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N4 Pharma Plc
("**N4 Pharma**" or the "**Company**")

New Nuvec® opportunity and patent filing

N4 Pharma Plc (AIM: N4P), the specialist pharmaceutical company developing Nuvec®, a novel delivery system for cancer treatments and vaccines, announces that it has filed a new UK patent application around both Nuvec®'s ability to be used to manufacture viral vectors and to make viral vectors more efficient in applications such as ex-vivo gene therapy treatments.

Nuvec® has a unique structure that allows the easy loading of DNA plasmids. The manufacture of viral vectors typically requires the use of two or more plasmids. Nuvec® has been shown to be capable of loading multiple plasmids. In recent research conducted by the Company, it has been demonstrated that loading Nuvec® with the three plasmids typically used to produce lentivirus, resulted in an increase in the amount of the desired viral vector produced. The manufacture of viral vectors is an expensive process, so utilising Nuvec®'s ability to efficiently load and deliver multiple plasmids could greatly reduce the cost involved in this process.

An important use of viral vectors is in ex-vivo gene therapy. In this approach, a patient's cells are taken from their body and more are grown in the laboratory. Whilst still outside the body, these cells are modified by adding the gene of interest into the cells' DNA by using viral vectors that are carrying the gene. These cells, carrying the gene designed to treat the patient, are then re-inserted back into the patient's body. In separate research, the Company has demonstrated that when complexed with a lentivirus carrying a gene of interest, Nuvec® can be used as a reagent to produce cells containing the gene using a fraction of the original lentivirus, thereby suggesting that this process can be made cheaper and more efficient.

The Company is now working with external consultants to identify how best to enter the virus manufacture and ex-vivo gene therapy markets.

Nigel Theobald, Chief Executive Officer of the Company, commented:

"Whilst investigating the dispersion of Nuvec® to improve its *in-vivo* consistency, we have been undertaking research on the *in-vitro* applications of Nuvec® as all our data shows good and consistent loading and *in-vitro* transfection using Nuvec®.

"The global viral vector manufacturing market was valued at $273 million in 2017 and is expected to grow to $816 million by 2023. Sales of transduction reagents were estimated to be $68m in 2017 and growing to $123m by 2024.

"These are significant markets for *in-vitro* applications of Nuvec® and will allow us to look at additional commercial opportunities whilst we continue to develop our *in-vivo* data package for licensing Nuvec® as a delivery system for cancer treatments and vaccines."

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

N4 Pharma's business model is to partner with companies developing novel antigens for vaccines and cancer 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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