Stock Data

Share Price:	6.75p
Market Cap:	£10.5m
Shares in issue:	156.1m

Company Profile

Sector:	Pharmaceuticals
Ticker:	N4P
Exchange:	AIM

Activities

N4 Pharma plc ('N4P, 'the Group') is a specialist pharmaceutical company developing a novel silica nanoparticle delivery system for vaccines and therapeutics for licensing to pharmaceutical and biotech partners. This nanoparticle has the potential to help the delivery of cancer immunotherapy drugs and improve the delivery of viral vaccines. Nuvec®, the Company's lead development is a unique, non-viral adjuvant delivery system that has the potential to revolutionise vaccines and cancer treatments.

1-year Share price performance

Source: LSE

Past performance is not an indication of future performance.

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N4 Pharma plc

N4P has released an update on its ongoing work programmes. Taking advantage of its virtual model and contracted laboratories, the Group has been able to make significant progress, moving its testing schedules forward despite the Pandemic lockdown. Data derived from optimisation work investigating different formulations of Nuvec® is now being analysed in anticipation of incorporation into the optimised strand of the pending *in vivo* study. Meanwhile, planning for the unoptimised *in vivo* study to compare the reactions of Nuvec® loaded with the Coronavirus and another generic plasmid in generating relevant antibodies, has also been finalised and is due to commence shortly. Taken together with feasibility work into oral applications and the ongoing technology transfer for the manufacture of Nuvec®, the next six months or so is likely to be pivotal for N4P as a deeper understanding of the potential for its unique, non-viral adjuvant delivery system is established and collaboration talks possibly get underway.

Optimisation findings to influence *in vivo* studies

N4P intends to maximise its chances of success in a planned comprehensive *in vivo* study by incorporating the findings of optimisation work into its design. This has included additional exploratory studies designed to heighten understanding of the translation potency of generic DNA plasmids including Coronavirus, along with the optimisation of Nuvec® plasmid loading. The outcome is expected to be key to the Group's ambition to further expand data sets in an effort to ensure they are applicable in terms of collaborations on multiple other injectable vaccines.

The optimisation programme is investigating different formulations of Nuvec® including the type of Polyethylenimine, the requirement for phosphonation and the ratio of DNA/Nuvec®. Within this study, different options to make a fully monodispersed formulation of Nuvec® loaded with plasmid DNA have been successfully developed, while initial studies also demonstrate that Nuvec® loaded with a plasmid DNA can be dried, stored at room temperature and reconstituted without any degradation of DNA. Development of consistent formulation stability could mark an important milestone, potentially offering highly commercial, simple to use and store vaccines, rather than existing, costly lipid-based mRNA systems that require substantial freezing or electroporation-based DNA systems. N4P will look to incorporate its key findings into the planned optimised *in vivo* study.

Planning for the unoptimised Nuvec® *in vivo* study to compare the reactions of Nuvec® loaded with the Coronavirus plasmid and other DNA plasmids has now also been finalised. It is expected that this work will commence in early 2021, subject to finalisation with N4P's nominated Contract Research Organisation ('CRO'). Having already demonstrated improved product consistency along with the creation of a significant data pack, demonstration of the capability of Nuvec® to generate COVID-19 and/or other specific antibodies might position N4P to commence licensing discussions with prospective partners while it progresses its various other work streams.

Feasibility work into oral delivery of vaccines

Feasibility work also continues on Nuvec® as a solution to the challenges faced in oral delivery of vaccines. Significantly in this respect, N4P has successfully demonstrated that Nuvec® protects plasmid DNA from both acid and nuclease digestion. This result provided the Group's Board with confidence that further investigation of this route of administration using Nuvec® is merited. Release of some data following the results of planned studies as to oral viability is now expected towards the end of 2020.

N4P now facing a pivotal six months

The Group's successful £2m (gross) equity placing that was completed in May 2020, along with the exercising of certain warrants and options, sufficiently bolstered its balance sheet to ensure that the development work which has set a faster pace in the second half can remain in a 'higher gear' as studies move to their next stage. In expectation of continued relaxation of lockdown restrictions in 2021, TPI considers monthly operational expenses will remain higher than the c.£98k/month seen in H1 2020, as acquired aggregate data sets are utilised in forthcoming *in vivo* studies and the more recently identified opportunity for oral delivery is also progressed.

Potentially, the outcome of these findings will be sufficient to attract participation in a COVID-19 or other vaccine development programme(s), thereby moving Nuvec® toward its first (partner-dependent) clinical trials collaboration along with demonstration of its GMP scalability.

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