substantially derived from its fertile FFS customer base, is detailed above, including work initiated by division (be it Therapeutics, Diagnostics or Solutions), indication of relative development time and anticipated opportunity value. In the lower left-hand-side, for example, a Top 5 Pharma commissioned FFS work that took advantage of Optimer<sup>®</sup>'s tuneable selectivity which can be tailored to desired end application and speed of discovery in order to develop a novel and specific critical reagent, which the Pharma partner is now evaluating. Such a work contract might typically earn £0.15m of revenues for the Group and, subject to its success, could then go on to annually generate £0.1m to £0.2m development fees. In the centre and higher up the value scale come two ongoing partnerships with diagnostics companies (Spain's Bioliq Liquid Innovative Genetics and the UK's Neuro-Bio), while the highest value opportunities can be seen at the top RHS, where the Group is working with Cancer Research UK, AstraZeneca and a further Top 15 Pharma company. Each of these is prospectively capable of generating additional FFS work, milestone payments, licensing fees and/or longer-term royalties.

Standing out from the latter is Unilever, toward the top on the LHS, which was identified and engaged as a customer through the Group's 'horizon scanning approach' that also identifies potential for creation of licensable assets outside of pure healthcare. As a global provider of fast-moving-consumer-goods, it is not involved in the development of therapeutics but topical personal care products. Having identified a new consumer goods product opportunity, in 2022 it engaged Aptamer on an FFS basis for development of a suitable binder. Following success in laboratory tests, extensive on-person functionality tests are planned for later this year. Subject to a satisfactory outcome, it is expected that a commercial agreement to use Aptamer binders in their formulation could be made within two years. As Unilever is one of the largest suppliers to this US\$25.6bn global market, potential returns from a licensing agreement could be highly significant although, not being subject to regulated drug development process, staged milestone payments are not likely to be included. Further background detail on the most advanced of these developments (in terms of anticipated work stages and possible time to collection of licensing fees, etc.) is also provided above.

### **Protection of Intellectual Property ('IP') is key to exploiting licensing opportunities**

Intellectual Property is central to Aptamer's business model and represents a significant barrier to competition. Its IP portfolio comprises trade secrets and know-how as well as patent rights arising from acquired/developed intellectual property and aptamers specifically developed for customers. In most situations, the Group retains ownership of the IP in relation to aptamers developed for customers, therein offering potential to generate significant fee(s). Such agreements tend to be negotiated on an individual basis, typically comprising an upfront licence fee plus a percentage of wholesale revenue share and may also include certain milestone payments as development and regulatory hurdles are successfully negotiated.

Given that they are notoriously difficult to reverse engineer, aptamers retain their own inherent protection. Nevertheless, in order to ensure its ability to exploit all proprietary IP and remain ahead of competitors, Aptamer fully controls its own portfolio of c.100 patent rights (granted and pending), arranged in c.20 different patent families, including a novel aptamer-based diagnostic platform, aptamer molecules against specific targets of commercial interest, and novel chemistries. These fall into several different 'buckets', starting with the building blocks themselves which can be licensed to different counterparts on a non-exclusive basis and filings covering precise development of sequence/structure of the aptamer molecule(s), beyond which the process for creation of the binders and their manufacturing process remains confidential. Patents contain wording aimed at protecting sequence variants, in particular to prevent competitors from making minor changes to existing filings in order to avoid infringement. The outputs from every inhouse aptamer selection project (based on sequence of the backbone and particular modifications) are considered for patent protection, with applications being made in all cases where commercially applicability is considered. Separately, its Optimer<sup>®</sup> and Optimer<sup>®</sup>+ platforms are covered by a proprietary, fully-controlled, portfolio of 45 patents ranging from processes to products.

### **Optimer<sup>®</sup> for precision treatments of fibrotic liver disease – Top 15 Pharma Partnerships**

FFS work contracted by a Top 15 Pharmaceutical company back in 2020 highlighted potential for creation of a



delivery vehicle that specifically targets fibrotic liver tissue. Shortage of capital and the post-IPO Board's revised operational focus, however, delayed Aptamer Therapeutics' further development of the molecule until new funding became available at the end of July 2023. Subsequent internal work generated a significant amount of new data demonstrating the capabilities of the optimised product to selectively deliver a functional model gene therapy. Based on this data, on 22 April 2024 it contracted Aptamer to manufacture test amounts of Optimer®-siRNA conjugates which were subsequently shipped to the customer's laboratories where evaluation of their therapeutic application remains ongoing.

