Proteo, Inc. / Proteo Biotech AG:

New mechanism of Elafin to prevent lung injury in mechanically ventilated newborns

Irvine, CA, Kiel, July 17, 2018 - Proteo, Inc. (OTCQB: PTEO) and its wholly-owned subsidiary Proteo Biotech AG today announced the publication of research results by Alcazar et al. from Stanford University on a new mechanism by which Elafin rescues lung cell survival in the lung of newborn mice subjected to mechanical ventilation.

Neonatal chronic lung disease or bronchopulmonary dysplasia develops in preterm infants whose lungs are incompletely developed and therefore require respiratory support after birth. The disease condition is characterized by incomplete formation of alveoli, associated with lung cell death and disordered deposition of matrix elastin. Treatment with Elafin is known to mitigate these adverse pulmonary effects of mechanical ventilation with oxygen-rich gas in newborn mice.

The study identified a novel pro-survival signal which involves the epithelial growth factor receptor (EGFR) and the Protein Klf4. This pro-survival signal is disrupted in the lungs of newborn mice exposed to mechanical ventilation. Elafin treatment reduced cell death in ventilated newborn lungs both by suppressing elastase activity and preserving EGFR-Klf4 signaling. The authors conclude that this could account for Elafin's benefit in promoting alveologenesis and lung growth in newborn mice during mechanical ventilation.

These experimental findings coupled with the research group's observation of significantly increased elastase levels in preterm infants with evolving neonatal chronic lung disease, support the notion that Elafin treatment might be effective in mitigating or preventing neonatal lung injury caused by mechanical ventilation.


About Proteo's Elafin clinical development program

Proteo's biopharmaceutical drug candidate Elafin promises an excellent therapeutic benefit risk profile for the use as an anti-inflammatory and tissue protective drug. Elafin is identical to the human protein elafin with high specificity for tissue destroying and inflammation promoting proteases. The development program of Elafin is focused on the late stage development of Elafin in major surgery and early stage development in pulmonary arterial hypertension (PAH). Elafin has received orphan drug designations in the USA and the EU for esophageal cancer surgery (ECS) and PAH. So far, there were no safety concerns after the treatment of 75 patients in three randomized, double-blind, placebo-controlled clinical trials. Postoperative complications in major surgery are the most significant independent risk factor leading to high morbidity and hospital readmissions. Following the completion of two Phase II surgery trials in ECS and coronary artery bypass graft surgery, and a final
European Medicines Agency advice letter, a European pivotal trial with Elafin in ECS is in preparation. Treatment of patients undergoing ECS resulted in a significantly shorter intensive care unit stay and a positive postoperative effect on liver and kidney markers. Treatment of patients undergoing coronary artery bypass surgery resulted in a postoperative reduction of the heart damage marker troponin I. In models of PAH it was shown that Elafin reverses obliterative changes in arteries of lung explants from PAH patients and that treatment with Elafin leads to the regression of pulmonary vascular lesions in rats. PAH is still a fatal disease with high medical need for therapies that stop disease progression. A Phase I trial in the US with subcutaneously administered Elafin funded by the NIH is planned to commence with recruitment in 2018.

About Proteo

Proteo focuses on the discovery and development of therapeutic solutions based on its innovative biopharmaceutical Elafin for life threatening surgeries and life-threatening diseases such as PAH. Proteo seeks partners and investors for the development, commercial scale manufacturing, marketing and distribution of the product. Proteo, Inc. common stock is quoted on the OTCQB under the symbol PTEO (www.proteo.us). The company has one wholly owned subsidiary, Proteo Biotech AG, Kiel, Germany (www.proteo.de).

Forward-Looking Statements

Certain statements in this news release may contain forward-looking information within the meaning of Rule 175 under the Securities Act of 1933 and Rule 3b-6 under the Securities Exchange Act of 1934 and are subject to the safe harbor created by those rules. All statements, other than statements of fact included in this release, including, without limitation, statements regarding potential future plans and objectives of the company, are forward-looking statements that involve risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Technical complications that may arise could prevent the prompt implementation of any strategically significant plan(s) outlined above. The company cautions that these forward-looking statements and risks and uncertainties involved are further qualified by other factors including, but not limited to those set forth in the company's Form 10-K filing and other filings with the United States Securities and Exchange Commission. The company undertakes no obligation to publicly update or revise any statements in this release, whether as a result of new information, future events or otherwise.

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