

Press Information

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Philips-led research consortium awarded EUR 6.3 million EU grant to develop integrated approaches for personalized cancer treatment

- *Four-year research project aims to increase accuracy of both genetic and functional characterization of primary breast and rectal cancer*
- *Clinical research studies to be carried out at University Medical Center Utrecht (the Netherlands) and the Institut National de la Sante et de la Recherche Medicale (France)*

Amsterdam, the Netherlands – [Royal Philips](#) (NYSE: PHG, AEX: PHIA), a global leader in health technology, together with its consortium partners, today announced that it has been awarded a EUR 6.3 million Horizon 2020 EU research grant to develop an integrated approach for personalized cancer treatment. The four-year research project, ‘Liquid biopsies and IMAGING for improved cancer care’ (LIMA), aims to increase the accuracy of both genetic and functional characterization of primary breast cancer and rectal cancer by combining two diagnostic technologies: advanced blood tests called liquid biopsy and Magnetic Resonance Imaging (MRI). The clinical research studies will be carried out at the University Medical Center Universitair Medisch Centrum Utrecht in the Netherlands, and the Institut National de la Sante et de la Recherche Medicale in France.

Integrating personalized treatment into the clinical workflow

Each patient and tumor is unique, and often a treatment that’s effective for one patient will be ineffective for another. The LIMA project aims to develop and validate tools and techniques that can be applied during the early stages of cancer treatment. This may enable clinicians to better understand the effectiveness of their approach, and to potentially adapt further steps in the individual treatment of the patient.

Liquid biopsies, advanced laboratory analysis based on routinely drawn blood samples, support diagnosis by providing in-depth genetic information about tumors and metastases in the body. The analysis can be based on circulating tumor DNA (ct-DNA) or Circulating Tumor Cells (CTC) contained in the blood samples. MRI gives physicians information about the location of the cancer and functional information about the tumor tissue composition. For example, diffusion weighted MRI and perfusion MRI, well-known imaging biomarkers in oncology, will be further developed for tumor detection and characterization in order to provide comprehensive and quantitative information for an integral diagnostic approach. In addition, properties of MRI contrast at and around the tumor will be analyzed to shed light on the tumor grade and biological status, a field of imaging sciences called ‘radiomics’.



“In collaboration with our partners we will combine a range of liquid biopsy technologies, which give us more detailed molecular information, with advanced MRI techniques, which could enable us to better understand the impact of treatment at an early stage,” said Hans Hofstraat, innovation program manager, Philips. “This has the potential to improve patient outcomes and potentially represents a significant step forward in delivering personalized cancer treatment.”

“With liquid biopsies we can analyze circulating tumor DNA and tumor cells in cancer that’s advanced in a specific part of the body,” said Alain Thierry, Research Director, at the Institut National de la Santé et de la Recherche Medicale (INSERM), Montpellier, France. “This technique is an important emerging field in diagnostics, particularly in oncology, and is starting to have a positive impact on patient care.”

“This project will allow us to build methods to look inside the body in much more detail, which has the potential to improve the treatment we provide and make a significant positive impact on the lives of our patients,” said Kenneth Gilhuijs, associate professor and research coordinator at University Medical Center (UMC) Utrecht, the Netherlands. “By understanding the impact of treatment at an early stage, we will be able to deliver more targeted and effective therapy.”

Alongside Philips, [INSERM](#) and [UMC Utrecht](#), the project involves several SMEs that have developed innovative technologies for liquid biopsies: [Agena Bioscience GmbH](#) (Germany), [DiaDx](#) (France) and [Stilla Technologies](#) (France) provide technologies for analyzing ct-DNA, [ANGLE plc](#) (UK) for CTC isolation and [ALS Automation Lab Solutions GmbH](#) (Germany) for single CTC detection and selection.”

Horizon 2020 is the largest-ever EU Research and Innovation program, with the goal of ensuring Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

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About Royal Philips

Royal Philips (NYSE: PHG, AEX: PHIA) is a leading health technology company focused on improving people’s health and enabling better outcomes across the health continuum from healthy living and prevention, to diagnosis, treatment and home care. Philips leverages advanced technology and deep clinical and consumer insights to deliver integrated solutions. Headquartered in the Netherlands, the company is a leader in diagnostic imaging, image-guided therapy, patient monitoring and health informatics, as well as in consumer health and home care. Philips’ health technology portfolio generated 2016 sales of EUR 17.4 billion and

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