Further to this, the same performance data was also presented at an international pharmaceutical conference, in turn generating significant interest from a number of other sector players, including Top 10 Pharma. Amongst these was AstraZeneca SA ('AstraZeneca') who decided to support the Group's in-house experimental work through the provision of their own model siRNA. As well as saving Aptamer significant time and development costs, upon success, it will progress to internally generating demonstrator data in animal models for evaluation by AstraZeneca. Negotiations continue with several other parties with respect to also testing the binder, which similarly await data generated through the forthcoming *in vivo* studies. Recognising that delivery of siRNA to precise cell types and tissues with successful cell internalisation remains a significant challenge for the wider therapeutic application of the technology, such a response from major sector players reflects an important opportunity for value creation.

Estimates suggest that globally, two million lives are lost annually to liver disease, with 1.5 billion people suffering from variations of this chronic condition. Of these the most common is steatotic liver disease, accounting for c.60% of all cases. In its advanced stages, this is known as metabolic dysfunction-associated steatohepatitis ('MASH'), which can progress to liver cancer. Despite this prevalence, treatment options are limited; there is only one medication, *N*-acetylgalactosamine (GalNAc) siRNA conjugate, currently approved for MASH and liver fibrosis. Tris-GalNAc binds to the Asialoglycoprotein receptor that is highly expressed on hepatocytes resulting in rapid endocytosis. The overall success of the drug remains limited, however, since it is forced to rely on general (rather than targeted) delivery to achieve therapeutic response, as a result of which it introduces a number of significant side-effects, including hepatotoxicity. Utilising its next generation targeting technologies, Aptamer aimed to resolve this problem through creation of Optimer®-based delivery vehicles specific for fibrotic liver cells.

Should the outcome be to creation a stable, reproducible, non-toxic, highly targeted molecule capable of transient silencing of particular gene(s) of interest, it could open the door for collection of licencing fees and/or a longer-term stream of royalties. Aptamer considers this could amount to 'double digit £m' with 2 to 3 years, while targeting >£1bn 'biobucks' deals on a 3-to-5-year view.

### **Optimer® asset for malodour application – Partnered with Unilever**

Unilever is the world's largest supplier of antiperspirant and deodorant products, addressing a global market that was valued at US\$25.6bn in 2023. Aptamer Solutions' relationship with Unilever initiated in FY 2022/23, which resulted in formation of a partnership for development of Optimers capable of controlling malodour. Rapid development resulted in production of a binder capable of inhibiting malodour production in laboratory tests, which was subsequently shipped to Unilever for evaluation. This produced positive and reproducible results in their laboratories, successfully demonstrating the ability to temporarily hinder production of the offending smell and indicating potential for use in their downstream products. Aptamer went on to further streamline this Optimer®, in order to improve their function and manufacturability while consulting with respect to their transfer for further evaluation. The outcome was for Aptamer and Unilever to file dual patents in March 2024 (covering area of use and binder design resp.) to protect the development and its commercial application. The project remains ongoing in Unilever's labs, with planned on-person safety and functionality studies scheduled for later this year.

The issue at the centre of this research is that mammalian skin is a region of high metabolic activity where a rich variety of biomarkers are secreted from the stratum corneum. As such, it is a constant source of volatile organic compounds ('VOCs') derived from skin glands and resident microbiota. Body odours result from a combination of emitted odorous VOCs (that are originally secreted from various cells inside the body via metabolic pathways)

reacting when saturated in water, salt and fat mix that comprises perspiration. The specific culprit in this case is an enzyme called C-S lyase, found in the bacterium *Staphylococcus hominis*, which dwells in human armpits. The current, widely adopted solution is one that blocks perspiration through incorporation of aluminium-based compounds, which is the active ingredient in existing ranges of antiperspirants. These form a temporary 'plug' within the sweat duct that stops flow to the surface of the skin. Research suggests that such underarm products, which are applied frequently and left on the skin near the breast, may be absorbed and have oestrogen-like (hormonal) effects (as well as other health implications, including development of hypersensitivity) on the user.

Accordingly, Aptamer's challenge was to develop a binder capable of temporarily hindering the metabolic process that creates the unpleasant odour. Its Optimer® platform was used to identify binders capable of hindering production of VOCs, which have been shown to function as required in laboratory tests. Being able to deliver a user experience similar to existing products without the attached health concerns potentially creates a significant new commercial opportunity. This of course could be highly significant for Unilever, which said to control c.32% of the global market as well as opening opportunities in other existing product areas (such as suncreams etc.) with further potential to also be utilised in a range of industrial, commercial and household applications.

