

## **Non-invasive method for differential diagnosis of benign prostatic hyperplasia vs carcinoma**

2022/05/04 – PROvendis offers various technologies of NRW universities for diagnostics at BioVaria 2022 in Munich.



BPH can cause uncomfortable bladder, urinary or kidney problems. Foto: iStock.com/Jan-Otto

About 75% of men between the ages of 60 to 69 and up to 86% of men over 80 years of age are affected by a disease called benign prostatic hyperplasia (BPH). BPH can cause uncomfortable urinary symptoms, bladder, urinary or kidney problems are often the result. Although the condition is well treatable, it's diagnosis is difficult. The problem: Various stages of BPH can show very similar symptoms as prostate cancer (PCA), which is the most common cancer and the third most frequent cause of male cancer deaths in Germany and worldwide.

Several methods are available today for the differential diagnosis between BPH and PCA. Digital rectal examination, transrectal ultrasound and PSA levels in blood are used, CT and MRI are more options. All methods are expensive, time consuming and quite error-prone. The gold standard for the diagnosis of different types of prostate disease, disorder or conditions is the transrectal punch biopsy. It's a quite painful procedure which additionally carries risks for the patient.

### **Game changer: urine sample replaces rectal surgery**

Scientists at the Witten/Herdecke University have found a non-invasive method for differential diagnosis of BPH versus PCA. The invention is based on determining the level of the expression of the piRNA hsa-piR-018849 alone or in combination with other small RNAs – and it only requires a

urine sample. The invention also applies to the monitoring of development, progress, or relapse of prostate cancer as well as to a method for a stratification of a therapeutic regimen. The method could be a game changer: testing a urine sample is a huge relief for patients, it is risk-free, painless and does not involve physical procedures such as rectal examinations. PROvendis will offer this and other inventions from the portfolio of North Rhine-Westphalian universities and university hospitals at the BioVaria in Munich from May 11 to 12, 2022.

### **More innovations from the field of diagnostics presented in Munich**

As one of the leading events for innovations in European life science research, BioVaria invites scientists, technology transfer experts and company representatives from the pharmaceutical and biotech industry to an annual exchange - this year, fortunately, once again on site in Munich. Research results, especially in the field of innovative diagnostic methods, are presented to interested companies and brought into clinical application. PROvendis will offer current NRW technologies from the fields of diagnostics at the BioVaria as part of NRW Hochschul-IP, the network for intellectual property (IP) of 28 North Rhine-Westphalian universities. Besides the aforementioned technology, Prof. Dr. Frank Entschladen will present the following inventions:

- Non-invasive diagnosis and differentiation of benign and malignant renal carcinoma ([Ref. No. 3485-4922](#))
- Early diagnosis of osteoarthritis ([Ref. No. 4812](#))
- Brown fat activity for the diagnosis and treatment of weight-related diseases ([Ref. No. 4527](#))

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#### **About PROvendis GmbH**

PROvendis acts as a professional service provider in the entire field of IP management for more than 30 universities and extra-university research institutions as well as for companies and start-ups.

#### **NRW Hochschul-IP — Network for Intellectual Property (IP) of NRW Universities**

28 universities of North Rhine-Westphalia and PROvendis GmbH form the network NRW Hochschul-IP. The network for Intellectual Property (IP) encourages professional knowledge and technology transfer. Together with the University of Münster (WWU) PROvendis acts as the central service provider for NRW Hochschul-IP. The network NRW Hochschul-IP is funded by the federal state of North Rhine-Westphalia. Grant authority is the Ministry of Economic Affairs, Innovation, Digitalization and Energy of the State of North Rhine-Westphalia.