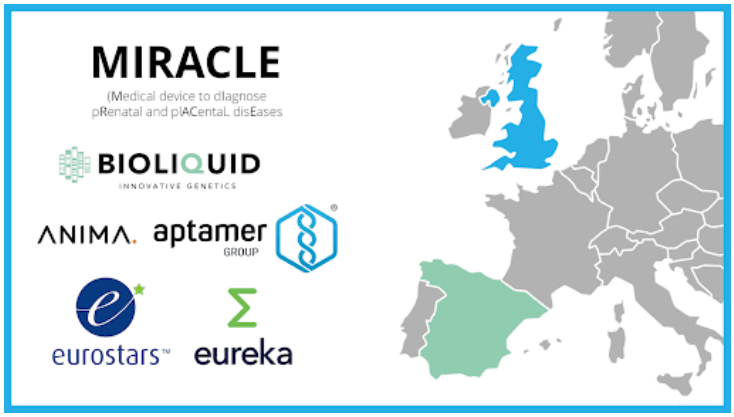
BioSpectrum
the business of Bio & Health Sciences
ASIA EDITION

Aptamer Group consortium awarded Eurostars grant to develop a novel prenatal disease diagnostic device

May 23, 2023 | News

Aptamer Group, the developer of novel OptimerÃ?Â® binders to enable innovation in the life sciences industry, in partnership with Bioliquid Innovative Genetics and Anima Design of Spain, announce that they have been awarded a Ã¢â??Â¬1.125 million grant as part of the Eurostar-3 competition. As part of a consortium, Aptamer Group with it's partners will develop a new medical device for improved non-invasive prenatal testing and the diagnosis of placental disease.



Current prenatal diagnostic methods are highly invasive, carrying risk of miscarriage, infection, and injury to the foetus. As part of the Eurostar's project, Aptamer Group will develop Optimer binders to be used within a new medical device and enable the isolation of intact foetal cells from liquid biopsies, with the aim of improving non-invasive prenatal tests and allowing the discovery of biomarkers for placental diseases. The consortium's project proposal MIRACLE (**M**edical device to d**I**agnose p**R**enatal and pl**AC**entaL dis**E**ases), ranked 25 out of 212 eligible applications in the third call of the Eurostars-3 competition, a joint program sponsored by Eureka and the European Commission.

Optimer binders will be developed using Aptamer Group's hypothesis-free cell targeting selection procedure. This procedure allows the development of Optimer binders to cellular biomarkers based on positive screening to the required cell type and the removal of any cross-reactive binders through negative screening against non-target cell types. The developed Optimer binders will then be integrated into the medical device to allow specific cell types to be isolated and analysed for diagnostic biomarkers from samples of the pregnant mother's blood. This removes the need for invasive amniocentesis testing. Compared to equivalent protein reagents, such as antibodies, the stability of Optimer binders enables simple global logistics for the test devices, while cost-efficiencies in Optimer binder manufacturing offer improved cost of goods for the final medical device.

Dr Rob Quinn, Interim Chief Executive Officer of Aptamer Group, commented: "We are extremely pleased to have been selected for such an exciting and prestigious grant, and to bring the power of our Optimer platform to develop novel reagents to support improved foetal and placental diagnostics. The consortium members all bring important expert knowledge of their specialisms, and we look forward to working closely with them to develop Optimer binders to enable this new device for more tolerable, personalised medicine approaches in the field of foetal and women's health."