

EXECUTIVE SUMMARY



MERMAID is a self-owned institution that identifies, finances and leads innovative international projects within the context of gynecological cancer research.

The project has started the fundraising for its third research project, which is titled: “MERMAID III – The challenge of ovarian cancer: Screening, early diagnosis and the identification of women at high risk”. The aim of the research is to identify one or more methods of diagnosing ovarian cancer at an early stage. The background for the research is that ovarian cancer is the type of gynecological cancer that causes the most deaths among women in Europe and the United States. In 2015, 140,000 women worldwide died as a result of this disease. Only around 40% of women diagnosed survive. However, 90% of women diagnosed at an early stage survive, whereas a mere 5-10% survive when diagnosed at a later stage. Hypothetically, via identifying all women at the earliest stage, the survival rate would be capable of reaching 90%. In the best possible scenario, it would mean that more than 200 lives in Denmark could be saved every year. In an international perspective, this number is multipliable many times over. Further research will benefit many of these women and their families. The research is divided into three sub-projects that attempt to identify methods for early diagnosis from multiple angles.

Early detection and screening:

A biobank is to be established with 200.000 cell samples from the cervix; samples that are taken routinely from all women as they are screened for cervical cancer. Moreover an existing biobank is used that contains samples from 50.000 Danish women. From the samples, cells from the ovaries can be isolated and genetic material can be mapped. This makes it possible for cancerous cells in the ovaries and their pre-stages to be identified and characterized. A positive result from this project would contribute to enabling the screening of ovarian cancer, in a similar fashion to the way we already screen for cervical cancer. Head of research: Professor Susanne Krüger Kjær, The Danish Cancer Society (Kræftens Bekæmpelse)/Copenhagen University Hospital, DK.

Biomarkers and/or prognostic markers: This project is based on women, who are already undergoing treatment for cervical cancer. Molecular and biological investigations of tissue and blood from women with cancer can identify new markers that are characteristic of the disease. A good marker will increase the chance of being able to diagnose the cancer at an early stage. Head of research: Professor Claus Høgdall, Copenhagen University Hospital, DK.

The infection theory:

The project will utilize highly sensitive, molecular and biological analytic methods, to discern whether ovarian cancer might be caused by a bacteria or a virus, as is the case with cervical cancer, which can today be prevented with a vaccine. Head of research: Professor Jan Blaakær, University of Southern Denmark (SDU) and the University Hospital, Odense, DK

The research will once a year be evaluated by an independent panel of experts. They will do so based on a scientific review of the research, which will be authored by the scientists participating in the project. The entire MERMAID III project, including sub-projects, will span 8 years, and has a total budget of 40 million DKK. The scientific project coordinator is Professor and Projectdirector Bent Ottesen, at Copenhagen University Hospital, Rigshospitalet, DK. The research is taking place in collaboration with scientists from John Hopkins Medical Institutes, Baltimore, US and Karolinska Institutet, Stockholm, Sweden.

The research commenced medio 2015.

Prior to MERMAID III the MERMAID Project has been responsible for the research completed for MERMAID I and MERMAID II, focusing on ovarian and cervical cancer respectively. Both projects have received significant international approval for their important results in these areas.