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N4 Pharma Plc

("N4 Pharma" or the "Company")

Work Programme Update

N4 Pharma Plc (AIM: N4P), the specialist pharmaceutical company developing Nuvec®, a novel delivery system for cancer treatments and vaccines, is pleased to announce an update on its current work programmes.

Highlights:

- Medicines Discovery Catapult study shows demonstrable suppression of tumour growth using a reduced load of TNFalpha with Nuvec®, enhancing data set from previous successful studies. Further results on the mechanism of action to follow
- Successful loading of Nuvec® with SiRNA and transfection *in vitro* showing clear gene suppression
- Positive preliminary results from ongoing oral studies undertaken at the University of Queensland ('UQ') showing Nuvec® delivered orally has transfected cells in the small intestine
- Material Transfer Agreement ("MTA") remains ongoing

Oncology work

Following the successful oncology studies concluded last year, the Company has been undertaking an expanded study to better understand the mechanism that produced the tumour suppression. The Company is pleased that the study showed clear tumour suppression with 10ug of the TNFalpha loaded onto Nuvec® which was a lower dose than used in the earlier studies. In this study, the dose preparation at a higher dose was sub-optimal and data from this dose could not be obtained. Further work to optimise formulations for *in vivo* studies continues.

Biochemical analysis of blood and tissue samples is continuing to determine whether the Nuvec® loaded with TNFalpha was directly taken up by the tumour cells to produce the active TNF within the tumour or whether other organs such as the liver took up the Nuvec® and produced the TNF and released it systemically to suppress the tumour. If it can be demonstrated that Nuvec® can selectively deliver the plasmid to the tumour this may indicate the potential use of Nuvec® to deliver to tumours with a reduced systemic effect and inform the scope of any clinical studies. This analysis remains ongoing and the results are expected in the next four to six weeks.

The posters resulting from the previous oncology studies undertaken by Nanomerics are due to be presented at the CRS Annual Meeting to be held in Montreal, Canada, between the 11 and 15 July at which point they will be published on the Company's website.

SiRNA

In addition to evaluating the potential of Nuvec® to carry DNA and mRNA, experiments have shown that Nuvec® can also be loaded with SiRNA and maintain a colloidally stable formulation. Experimental work is ongoing to establish the number of SiRNA strands that can be loaded on Nuvec® and to determine the minimal functional load. The application of specific SiRNAs in oncology is a rapidly developing field and this may represent a further extension of the use of Nuvec®.

Oral Applications for Nuvec®

As announced previously, a longer term study on oral applications is being carried out at UQ utilising grant funding obtained by N4 Pharma and UQ for this purpose. Early results are promising with UQ having successfully demonstrated via an *in vivo* pre-clinical study that Nuvec® loaded with McCherry DNA (a commonly used form of labelled DNA to track expression) and formulated and administered in capsules was able to pass through the lining of the stomach to successfully transfect the small intestine. Whilst there is a lot more work to do in this area this is a significant step in establishing how Nuvec® could be delivered orally.

Nigel Theobald, Chief Executive Officer of the Company, commented: "We are very pleased with our recent results across oncology, the potential opening up of the siRNA market and the early data coming from UQ on their oral work.

"We have now demonstrated across 50ug, 20ug and now 10ug of TNF alpha loaded onto Nuvec® results in tumour suppression *in vivo*. We now wait with interest the further data due on this study to better understand how the suppression has occurred which will help determine the most appropriate use of Nuvec® as a delivery system to help treat tumours.

"Our proof of concept work is extremely encouraging and, again, points towards multiple applications that Nuvec® could be used for, although it is clear that precise formulation for use in each area will be critical when advancing towards a commercial product. Our work with our MTA partner continues and I look forward to providing an update on the next steps following the final results of the oncology work."

The information contained within this announcement is deemed by the Company to constitute inside information as stipulated under the Market Abuse Regulations (EU) No. 596/2014 which has been incorporated into UK law by the European Union (Withdrawal) Act 2018.

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About N4 Pharma

N4 Pharma is a specialist pharmaceutical company developing a novel delivery system for cancer and vaccine treatments using its unique silica nanoparticle delivery system called Nuvec®.

N4 Pharma's business model is to partner with companies developing novel antigens for cancer and vaccine treatments to use Nuvec® as the delivery vehicle to get their antigen into cells to express the protein needed for the required immunity. As these products progress through pre clinical and clinical programs, N4 Pharma will seek to receive up front payments, milestone payments and ultimately royalty payments once products reach the market.

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