Importantly in this respect, an over-the-counter product in the form suitable for topical administration is generally regarded as safe and effective through a 510k pre-market submission to the FDA (with similar process for other international healthcare regulators), based on ingredient concentration/dosage ratios described in the US Pharmacopeia-National Formulary. As such, time and cost required for commercialisation is expected to be lower than that typically required for prescriptive drugs.

With Unilever's own testing expected to be completed in FY 2024/25, Aptamer will then work with Unilever to assess the binder's production economics/process for scale manufacturing. This is not expected to present any significant hurdle given that aptamers are already incorporated within formulations for other personal care products (like shampoos and body creams etc.), in anticipation of entering licensing negotiations with Unilever during FY 2025/26. Given that Unilever's main competitor, Procter & Gamble (NYSE: PG) is understood to be conducting similar trials with another specialist aptamer developer, there is clearly some urgency to get this product to market. The details of any such negotiations will remain confidential but could, for example, include upfront payment(s) upon reaching market followed by royalties (say, low single digit percentage of wholesale price on projected unit sales for a set period going forward). Clearly, this would amount to a sizeable stream of earnings.

### **Optimer® for rapid Alzheimer's disease diagnostic – Partnered with Neuro-Bio**

On 22 February 2024, Aptamer Diagnostics announced the second phase of its on-going partnership with Neuro-Bio Ltd, an Oxfordshire-based biotechnology company with a focus on neurodegenerative disease, to develop Optimer® binders against the company's innovative target implicated in Alzheimer's disease. This presents opportunity for Aptamer to provide the key technology for enabling a 'first-in-kind' diagnostic, with the goal being to develop a nasal swab-based lateral flow test ('LFT') for early disease detection. With over 55m people said to have dementia worldwide, in 2022 research group Market Research Future estimated the value of diagnostics for the disease to be worth some US\$4.1bn. The project is being championed by Baroness Susan Greenfield, Neuro-Bio's CEO, and eminent neuroscientist, who is a recognised authority on the condition. She considers a biomarker discovered by Neuro-Bio could be an indicator of disease onset some 10 or even 20 years before symptoms become apparent. Early detection could permit treatment designed to slow and/or minimise progression of otherwise life-changing effects.

Following identification of Optimer® binders to this novel biomarker, Aptamer has subsequently characterised them for use in lateral flow and biosensor assays. Common lateral flow test formats require a pair of binders to increase diagnostic test accuracy. Moreover, in order to prevent the need for animal-derived antibodies in its diagnostic, Neuro-Bio required development of additional binders to support its lateral flow device ('LFD') format and deliver a wholly Optimer®-powered solution. Being oligonucleotide-based, rather than protein-based like antibodies, Optimers offer further advantages including scalability of manufacture, improved shelf-life and tuneability benefits

that will permit more stable and specific reagents for use in LFDs.

The first binder has already been successfully developed. With the second already underway, an early prototype of the proposed LFD could emerge within the coming 12 to 18 months. On this basis, Aptamer appears to be on track to deliver the final approved LFD to Neuro-Bio in FY 2025/26, with the product then potentially able to commercialise some 6 to 12 months later. From this, Aptamer might expect to collect appropriate downstream milestone fees, licensing payments plus single or even double-digit royalties upon sales of point-of-care clinical diagnostics.

### **Optimer® for critical reagent in drug development - Evaluation is continuing with Top 5 Pharma**

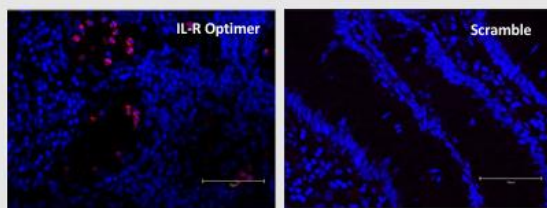
Critical reagents are an essential part of bioanalytical testing for large molecule preclinical and clinical studies, with the quality of these reagents being essential to the progress of drug discovery and development. Aptamer's ambition here is to address the need for improved products in this market vertical. Such products enable development of pipeline assets. Early in FY 2021/22, Aptamer signed a number of contracts with a Top 5 pharma partner for development of such binders to support improved sensitivity and selectivity in biomarker identification. In FY 2022/23, this partnership was expanded with two further contracts (valued at up to £0.22m) for which Aptamer has developed a new technology and platform called Optimer®-Fc for the development of reagents for automated Immunohistochemistry ('IHC') workflows to support immunoassays for targets associated with diseases such as neurodegeneration or cancer.

