

Stock Data

Share Price	0.85p
Market Capitalisation	£2.28m
Shares in issue:	268.78m
52 week high/low	2.30p/0.60p

Company Profile

Sector:	Pharmaceuticals
Ticker:	N4P
Exchange:	AIM

Activities

N4 Pharma plc ('N4 Pharma', 'N4P' or 'the Group') is a specialist pharmaceutical company nanoparticle and try developing a novel silica nanoparticle delivery system for vaccines and therapeutics for licensing to pharmaceutical and biotech partners.

www.n4pharma.com

5-year share price performance



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

Past performance and forecasts are not a reliable indicator of future results.

Turner Pope contact details

Tel: 0203 657 0050
Email: info@turnerpope.com
Web: www.turnerpope.com

Andrew Thacker
Corporate Broking & Sales

Barry Gibb
Research Analyst

Turner Pope acts as joint broker to N4 Pharma plc.

Attention is drawn to the disclaimers and risk warnings at the end of this document.

Retail clients (as defined by the rules of the FCA) must not rely on this document.

N4 Pharma plc

N4 Pharma and Silicon Valley-based SRI International ('SRI') have entered a research collaboration agreement ('the Agreement') designed to progress development of preclinical products capable of overcoming barriers that prevent intracellular delivery of large molecule biotherapeutics. SRI is a high reputation not-for-profit scientific research institute, that was originally founded by the trustees of Stanford University in 1946 and today comprises c.1500 professional staff. Its Biosciences division has supported the advancement of >200 drugs to clinical trials. Providing significant validation for Nuvec[®], N4P's unique novel silica nanoparticle delivery technology, the Agreement will utilise SRI's proprietary FOX Three Molecular Guidance system™ ('MGS') platform with a view to advancing development of N4P's nucleic acid-based therapies. Should combination of the two technologies in due course open new commercial potential, N4P and SRI will work together to identify, develop and pursue related business opportunities.

SRI Biosciences has advanced >200 drugs to clinical trials

SRI operates across a wide range of technical and scientific disciplines to discover and develop groundbreaking products and technologies, with a view to bringing new innovations and ideas to the marketplace. Its SRI Biosciences division integrates basic biomedical research with drug/diagnostics discovery, along with preclinical and clinical development. The team has advanced more than 200 drugs to clinical trials, of which 25 have commercialised. Its focus is on novel platforms and programs in a variety of therapeutic areas targeting high unmet medical needs. It collaborates with a broad range of partners from small and virtual biotechnology companies to top 10 pharmaceutical companies and other leading industry partners.

SRI's FOX Three Molecular Guidance System

The FOX Three Molecular Guidance System uses proprietary procedures to identify unique peptide delivery agents. Such MGSs are then delivered systemically, but target a specific cell type in order to internalise its elected payload. Significantly, when an MGS binds to its identified target, the event triggers rapid cellular uptake of the attached payload and delivers it to subcellular organelles (such as the nucleus, mitochondria, endoplasmic reticulum, Golgi apparatus, etc.) The ability to selectively target specific (i.e., diseased) cells with therapeutic payload while remaining broadly inert in plasma is, of course, a key ambition for next generation medication and has potential to generate significant interest across the wider pharmaceutical industry.

Initially focused on oncology, with molecules targeting a variety of solid tumours, research subsequently expanded to include liquid tumours (leukaemia, lymphoma, myeloma etc.), cardiovascular uses, metabolic applications, and vaccine targets. SRI Biosciences' preclinical library, which now comprises more than 50 MGSs targeting c.20 cell types across more than a dozen cellular locations, continues to expand. Research has demonstrated

delivery of a wide range of otherwise impermeable biotherapeutics, ranging from protein-based toxins, antibodies and nucleic acids (as siRNA and ASO), to liposomes and nanoparticles. With such cargos not influencing MGS cellular binding, uptake or trafficking, this holds potential for rapid translation into a fully functional, targeted therapy.

SRI has various different FOX Three applications presently in development. In 2020, programmes included modulators of protein-protein interactions, biological catalysts, immunomodulators and generic manipulation. Highlighting success already recorded when dealing with nucleic acids, early programmes demonstrate ability to deliver/successful uptake of siRNA in a cell-specific fashion.

