

## Press release

NeuroVive Pharmaceutical AB (publ)  
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# NeuroVive's partner Yungjin Pharm completes KL1333 Phase I study recruitment

**Lund, Sweden, 17 April 2018, NeuroVive Pharmaceutical AB** (Nasdaq Stockholm: NVP, OTCQX: NEVPF) and Yungjin Pharm Corporation Ltd (South Korea Stock Market, KRX 003520) today announced that the last visit of the last healthy volunteer in the clinical phase I single ascending dose (SAD) study of KL1333 has been completed. All planned dosing cohorts have now been completed and no serious adverse events have occurred. The next multiple ascending dose (MAD) study run by NeuroVive will be initiated in the second half of 2018.

The study is a double-blind, placebo-controlled, single-dose, dose-escalation phase I clinical study to investigate the pharmacokinetics and safety/tolerability of KL1333 in 60 healthy subjects. All planned dosing cohorts have now been completed according to plan. Data processing is ongoing and full safety/tolerability and pharmacokinetic results are expected to be available in mid-2018. The results of Yungjin's SAD study will be referenced for the final design of NeuroVive's upcoming multiple ascending dose (MAD) study in healthy volunteers and patients with genetic mitochondrial disease.

"We are pleased with the successful completion of the first in human clinical trial of KL1333 and look forward to continuing our close collaboration with the team at NeuroVive to progress the exciting KL1333 treatment opportunity through further clinical development for patients with high unmet medical need," commented Yungjin Pharm CEO & President Chae J. Lee.

NeuroVive has chosen a leading global contract research organization (CRO), for its planned repeated dosage phase I study of KL1333 in healthy volunteers and genetic mitochondrial disease patients. The study is expected to commence in the second half of 2018.

"The completion of the first clinical KL1333 study is a substantial milestone, which means we can now confidently initiate our clinical phase I MAD study as planned. This is an important step towards our goal of bringing a novel treatment for patients with severe orphan diseases with few or no treatment options," said NeuroVive CEO Erik Kinnman.

The MAD study will consist of two parts; a dose escalation in healthy volunteers, and also dosing of patients with genetic mitochondrial disease. The purpose of the study is to investigate safety and pharmacokinetics of KL1333. The study will be conducted at sites in the UK and results are expected in the first half of 2019.

*The information was submitted for publication, through the agency of the contact person set out below, at 08:30 a.m. CET on 17 April 2018.*

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## **About KL1333**

KL1333 is a potent modulator of the cellular levels of NAD<sup>+</sup>, a central coenzyme in the cell's energy metabolism. KL1333 has in preclinical models been demonstrated to increase mitochondrial energy output, reduce lactate accumulation, diminish the formation of free radicals, and to have long-term beneficial effects on energy metabolism such as the formation of new mitochondria. It is in clinical development stage intended to document the use for chronic oral treatment in primary genetic mitochondrial disorders such as MELAS, KSS, CPEO, PEO, Pearson and MERRF. Its mode of action is complementary to that of NVP015, which is intended to alleviate acute episodes of energy crises in genetic mitochondrial disorders with dysfunction in respiratory complex I and to NVP025, intended to protect the mitochondria in skeletal muscle from dysfunctional calcium handling and consequential muscle wasting.

## **About Yungjin Pharm**

Yungjin Pharm Co. Ltd., established in 1952, has been playing a major role as a forerunner in the Korean pharmaceutical industry for half a century. With the inspiring mission statement, "To relieve the suffering of mankind from diseases with our innovative, effective and safe pharmaceutical products", they have shown a successful contribution not only within Korea, but also through global expansion. As a result, they have received a total of 25 awards including the President Award for Superior Product Development, the Prime Minister Award, Industry Award and many more. These accomplishments demonstrate their sustainability and commitment to the development of innovative products and business excellence in both overseas and domestic segments. The company is listed on the South Korean stock market, KOSPI (KRX 003520).

## **About NeuroVive**

NeuroVive Pharmaceutical AB is a leader in mitochondrial medicine, with one project in clinical phase II development for the prevention of moderate to severe traumatic brain injury (NeuroSTAT<sup>®</sup>) and one project in clinical phase I (KL1333) for genetic mitochondrial diseases. The R&D portfolio consists of several late stage research programs in areas ranging from genetic mitochondrial disorders to cancer and metabolic diseases such as NASH. The company's strategy is to advance drugs for rare diseases through clinical development and into the market. The strategy for projects within larger indications outside the core focus area is out-licensing in the preclinical phase. NeuroVive is listed on Nasdaq Stockholm, Sweden (ticker: NVP). The share is also traded on the OTCQX Best Market in the US (OTC: NEVPF).