The international market for IHC antibodies is valued at US\$1.4bn. Evaluation is continuing with the partner, from which Aptamer is seeking opportunity to license its Optimer®-based binder as a critical reagent.

### **Advancing Critical Reagent with Top 5 pharmaceutical Company**

#### **Optimer® to key biomarker for use as critical reagent**

- Optimer® shown to function as a critical reagent in IHC
- Demonstrates use of Optimer® in \$1.4bn IHC antibody market<sup>1</sup>
- Optimer® evaluation is continuing in other application areas at Top 5 Pharma partner



*Optimer® critical reagent performs in IHC to detect key biomarker for drug development. Optimer shown in red with cell nuclei in blue*

<sup>1</sup> Nova1Advisor. 2024 Report code: 7594

#### **Support from Aptamer Group could amplify licensing**

- Optimise performance with Optimer®-Fc platform for potential improvements in IHC
- Expand reagent applications via internal assay development at Aptamer Group for easier adoption
- Increased demonstrator data to support marketing



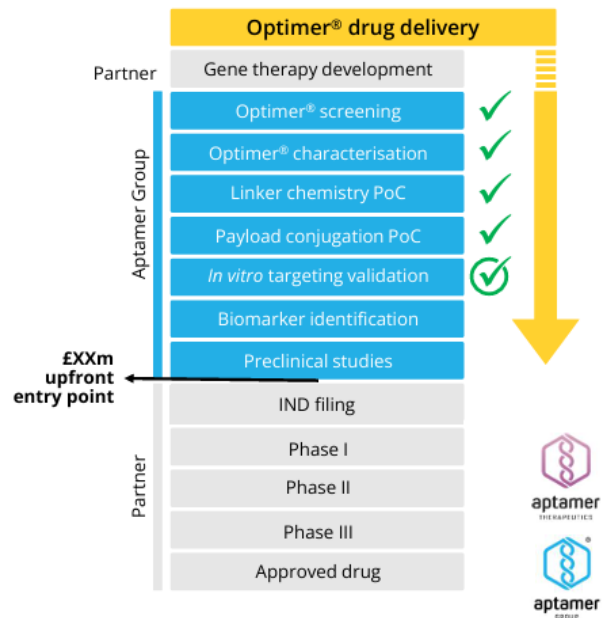
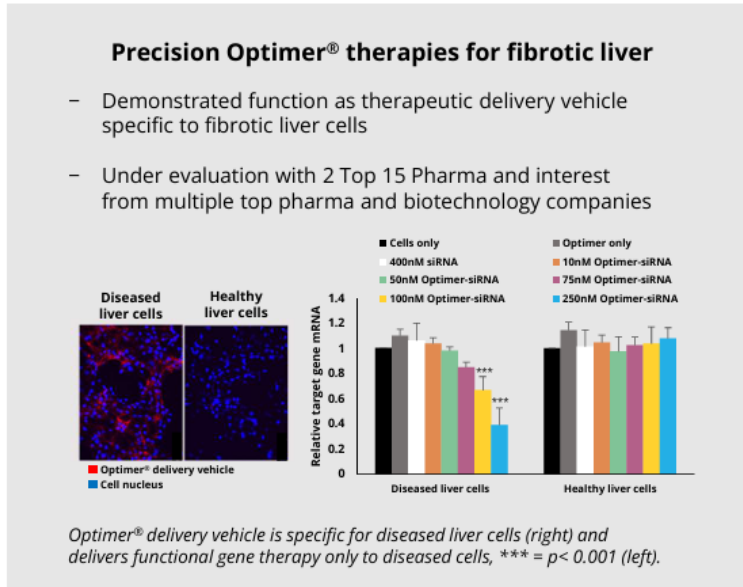
*Source: Aptamer, Investor Presentation July 2024*

### **Optimer platform being evaluated as siRNA delivery vehicle with support from AstraZeneca**

As noted previously, following the encouraging results achieved to-date with Aptamer's fibrotic liver delivery vehicles, on 3 July 2024 Aptamer announce an agreement with AstraZeneca to help it evaluate the Optimer® platform for targeted delivery of siRNA. The Group's relationship with AstraZeneca dates back to 2020 when the two companies first entered a fee-for-service partnership. Encouraging results produced through combination of an Optimer® binder with a model gene therapy payload, demonstrated selective *in vitro* delivery to fibrotic human liver tissue while producing no interaction with normal hepatocytic cells (figure below, left hand side). AstraZeneca is supporting Aptamer's in-house research by providing its own developed model siRNA to be trialled with the

Group's Optimer<sup>®</sup>-based delivery vehicle, in order to make an assessment of data demonstrating the molecule's effectiveness.