FOX Three Molecular Guidance System Provides Diverse Payload Delivery

Cell-Specific Intracellular Delivery:

- Opens entirely **new classes** of impermeable therapeutics and novel targets.
- Rescues withdrawn compounds with poor cell penetration or **off target toxicity**.

Diverse Payload Delivery:

Virtually any payload (proteins, nucleic acids, biotherapeutics, small molecules, nanoparticles, etc.) can be targeted to the correct location within a cell.

Versatility:

- Peptide based** - easily synthesized and amenable to a variety of therapeutic and diagnostic applications.
- MGS drives the targeting - not the payload.
- Cargo can be incorporated into MGS without disrupting **cell binding and internalization**.

Multiple Payloads Validated

© 2020 BIO International. All rights reserved. Proprietary. 11
Contact melissa.wagner@sri.com
SRI Biosciences

Source: SRI Biosciences, Presentation at BIO International Convention (June 2020)

Nuvec® utilises a complementary mechanism of action

The joint research agreement aims for co-discovery of new MSGs for new target cells/intracellular locations for Nuvec® carrying nucleic acid payload defined by N4P.

Key properties of the Nuvec® nanoparticle include its ability to prevent enzymatic breakdown of nucleotides along with a large 'spiky' surface area coupled with polyethyleneimine ('PEI'), that permits it to be heavily loaded with siRNA/DNA/mRNA (or a wide range of plasmids including TNFalpha, IL12, IL2) via a simple mixing process. It protects and delivers each compound/molecule into the same cell and generates the desired antigen protein expression, protein silencing or other required outcome, while featuring strong binding, localised transfection efficiency and tumour growth suppression. Nuvec® nanoparticles are highly scalable with stable formulation.

Utilising Nuvec® alongside the targeting abilities provided by MGS, offers potential to significantly enhance the use of nucleotides as they travel to and internalise within target cells via general and dynamin endocytosis. Once internalised, the PEI is seen to alter its charge and begins to disassociate, releasing the payload into the cytoplasm followed by transfection to produce the desired biological effect.

Providing access to potential commercial partners

SRI collaborates with a broad range of partners from small and virtual biotechnology companies to top ten pharmaceutical companies and other leading industry partners. Should a successful combined technology result from today's research initiative, this new relationship prospectively presents unparalleled access to a wide range of commercial partners for N4P.

While today's announcement does not disclose any possible funding commitment and/or ownership/access rights to science jointly developed, the collaboration potentially marks an exciting new chapter for N4P. Further updates covering such details are expected as work progresses, alongside news from the Group's other work streams including oral applications of Nuvec® and the development of ECP105 for an orphan indication with recent acquired Nanogenics.

FOX Three Molecular Guidance System Solves Gene Therapy Delivery Challenges

Future discoveries and applications are limited only by the cell types we would seek to target and payloads to be delivered

Expansion therapeutic areas including:

- Cardiovascular
- CNS
- Immunology
- Infectious disease
- Gl/metabolic
- Genetic disorders

Discovery programs:

- New cell types: **cardiomyocytes, skeletal muscle, liver and kidney**
- Expansion of novel cargos delivered, including **novel MAbs, enzymes, biologic Inducers of apoptosis, antigens and nucleic acids**
- POC study for **siRNA demonstrated successful uptake**; knockdown experiments are in progress

DiaCyt Platform Technology

- Discovery of molecular transport systems for delivery of cargo to the central nervous system- **Blood Brain Barrier**

© 2020 SRI Innovations. All Rights Reserved. Proprietary 12

FOX Three Applications in Development

		Current Programs			
	Therapeutic Class	Modulators of Protein-Protein Interactions	Biological Catalysts	Immuno-modulators	Genetic Manipulation
Cargo Type		<ul style="list-style-type: none"> • MAb • Proteins • Peptides • Techneins 	<ul style="list-style-type: none"> • Protein Toxins • Enzymes 	<ul style="list-style-type: none"> • Antigens (peptides, proteins) 	<ul style="list-style-type: none"> • Antisense oligonucleotides • mRNA/siRNA
Outcome		<ul style="list-style-type: none"> • Modulation of Protein-Protein Interactions • Intracellular Immunotherapy: Expansion of MAb Market 	<ul style="list-style-type: none"> • Delivery of cell impermeable protein/peptide toxins • Catalytic inactivation of biological target • Avoids need for immunoconjugates 	<ul style="list-style-type: none"> • Activation of secondary, recall immunity • No need for tumor associated antigens • Compatible with IO inhibitors 	<ul style="list-style-type: none"> • Solves the delivery challenges getting gene therapy into the cell • Cells specific gene modulation

Contact melissa.wagner@sri.com

SRI Biosciences

Source: SRI Biosciences, Presentation at BIO International Convention (June 2020)

THIS DOCUMENT IS NOT FOR PUBLICATION, DISTRIBUTION OR TRANSMISSION INTO THE UNITED STATES OF AMERICA, JAPAN, CANADA OR AUSTRALIA.

