

Humedics receives patent on method for quantitative liver function analysis based on a breath test

Patent is a milestone for further commercialization of the LiMAx test

Berlin, Germany, December 5, 2012 - Humedics GmbH, a specialist for real-time and mobile measurement of the individual liver function at the bedside of the patient, today announced that another key patent protecting Humedics' proprietary technology has been granted by Australian authorities.

The Australian patent AU20062664108 covers an analysis method for determining a functional parameter of an organ using a ^{13}C labeled methacetin solution. "This patent is a milestone for the commercialization of our LiMAx test and the corresponding FLIP device", says Prof. Dr. Karsten Heyne, co-founder of Humedics GmbH. "We receive so much positive feedback on this test system from clinical users and, from a company perspective, it is great that the essential part of our proprietary technology is protected by now."

The underlying principle of the test involves the following steps: At first, a ^{13}C methacetin solution is administered intravenously. Methacetin is metabolized in the liver to paracetamol and $^{13}\text{CO}_2$ and the latter is exhaled in the breath. The exhaled air is collected via a respiratory mask. Subsequent measurement of $^{13}\text{CO}_2$ in a detection device provides a quantitative determination of the liver capacity and thus the liver function.

"Liver surgery and liver transplantation often are very serious interventions" says Dr. Martin Stockmann, co-founder of Humedics GmbH and co-owner of the mentioned patent. "It is therefore a high medical need to determine liver function prior to this kind of interventions to better assess the prognosis and also after interventions to monitor recovery." The LiMAx test fulfills these requirements. Liver diagnostic tests available on the market so far are of limited use for this purpose and do not provide a quantitative liver function analysis. The LiMAx test is a bedside test that can be performed prior, during and subsequent to surgery. And the liver surgeon at Charité – Universitätsmedizin Berlin adds: "In liver surgery the LiMAx test provides added value to make correct therapeutic decisions and to improve therapy control."

The recently granted patent adds to Humedics' portfolio of pending and granted patents that secures the economic utilization of the company's products. A previously granted patent covers the measurement device and a method for analyzing a sample gas by infrared absorption (German Patent No 10200905320) and thus Humedics' FLIP device for the measurement of exhaled air.

About Humedics

Humedics has developed a breath test (LiMAx test) based diagnostic system composed of the medical device FLIP and a new diagnostic drug preparation (^{13}C -Methacetin). More than 100 million people world-wide suffer from chronic liver diseases (i.e. cirrhosis, hepatitis, fatty liver, metabolic disorders and tumors). The LiMAx test enables the clinician to quantitatively determine the individual

liver function capacity within minutes. This allows for selecting treatment strategies optimally adapted to the individual patients liver status. Current applications include diagnosis of the liver function before and after liver transplantation, liver surgery and assessment of diseases of the liver such as liver cirrhosis. Up to date the LiMAX test has been validated in over 7,500 tests and the results have been published in highly respected scientific journals.

Humedics is equity financed by Peppermint VenturePartners (managing the Charité Biomedical Fund) as lead investor together with VC Fonds Technologie managed by IBB-Beteiligungsgesellschaft, ERP Startfonds of the KfW, Ventegis and High-Tech Gründerfonds. The funds enable Humedics to complete the final development and early commercialization of its proprietary and CE-marked diagnostic system to determine the liver function of patients in real time.

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