**Aptamer Group Asset - Development Delivery Vehicle for Fibrotic Liver Disease**



Source: Aptamer, Investor Presentation July 2024

Should the outcome be positive, Aptamer will progress to generating demonstrator data in animal models for review and evaluation by AstraZeneca. Being a non-animal based technology, Aptamer Group does not have internal capabilities to conduct animal studies. This work must be outsourced, at an estimated cost in the region of c.£0.5m, although such data has potential to create an important value inflection point for this asset. Accompanying biomarker identification work may also lead to another high-value asset should a novel general marker of fibrosis be established. This is one of the two project areas that Placing funds raised in excess of £2m net required for working capital purposed will be directed.

In progressing this in-house development, Aptamer recognises that delivery of siRNA to precise cell types/tissues with successful cell internalisation remains a significant challenge for the wider therapeutic application of the siRNA technology. Despite this limitation, the siRNA market was still valued at over US\$13bn in 2023. Tests have already demonstrated that, compared to the gene therapy alone, delivery with the Optimer<sup>®</sup> binder produces a significantly more positive effect, with a p-value of less than 0.001 indicating the probability of such results to be more than 99%.

As such, this could represent a paradigm shift in the targeted delivery of siRNA molecules (or other therapeutic payloads), taking advantage of the high levels of selectivity, strong affinity and simple conjugation offered when using Optimer<sup>®</sup> delivery systems as non-viral vectors. Should it be successfully demonstrated, this process could lead to the development of novel compounds that have significant advantages over current cell and tissue-targeting methods. The next step will be to demonstrate proof of principle in animal models, a positive outcome from which would be to significantly derisk the Optimer<sup>®</sup> platform and potentially bring it closer to delivering targeted and effective gene therapies for patients.

**Delivering Optimer<sup>®</sup>+ platform to market**

The past 12 months have seen Aptamer dedicate resources to integrating the Optimer<sup>®</sup>+ platform, demonstrating that it can generate binders with performance benefits over the existing platform. Supporting this endeavour two contracts with early adopters have supported the Group's product development and refinement. Additional customers are now being sought.




The Group is now keen to develop more comprehensive exemplification data, although it already has been able to confirm that it is stable in serum (blood) and well tolerated in a simple animal study. In order to further demonstrate the platform is suitable for therapeutic applications, further work including a more comprehensive safety assessment and complete pharmacokinetic study needs to be carried out, along with a review of functional performance/product manufacturing scalability. This is the second area to which surplus Placing cash resources will now be directed.

**Optimer®+ Platform Delivers Improvements Over Existing Optimer® Platform**

**Novel affinity ligand development platform**

- Demonstrated performance improvements over current Optimer® platform
- Demonstrated preliminary stability and safety data indicative of good therapeutic potential
- Two projects in progress with early pharma adopters



*Optimer®+ is a proprietary affinity ligand platform combining the best of Optimer® and antibodies.*

<sup>1</sup> Market cap value with all currencies converted to GBP as at 14<sup>th</sup> June 2024.

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Additional supporting data could lead to **faster adoption of the proprietary platform**

- Exemplification data for key applications
- Safety profiling and distribution studies in animal models
- Assessment of functional performance as delivery vehicles with effective gene silencing
- Platform comparators