Conflicts

This is a non-independent marketing communication under the rules of the Financial Conduct Authority ("FCA"). The analyst who has prepared this report is aware that Turner Pope Investments (TPI) Limited ("TPI") has a relationship with the company covered in this report. Accordingly, the report has not been prepared in accordance with legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing by TPI or its clients ahead of the dissemination of investment research.

TPI manages its conflicts in accordance with its conflict management policy. For example, TPI may provide services (including corporate finance advice) where the flow of information is restricted by a Chinese wall. Accordingly, information may be available to TPI that is not reflected in this document. TPI may have acted upon or used research recommendations before they have been published.

Risk Warnings

Retail clients (as defined by the rules of the FCA) must not rely on this document. Any opinions expressed in this document are those of TPI's research analyst. Any forecast or valuation given in this document is the theoretical result of a study of a range of possible outcomes and is not a forecast of a likely outcome or share price.

The value of securities, particularly those of smaller companies, can fall as well as rise and may be subject to large and sudden swings. In addition, the level of marketability of smaller company securities may result in significant trading spreads and sometimes may lead to difficulties in opening and/or closing positions. Past performance is not necessarily a guide to future performance and forecasts are not a reliable indicator of future results.

AIM is a market designed primarily for emerging or smaller companies and the rules of this market are less demanding than those of the Official List of the UK Listing Authority; consequently, AIM investments may not be suitable for some investors. Liquidity may be lower and hence some investments may be harder to realise.

Specific disclaimers

TPI acts as joint broker to N4 Pharma plc ('N4 Pharma') which is listed on the AIM Market of the London Stock Exchange ('AIM'). TPI's private and institutional clients may hold, subscribe for or buy or sell N4 Pharma's securities.

Opinions and estimates in this document are entirely those of TPI as part of its internal research activity. TPI has no authority whatsoever to make any representation or warranty on behalf of N4 Pharma.

General disclaimers

This document, which presents the views of TPI's research analyst, cannot be regarded as "investment research" in accordance with the FCA definition. The contents are based upon sources of information believed to be reliable but no warranty or representation, express or implied, is given as to their accuracy or completeness. Any opinion reflects TPI's judgement at the date of publication and neither TPI nor any of its directors or employees accepts any responsibility in respect of the information or recommendations contained herein which, moreover, are subject to change without notice. Any forecast or valuation given in this document is the theoretical result of a study of a range of possible outcomes and is not a forecast of a likely outcome or share price. TPI does not undertake to provide updates to any opinions or views expressed in this document. TPI accepts no liability whatsoever (in negligence or otherwise) for any loss howsoever arising from any use of this document or its contents or otherwise arising in connection with this document (except in respect of wilful default and to the extent that any such liability cannot be excluded by applicable law).

The information in this document is published solely for information purposes and is not to be construed as a solicitation or an offer to buy or sell any securities or related financial instruments. The material contained in the document is general information intended for recipients who understand the risks associated with equity investment in smaller companies. It does not constitute a personal recommendation as defined by the FCA or take into account the particular investment objectives, financial situation or needs of individual investors nor provide any indication as to whether an investment, a course of action or the associated risks are suitable for the recipient.

This document is approved and issued by TPI for publication only to UK persons who are authorised persons under the Financial Services and Markets Act 2000 and to professional clients, as defined by Directive 2004/39/EC as set out in the rules of the Financial Conduct Authority. This document may not be published, distributed or transmitted to persons in the United States of America, Japan, Canada or Australia. This document may not be copied or reproduced or re-distributed to any other person or organisation, in whole or in part, without TPI's prior written consent.

Copyright © 2024 Turner Pope Investments (TPI) Limited, all rights reserved.