

Stock Data

Share Price:	0.23p
Market Cap.:	£4.42m
Shares in issue:	1,920,34m
52 week high/low:	1.59p/0.20p

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

Share price performance since Admission²



²22 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 announced an extension to its partnership with Unilever plc (LSE: ULVR). This new phase aims to commence *in-vivo* efficacy testing of Optimer® binders as active ingredients in deodorants before the end of 2024. This represents a significant endorsement of the Group's technology with opportunity to create a long-term interdependent relationship with the consumer goods giant. Today's news is also a reminder of the recently appointed CEO's stated ambition to re-establish focus on asset development and licensing (while seeking to cover Group operating costs through its more predictable but lower value-added fee-for-service ('FFS') operations) in expectation of crystallising much higher-value inflection points for shareholders. Beyond Unilever, Aptamer also continues to work with a number of major development partners, including AstraZeneca, NeuroBio and other top-tier pharmaceutical groups, each of which are similarly progressing products that utilise its binders to target global market opportunities. There is very real potential for one or more of these to generate initial (albeit modest) payments as early as this financial year, with potential to multiply quite dramatically thereafter. Seemingly unrecognised in the Group's current valuation, any such breakthrough adoption would be transformative for the Group both financially and in terms of reputation. Yet, based simply on the current trajectory of new FFS work being sustained along with this year's expected scaling back of its cost base, the Board considers last July's fundraise (plus annual R&D tax credit) will be sufficient to satisfy working capital needs out to mid-2026, by which time anticipated receipt of licensing fees should enable the Group to become financially self-sustaining.

Providing Unilever with unique solutions across new sectors

The continued advancement of Aptamer's Optimer® binders in collaboration with Unilever, ideally showcases the versatility of the Group's technology in providing unique solutions across new sectors, including OTC personal care products. The current contract extension follows a series of successful laboratory-based tests. As a result, the partnership will progress to its next important stage before the end of 2024, in the form of planned *in-vivo* activity studies that utilise the Optimer® binders.

Aptamer was wholly responsible for development of the binders, targeting the C-S Lyase bacterial enzyme, which is critical in the generation of axillary odour. Extensive testing at both Aptamer's laboratories and subsequently at Unilever's facilities demonstrated consistent and effective inhibition of the enzyme. The most obvious product application is in the form of underarm deodorant, although the fact that the enzyme is also routinely found on other regions of the human (and animal) body clearly presents opportunity for development of an extended range of related offerings. Following successful testing, Aptamer and Unilever remain engaged in a process of further product refinement, with a view to both enhancing the efficacy of the active ingredients and to improve high-volume manufacturability.

Unilever intends to appoint an in-house panel of experts to help steer the developed materials through their forthcoming *in-vivo* efficacy studies, examining impact and optimising formulation as necessary. A successful

outcome from these trials can be expected to further advance the partnership. Recognising that the use of Optimers in the cosmetic space is a wholly novel application for this class of active product, Unilever is expected to continue engagement with Aptamer's scientists in order to explore related and other product opportunities.

Optimer® asset for malodour application – Partnered with Unilever

Unilever is the world's largest supplier of deodorant products, for which it boasts over 30% market share (being roughly one-fifth larger than its closest competitor, Procter & Gamble (NYSE: PG)). The current global market value for deodorants is in excess of US\$21 billion per annum, and said to be expanding at a pace of 4.5% annually (CAGR for the next 5 years). Aptamer Solutions' relationship with Unilever initiated in FY 2022/23, resulting 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 laboratories, with planned on-person safety and functionality studies now being scheduled.

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, as a highly abundant coloniser of non-oral human niches, typically dwells in human armpits and sometime also other parts of the body (such as the groin area and feet). The current, widely adopted solution for under-arm odours is one that blocks perspiration through incorporation of aluminium-based compounds, being 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 a highly significant development for Unilever, not only in terms of the evolution of deodorant products but also related 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 and commercial assessment expected to be completed in FY 2024/25, Aptamer will then work with it 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 for the Aptamer.

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