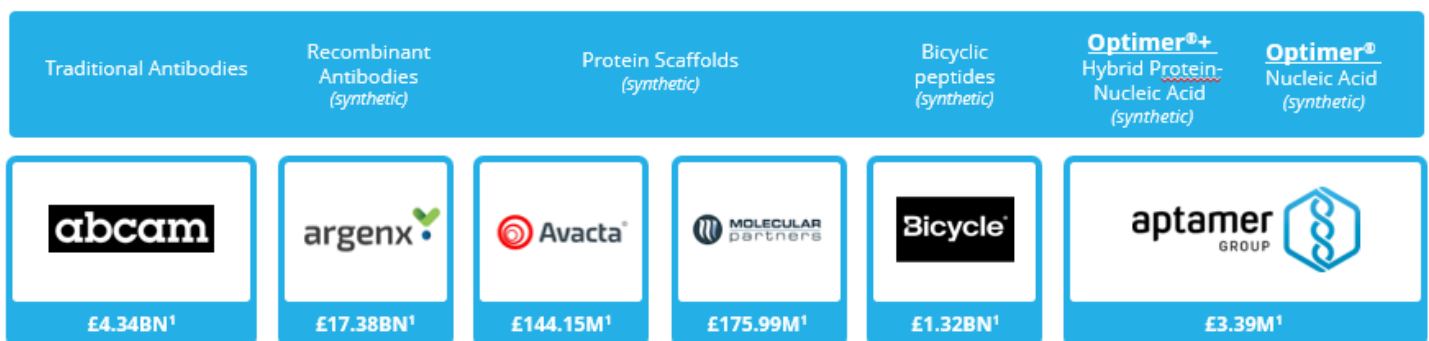


Source: Aptamer, Investor Presentation July 2024

**Potential for transformational value creation in the sector**

The need for new therapeutic and diagnostic solutions, capable of delivering broad target applicability along with tuneable selectivity, has been clearly established across the medical world. The fact that half of all antibodies under development at any one time, fail to perform as required highlights this issue, resulting in costs to the industry said to be in excess of US\$800m annually. Aptamer’s proprietary platforms have been created specifically to address this situation while recognising that nucleic acid-based affinity ligands, like aptamers also introduce a number of specific advantages over their protein-based counterparts. These come in terms of more rapid discovery, scalable cost-effective and animal-free production and the fact that their synthetic production permits an elevated level of quality control, leading to more reliable and scalable supply, etc.

**Aptamer Group’s Positioning Amongst its most Obvious Platform-based Peer Group**



<sup>1</sup> Market cap value with all currencies converted to GBP as at 14th June 2024

Source: Aptamer, Investor Presentation July 2024

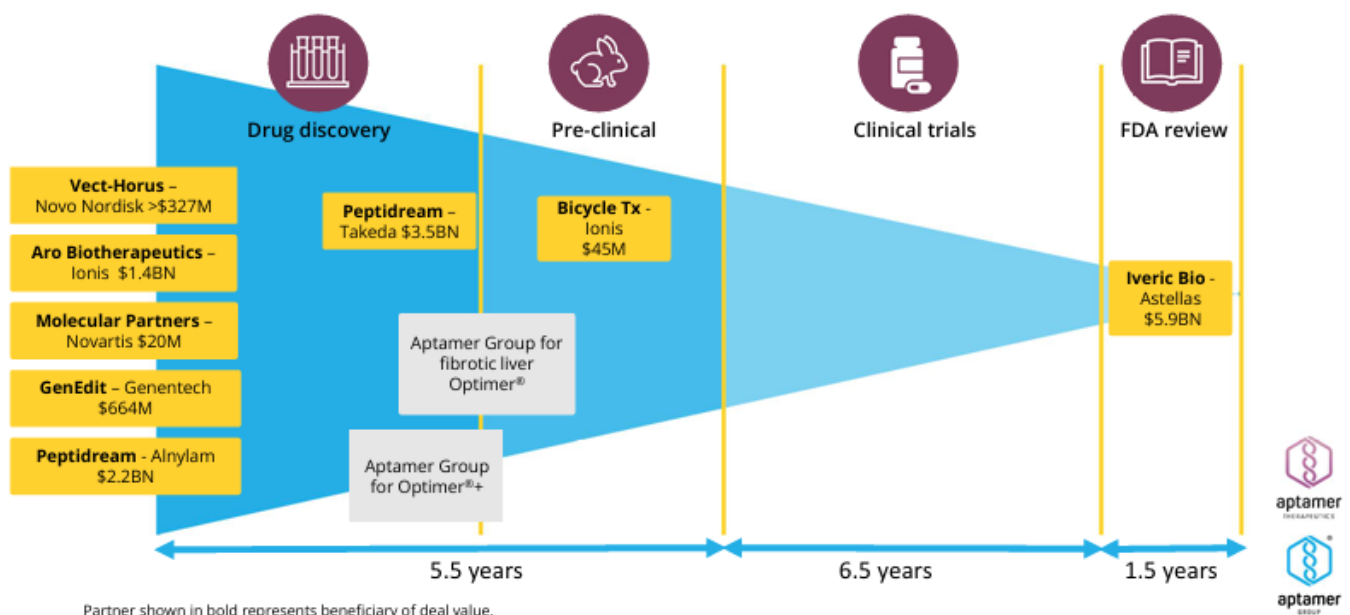
Aptamer’s platforms are tailored to address the specific customer needs for new affinity ligands. The original Optimer® platform offers diverse applications across the life sciences and FMCG sectors, consisting of three parallel refined processes for the discovery and development of optimised DNA/RNA aptamers against small molecules; proteins and peptides; and cells and tissues. Heightened recognition of this technology is now sustaining repeat business from an expanding customer base, with FFS development contracts delivering multiple high value assets that are exclusively owned by Aptamer and can be leveraged for increased shareholder value.

