

1980s: Detects important protein – 2016: Major agreement with MSD

Global pharmaceutical company to bring Norwegian e-health technology to Europe

The founders of Calpro discovered the protein that became an internationally recognized marker for diagnosis and treatment of IBD intestinal diseases. The company has now signed a major agreement with MSD, one of the world's largest pharmaceutical companies, for the delivery of the e-health technology CalproSmart. With this, patients can monitor the disease while at home and report to the doctor via a smartphone.

- This is very inspiring, especially as several IBD patients may get a better quality of life and faster medical supervision. It also implies a great opportunity for a small company such as Calpro, says Anne Thjømøe, Executive Chairman at Calpro.

IBD (Inflammatory Bowel Disease) is the generic term for chronic inflammatory diseases of the intestine and the two most common are ulcerative colitis and Crohn's disease.

Discovered Calprotectin

During the '80s the doctors Inge Dale and Magne K. Fagerhol at Ullevål Hospital discovered a protein in the white blood cells they named calprotectin. It discharges in faeces when Crohns- and ulcerative patients experience inflammation in the intestine. The discovery has had significant importance for gastroenterologists worldwide.

In 1993, Inge Dale and two colleagues founded Calpro and developed technology for measuring protein levels in stool samples. It shows the degree of inflammation and thus how ill a patient is. The so-called ELISA tests (Enzyme-linked immunosorbent assays) are by now used in a large part of the world to monitor the disease and provide accurate treatment, in addition to separating IBD from related IBS (Irritable bowel syndrome) during the diagnosis phase.

The tests have also reduced the need for unpleasant and costly examinations such as gastric defecation using colonoscopy, in which the colon is examined using fiber-optic cable, an examination that for children requires general anaesthesia.

Smarter process

Until now, patients had to visit a hospital or submit stool samples, something that could take several weeks before getting an answer. With the newly developed home based testing system CalproSmart patients can by themselves measure protein levels, get immediate feedback and immediately send the results to their general practitioner (GP) via a smartphone application.

- The technology frees capacity in the health sector since part of the consultations can be done via phone. The patient also receives quicker and more tailored medical care. The test can show recurrence prior to the patient even noticing symptoms and the doctor can implement the appropriate medication, says Inge Dale. He is a Calpro founder, protein-detector and physician with a doctorate in calprotectin analysis.

The supply agreement with MSD means that the Norwegian e-health technology may be distributed throughout Europe. As many as 2.5 to 3 million people in Europe are estimated to have ulcerative colitis or Crohn's disease and many gastroenterologists believe that these patients should be tested at least four times a year*. Thus there is a real potential for this agreement.

- The digitalisation of the healthcare industry in order to provide a more efficient and better solution for the patients is an important priority for the pharmaceutical industry, as well as authorities. We might be a small company but we are very proud of having developed an innovative technology that now will have a European reach, says Dale.

About CalproSmart

Patients are trained by a gastro-nurse and given a test kit to take home. A collector for stools is mounted on the toilet, a sampling stick is inserted into the faeces and then into a test tube containing a special liquid. An extract is then formed which is dropped onto a test cassette. After 15 minutes two coloured lines appear and can be photographed via a mobile app. The application provides an immediate result on the screen, where green, yellow, and red indicate mild, moderate, and severe inflammation respectively. In addition, the calprotectin values in milligrams per kilogram are presented. When the patient presses "send" the results are sent directly to the treating physician. See info film here: <https://calpro.no/products/calprosmart-home-testkit>

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* Chapter 7, Telemangement of Inflammatory Bowel Disease - Journal

About Calpro

Calpro AS was founded in 1993 by the inventors of the technology behind the ELISA kits for determination of calprotectin in stools and other biological materials. The Oslo-based company is market leader in the USA and has a strong position in Europe. Calpro has eight employees and is family- and employee-owned. For more information: www.calpro.no.

About MSD

At MSD we believe the most important thing we make is a difference. We operate in more than 140 countries and through our prescription medicines, vaccines, biologic therapies, and animal health products we work with customers to bring innovative healthcare solutions to those who need them the most. We also demonstrate our commitment to increasing access to healthcare through far-reaching policies, programmes and partnerships. The company is known as Merck & Co., Inc., Kenilworth, NJ, USA in the United States and Canada. Everywhere else, we are known as MSD. Simponi® is a Registered Trademark owned by Johnson & Johnson and licensed to Merck and Co., Inc. (known as MSD outside the US and Canada), Kenilworth, New Jersey, USA.