



New drug candidate for normal brain development in extremely premature infants

Arctic Bioscience and Smerud Medical Research International AS (SMERUD) are initiating a research collaboration to develop a new drug candidate based on phospholipid esters from herring roe for extremely premature infants.

More than 30 000 babies in USA and Europe are born before 28 weeks of pregnancy. Babies born this early do not have fully developed brains, and therefore a high risk of disability and complications.

The company plans to apply for orphan designation for the drug candidate.

Docosahexaenoic acid (DHA) is important for normal development of brain and vision in the fetus. Herring roe is a natural source of the omega-3 fatty acid DHA. Thus, there is a sound scientific rationale for a drug candidate based on phospholipid esters from herring roe to contribute to normal brain development in extremely premature infants.

Arctic Bioscience will, based on patented technology, develop a new liquid drug formulation with a high content of phospholipid bound DHA which can be administered through a feeding tube to extremely premature babies.

“If we can contribute to normal brain development in extremely premature infants, this will have enormous impact for these babies and their families all over the world. Our long-term strategy is to develop a pipeline of drugs for several indications based on our patented technology platform. This agreement gives us the opportunity to develop a new product in parallel with our psoriasis drug candidate. If the development is successful, we will enter a new billion NOK market”, says Ole Arne Eiksund, CEO of Arctic Bioscience.

SMERUD has collaborated closely with global experts in neonatal medicine during the last 10 years and have participated in the development of another medicine used to reduce complications related to extreme prematurity. Extremely premature infants have a high risk of complications after birth, not only neurological, but also diseases related to vision, lung, and intestine.

“It is very complex and challenging to conduct clinical trials in this patient group, and very few companies have this experience. We want to utilize our special competence and will invest significant resources in this important project over the coming years. We know that DHA is essential for normal development, but only high-quality clinical research will uncover whether this particular DHA formulation from herring roe will have sufficient efficacy in treatment or prevention of complications related to prematurity”, says Knut Smerud, Founder and Chairman at SMERUD.

Research on effect of phospholipid esters from herring roe on brain development in extremely premature infants will be conducted in collaboration with several specialist clinics in the Nordics, Europe, Canada, and USA.



One such institution is in Genoa, Italy, and Professor Luca Ramenghi who is the head of neonatal pathology and intensive care at the Gaslini Institute at the University of Genoa will be a key partner when we plan the development course and apply for grants from the EU and others. Professor Ramenghi's research unit is a world leader in very advanced MRI imaging of the brain in extremely premature infants as well as clinical interpretation of this image analysis, and has extensive experience from complex clinical studies of this patient group.

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About Arctic Bioscience

Arctic Bioscience is a biotech company developing and commercializing nutraceutical products based on herring roe oil. Herring roe oil contains lipids that are essential to maintain cell membranes, contributing to normal functioning of brain, heart, and vision. Nutraceuticals from Arctic Bioscience are sold globally as bulk ingredients to other companies making dietary supplements, and as finished goods under the Romega brand. The strategy is to switch sales from bulk to finished goods and focus markets are USA and China.

The company is developing HRO350 – a novel investigational drug candidate with herring roe as raw material. HRO350 is being developed for treatment of mild-to-moderate psoriasis. This is a large patient group in need of new effective medicines with beneficial safety profile. Arctic Bioscience is led by a team of highly competent people with experience in developing marine oils and experience from global pharmaceutical companies.