By contrast, the Optimer®+ platform (which remains under development), produces binders in the form of hybrid DNA-protein molecules capable of combining the best features of both aptamers and antibodies. Further opportunities will be created through commercialisation of this platform, which has already successfully demonstrated performance improvements over the current Optimer® platform, producing preliminary stability and safety data indicative of good therapeutic potential. Further expansion of its exemplification data packs is now required to accelerate customer adoption.

The most obvious life science-sector comparator platform to Optimer®/Optimer®+ is operated by [Bicycle Therapeutics plc](#) (NASDAQ: BCYC), which discovers ‘Bicycles’ based on a novel synthetic peptide modality that can be delivered as stand-alone molecules, as bi-specifics or linked with other small molecules, nucleic acids or radioisotopes to act as a precision-guidance mechanism. This enables the drugging of complex targets which it presently focusses on oncology with multiple clinical assets. Other players with some similarities to Aptamer include [PeptiDream Inc.](#) (TYO: 4587) and [Pieris Pharmaceuticals Inc.](#) (NASDAQ: PIRS)

The chart below provides a simple illustration of the potential for value creation through development and optimisation of a drug delivery platform or protected assets that the platform delivers for partnering with suitably resourced counterparts. As can be seen from a range of quite recent transactions, potential rewards available from either buying out the complete company (i.e., [Iveric Bio, Inc.](#) (NASDAQ: ISEE)) or just for licensing and co-developing its candidate (i.e., [Aro Biotherapeutics Company](#)) at early drug discovery and pre-clinical stages, can be very high. These routinely include an upfront cash payment, R&D funding and payments on achieving specific development and commercial milestones in addition to royalties on net sales. In this respect, the position of Aptamer’s own in-house development for fibrotic liver disease and the capabilities of its platforms alone appear to belie the Group’s current valuation, before considering the revenue generation potential of its high value assets partnered with Top Tier pharma and FMCG companies.

**Reaching a Pivotal Inflection Point for Optimer® Delivery Vehicles**



Source: Aptamer, Investor Presentation July 2024

This point is expected to become increasingly recognised. Having overseen progress across a number of its partnered aptamer developments, Group directors are sufficiently confident to project collection of first licensing fees from its critical reagent development with a Top 5 Pharma partner during the FY 2024/25, followed by the signing of a licensing and royalties' agreement with Unilever for a consumer goods product and delivery of final approved LFD for early Alzheimer's testing to Neuro-Bio.

**Aptamer Group's Projected Key Inflection Points for this Financial Year and Next**  
Key value inflection points

**FY25**

**FY26**



Licensing of critical reagent to top pharma



License & royalties' agreement with Unilever



Progression of cosmetic Optimer® with Unilever



Delivery of LFD for early Alzheimer's test with Neuro-Bio

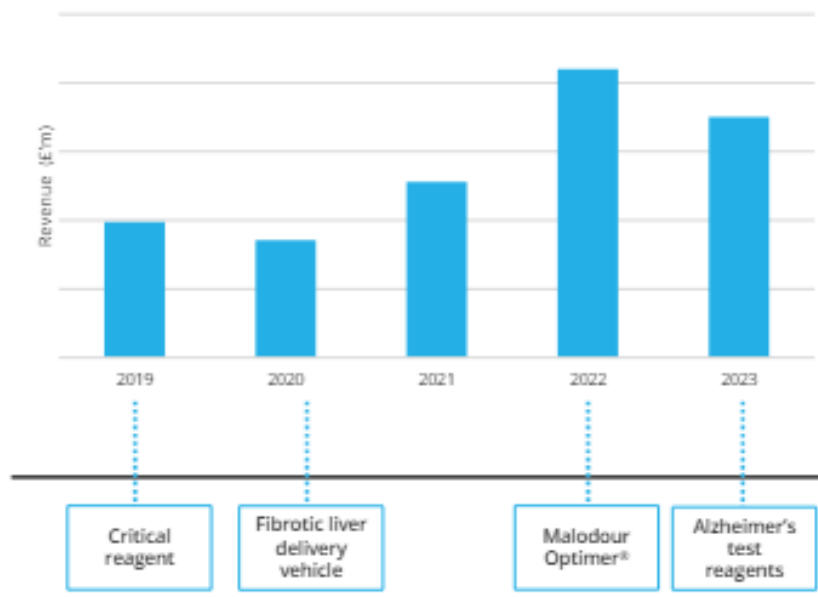
Source: Aptamer, Investor Presentation July 2024

