



SUCCESS STORY

New device protects mother and child

Horizon 2020 | FET Innovation Launchpad | EIC Pathfinder

Preeclampsia is one of the leading causes of maternal and foetal mortality in pregnancy. Swiss start-up “MOMM Diagnostics” is developing a simple, cheap and rapid diagnostic test for preeclampsia that can be carried out in the doctor’s office. Point-of-care screening means that mothers can get the treatment they need before preeclampsia becomes life threatening – and thereby avoid hospital stays.

Preeclampsia – a pregnancy complication characterised by high blood pressure and organ damage – can threaten the lives of both mother and unborn child. With early detection, the condition can often be managed successfully, however current diagnostic techniques remain slow, expensive, sometimes inaccurate and often come too late in the pregnancy to help.

Certainty in a drop of blood

Now, thanks to a FET Innovation Launchpad grant, the Empa spin-off

MOMM Diagnostics is developing a rapid and precise point-of-care (POC) test that provides diagnostic certainty and cuts healthcare costs. Called “PEDPOC”, the project is being coordinated by Dr Mathias Wipf, CEO and co-founder of MOMM Diagnostics, who initiated the concept. A physicist with expertise in nanoscience and electrical biosensors, Wipf says the new-generation diagnostic test resembles a paper-strip pregnancy test. It can be used during prenatal checkups, with no need to ship blood samples to a specialised diagnostics lab and no anxious waiting for lab results.

‘I had little experience writing grant applications, particularly for Horizon 2020. I had no problem with the scientific part, but many other aspects were new to me.’

“Our device will test 2 very specific biomarkers for preeclampsia in a drop of maternal blood and analyse them electronically with a compact

reader,” Wipf explains. “The specificity and sensitivity of the test are significantly higher than those of current clinical diagnosis.” Given that one-third of current hospital pregnancy costs are associated with preeclampsia, the POC test promises substantial savings in public health costs. The PEDPOC team expects to have a prototype soon to demonstrate to investors, and to go to market by 2023. Development will continue after project end with support from Innosuisse – the Swiss Innovation Agency, the University of Applied Sciences and Arts Northwestern Switzerland and the Swiss Center for Electronics and Microtechnology (CSEM).

Insightful assistance

Wipf says that Euresearch was instrumental in helping him win the FET grant. “Euresearch made me aware that such an opportunity existed. They also supported me with the application and helped me structure it well,” he explains.

'Motivated entrepreneurs turning science into robust, market-ready technology – it's a privilege to be part of this.' (Euresearch)



Dr Mathias Wipf (@Keystone-SDA/Keystone)

Euresearch is an information and advisory service on the European Research and Innovation Framework Programmes. It has offices in all the Swiss regions and a Network Office in Bern. Euresearch is a non-profit association supported by the Swiss confederation.

PROGRAMME

The Future and Emerging Technologies (FET) Innovation Launchpad is a versatile and light-weight funding scheme that turns results from previously funded FET projects into economic or social innovations.

In Horizon Europe, the FET programme will be part of the European Innovation Council (EIC) Pathfinder. The EIC Transition Activities will supersede the FET Innovation Launchpad.

FACTS & FIGURES

Project Name PEDPOC – Rapid diagnosis of pre-eclampsia at the point-of-care

Programme Future and Emerging Technologies (FET) Open, FET Innovation Launchpad, EIC Transition

Interviewee Dr Mathias Wipf, MOMM Diagnostics

Project Participants MOMM Diagnostics and the Swiss Federal Laboratories for Materials Science and Technology (Empa; Prof. Michel Calame)

Research Area Biomedical engineering

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Project Cost €219 375

Project Funding €100 000

More information www.mommdiagnosics.com

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