**Information Sheet for ANGIE – EU-funded research project**

**Tiny devices delivering drugs precisely where needed**

ANGIE is a new research project tasked with creating a radical new technology for localised, targeted drug delivery.

Tiny mobile magnetic devices are showing huge potential for future biomedical applications. However, the use of these micro- and nanodevices in clinical settings is not easy.

The EU-funded ANGIE project will forge ahead with small-scale robotics, magnetic navigation systems and localised targeted drug delivery. Specifically, the project will develop magnetically steerable wireless nanodevices (micro robots) that will be able to enter the body’s vascular system to target treatment at the site of the blood clot, unblock blood vessels and fight stroke from within.

By creating a baseline of knowledge and skills for localised targeted drug delivery, the project will increase health professionals’ capacity to treat multiple chronic diseases. Moreover, it will enable doctors to deliver drugs precisely where needed with minimal side effects.

This is a much-needed development because stroke is the leading cause of adult physical disability in the world, affecting 17 million people worldwide each year.

Navigating inside the body to treat injured tissues has fascinated scientists and the public for decades, but the required technologies have lagged behind. Scientists in the ANGIE project believe that they are now in a position to make it happen. The ANGIE project will be run by a leading group of scientists working in universities, research centres and innovative companies across Belgium, Germany, Greece, Portugal, Spain and Switzerland.

The scientists at ANGIE are confident that their team includes all the required knowledge, experience, and infrastructure to make it happen. For many years they have been building the needed knowledge for the use and control of small-scale robotic systems for different health applications. They recently developed the first system to treat cardiac arrhythmias using electromagnetically steerable catheters.

Achieving such a breakthrough will require advances in fields such as medical robotics, numerical simulation and biomaterials. Also, it needs technical capabilities and facilities that only few organisations have. But even those who do often lack the knowledge to transform scientific knowledge into medical instruments ready for clinical application.

The ANGIE project will start in 2021 and its team will need four years to develop the basic foundations of the technology.

The Consortium consists of a group of four research institutions, three small-medium enterprises, and two non-profit organizations from across the EU.

The Stroke Alliance for Europe (SAFE) is part of the consortium and is responsible for disseminating information about ANGIE to the stroke community.

The project is funded by the European Commission under the Grant Agreement number 952152.

[www.H2020-ANGE.eu](http://www.H2020-ANGE.eu)