**Aptamer projects first licensing revenues as early as FY 2024/25**

With a current FFS order book of £1.8m plus a £2.1m sales opportunities pipeline amid a continuing background of high customer interest, simple extrapolation of the chart below provides an indication of the Board expectation of continuing strong recover of FFS revenues during FY 2024/25 and FY 2025/26. To this should be added the Board anticipation of its collection of the Group's first modest licensing revenues FY 2024/25, which it expects to build significantly thereafter.

**Aptamer Projects Receipt of First Licencing Revenues in the Current Year**

Fee-for-service revenue



High value assets developed

Source: Aptamer, Investor Presentation July 2024

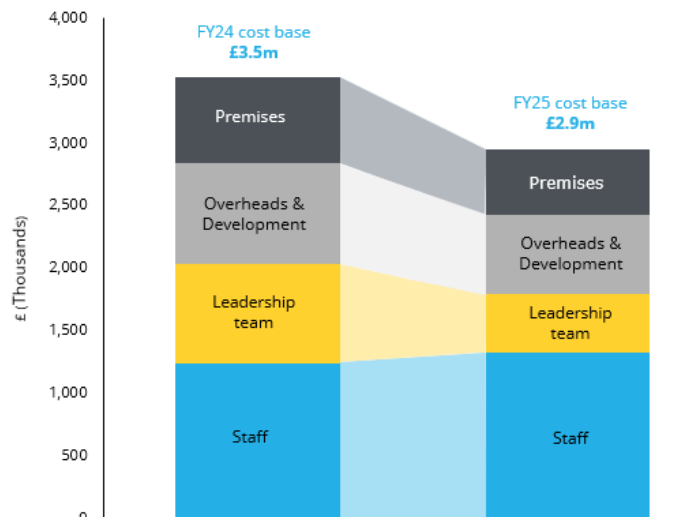
**Retaining a lean cost base**

Aptamer has reconfirmed its commitment to a lean cost base. It targets further reductions in the Group annual cost base. Having reduced it from c.£5.6m in FY 2022/23 to c.£3.5m in FY 2023/24, the Board now targets c.£2.9m for the

current period. This is expected to be achieved through reducing the size of the senior leadership team and scaling back its office space commitment. This leaner cost base is expected to be achieved without impacting operational capacity of deteriorating its scientific capabilities/skill set.

The Board considers this reduced cost base, its successfully rebuilt FFS business and improved licensing opportunities should achieve break even on a monthly basis at the EBITDA in the coming 48 months.

### going commitment to a lean cost base and break even



Source: Aptamer, Investor Presentation July 2024

### Board and management team share options

Aptamer intends to award share options to retain and incentivise its directors and employees. The number of share options granted will be up to 25% of the issued share capital as enlarged by the Fundraise. These options will vest subject to stretching performance targets and will vest and exercise as follows:

- (a) 33% on the share price having remained at or above 7 times the Issue Price for at least 3 months and exercisable 6 months following vesting;
- (b) 33% on the share price having remained at or above 10 times the Issue Price for at least 3 months and exercisable 12 months following vesting; and
- (c) 33% on the share price having remained at or above 12.5 times the Issue Price for at least 3 months and exercisable 24 months following vesting.

All in the money share options would vest in the event that the Group is acquired (or in the event of that a person or group shall have acquired or entered into a definitive binding agreement to acquire more than 50% of the issued share capital of it or its assets or its subsidiaries representing more than 50% of Aptamer's consolidated earning power and its subsidiaries.)

Subject to independent consideration, the options will have an exercise price equal to the Issue Price. It is currently envisaged that these options will be awarded following the Second Admission. In October 2023, share options were awarded to Directors and staff with an exercise price of 1 penny. Awardees of that option scheme will forfeit their share options on acceptance of this latest package.



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