

Novel Preeclampsia Treatment

10.05.2022 – University Hospital Cologne grants license to USA company Advanced Prenatal Therapeutics for improved blood filtering method to treat severe pregnancy complication.

A life-threatening condition for pregnant women and their children, preeclampsia, affects four to eight percent of women after the 20th week of pregnancy and, in the worst case, can lead to placental abruption, kidney failure, or a stroke. As a leading cause of maternal death and fetal death worldwide, preeclampsia is a critical unmet medical need. Affected women often have to give birth early because the treatment options for preeclampsia are limited. Scientists at the University Hospital Cologne (UKK) are researching therapeutic intervention by means of a blood filtration procedure known as apheresis. A special and improved procedure has been developed at the UKK that could potentially prevent life-threatening complications and prolong the pregnancy. With the support of PROvendis GmbH, this technology was licensed to the US company Advanced Prenatal Therapeutics, Inc. (APT).

Improved approach to preeclampsia treatment

During pregnancy, the interaction and relationship between the body's own vasogenic and vasogenic-inhibiting factors plays an important role in the formation of the placenta. In the disease preeclampsia, there is an imbalance between these factors: There is an excess of the protein sFlt-1, which blocks the factors vascular endothelial growth factor (VEGF) and placental growth factor (PlGF), which are important for vessel formation. For several years, research has been conducted into how the harmful protein sFlt-1 can be filtered out by means of apheresis outside the body, thus prolonging the pregnancy to the maximum. Researchers at the UKK have developed an apheresis procedure that not only filters sFlt-1 out of the blood, but also displaces already bound VEGF and PlGF from sFlt-1 again and thus makes the important growth factors physiologically functionally available. This particular advantage makes it possible to restore the necessary balance of factors in the patient's body.

APT intends to commercialize the licensed apheresis technology

As one of the pioneers in the field of treating preeclampsia with apheresis technology, the US company Advanced Prenatal Therapeutics, Inc. already holds intellectual property in this field. APT has also been granted Breakthrough Device Designation by the US FDA for a novel medical device to remove sFlt-1 from the blood of pregnant mother's with preeclampsia using an apheresis process. Licensing the UKK invention, for which an international patent has already been filed with the support of PROvendis, is another important step on the company's path to a safe and reliable therapeutic option for preeclampsia.

More information:

[!\[\]\(cf531ed27e91483460120fcc057b3901_img.jpg\) Matin, M., et al. \(2020\) Affinity-Enhanced Multimeric VEGF \(Vascular Endothelial Growth Factor\) and PlGF \(Placental Growth Factor\) Variants for Specific Adsorption of sFlt-1 to Restore Angiogenic Balance in Preeclampsia. Hypertension](#)

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NRW Hochschul-IP – Network for Intellectual Property (IP) of NRW Universities

28 universities of North Rhine-Westfalia and PROvendis GmbH form the network NRW Hochschul-IP. The network for Intellectual Property (IP) encourages professional knowledge and technology transfer. Together with the University of Münster (WWU) PROvendis acts as the central service provider for NRW Hochschul-IP. The network NRW Hochschul-IP is funded by the federal state of North Rhine-Westfalia. Grant authority is the Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia.

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About PROvendis GmbH

PROvendis acts as a professional service provider in the entire field of IP management for more than 30 universities and extra-university research institutions as well as for companies and start-ups.

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About Advanced Prenatal Therapeutics, Inc.

APT is a privately-held company engaged in developing novel methods to diagnosis and treat preeclampsia. The company is using its proprietary technologies to develop diagnostic test(s) and therapeutic devices that can safely treat symptoms and underlying causes of preeclampsia to improve health outcomes for both mother

www.advancedprenatal.com

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