

## UMBRELLA study

# Kidney rejection after transplantation: numares develops radically new urinalysis procedure

**Regensburg, 04 November 2015 – As part of its UMBRELLA study, numares HEALTH has discovered a urinalysis procedure for diagnosing the impending rejection of a transplanted kidney. By the end of 2016, the Regensburg-based company aims to have a marketable product that will significantly improve post-transplant care. This product will be the world's first NMR-based method of in-vitro diagnosis for renal conditions.**

In collaboration with Prof Bernhard Banas of University Hospital Regensburg, numares HEALTH has been monitoring more than 100 post-operative kidney transplant patients. Over the course of a year, these patients provided regular urine samples that were analysed by numares using a radically new procedure based on nuclear magnetic resonance (NMR) spectroscopy. NMR enables highly accurate and simultaneous detection of multiple metabolites in body fluids. In order to detect the required metabolite profile, numares has developed new analysis and evaluation procedures that are summarized by the technology term “Magnetic Group Signaling (MGS)”.

“We have identified a specific metabolite profile that warns of impending kidney rejection. We also tested and confirmed this profile during the UMBRELLA study. Based on these highly promising results, we are now in the process of developing a product,” explains Dr Philipp Pagel, Head of Clinical Development & Biostatistics at numares.

Conventional diagnosis of impending kidney rejection involves analysis of the clinical picture, i.e. the totality of signs and symptoms, and, more importantly, the use of blood tests to identify abnormalities in renal function. Unfortunately, it is not possible to detect these abnormalities in the blood until renal function has already been significantly impaired. Ultimately, the only method of gaining a clear insight into the condition of a transplant is to take a renal biopsy – a costly procedure that can have a negative impact on patient health. “It is therefore extremely useful, both for patients and clinicians, to have additional markers that

provide either early warning of kidney rejection or confirmation of a successful transplant,” says Pagel. “Urine analysis is ideal – it is easily accessible for clinicians and has no adverse effects on patients.”

numares plans to launch its new in-vitro diagnostic system in 2017.

### **About numares**

numares GROUP develops and markets new analytical and diagnostic products based on nuclear magnetic resonance (NMR) spectroscopy in the fields of medicine, plant breeding and biotechnology.

The business unit numares HEALTH develops and markets in-vitro diagnostic tests with the CE marking and integrated test systems for high-throughput use in clinical diagnostics and life science research. The highly standardized tests provide valuable information on the disease status of patients in the indication areas of cardiovascular diseases, nephrology and oncology.

In addition, numares HEALTH provides its test systems to the pharmaceutical industry on a fee-for-service basis. They can be used for example to investigate the therapeutic effects of drugs as part of clinical trials. The company also supports customers with complex issues and clinical trials, drawing on its many years of expertise and experience in the area of NMR spectroscopy and metabolomics.

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