

TECHNOLOGY OFFERS

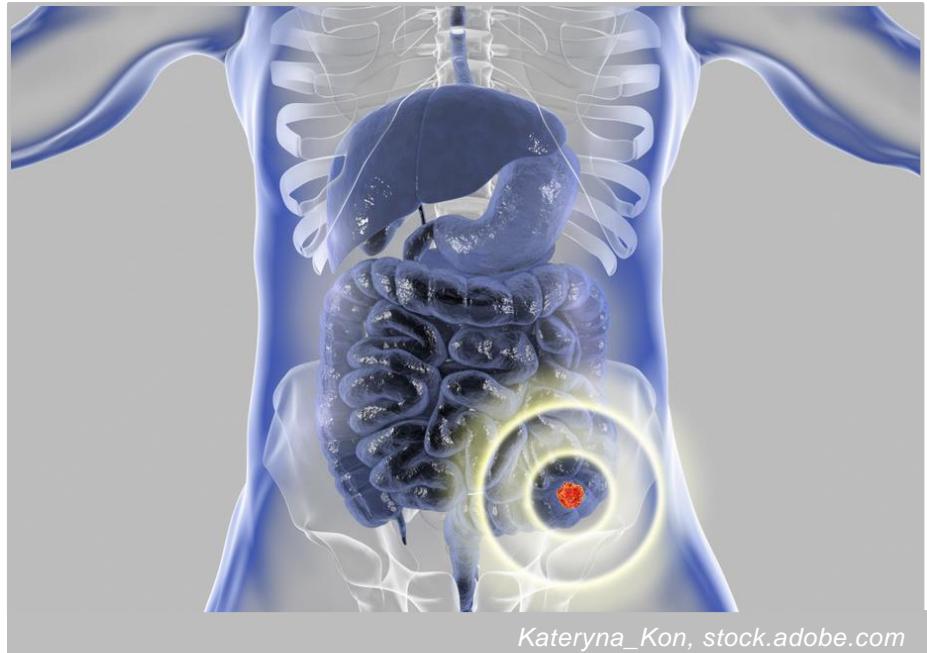
A Plasma Protein Marker Panel for Diagnosis of Colorectal Cancer (P-1214)

A core set of 8 plasma protein markers for diagnosis and stratification of colorectal cancer with a sensitivity of 90%

EXECUTIVE SUMMARY

Based on the prospective BliTz study from 2005–2012 including approximately 5500 participants, a panel panel of 8 proteins was identified and validated.

The invention is a method for the diagnosis, prognosis, stratification and monitoring of a colorectal cancer progression and therapy in a patient. The panel consists of biomarkers selected from CEA, AREG, IL-6, GDF-15, HGF-receptor, CXCL9, ErbB4-Her4, CXCL10, Flt3L, VEGFR-2, CD69, CXCL5, PSA, EMMPRIN, Cathepsin-D, Caspase-3, TNF-alpha, and INF-gamma. The new biomarker panel of the invention allows diagnosing and even stratifying various cancer diseases.



Category	Indication	Development stage	Seeking
Diagnostics	Colorectal cancer	Pre clinical	Licensing, Commercial partner

BENEFITS

- Plasma protein marker panel for diagnosis and stratification of colorectal cancer
- Core set of 8 protein markers performing with an AUC [95% CI] of 0.76 [0.65-0.85]/specificity of 44% [24–72%] and a sensitivity of 90%.
- Broad patent protection

TECHNOLOGY BACKGROUND

Sigmoidoscopy and colonoscopy, the current gold standards for detection of CRC in the distal and total colorectum, respectively, are limited by several disadvantages, such as high costs, limited resources and poor compliance. So other cost effective and sensitive methods for the early detection of colorectal cancer are urgently needed and very important from the health economic standpoint. The invention offers a plasma protein biomarker set that can be used as a diagnostic tool for diagnosis and stratification of colorectal cancer.

DEVELOPMENT STAGE

DKFZ is looking for a commercial partner for further development of the marker panel alone or in combination with other markers towards clinical application.

APPLICATIONS

This innovation can be used with a very lower cost to diagnose and detection of colorectal cancer.

INTELLECTUAL PROPERTY

Patent application submitted.

- A priority patent application "Biomarker panel for diagnosing cancer" EP 15161465.8 has been filed at the Europe Patent Office March 27, 2015.
- International PCT patent application published as WO2016156128A1.
- Applied as US10408839B2 (granted), CA2980101A1, EP3274718A1, KR20170130441A.

PUBLICATIONS & REFERENCES

- Bhardwaj M, Weigl, Tikk, Benner A, Schrotz-King P, Brenner H. "Multiplex screening of 275 plasma protein biomarkers to identify a signature for early detection of colorectal cancer" in Molecular Oncology October 25 2019
- Hongda Chen, Manuela Zucknick, Simone Werner, Phillip Knebel and Hermann Brenner Clin, "Head-to-Head Comparison and Evaluation of 92 Plasma Protein Biomarkers for Early Detection of Colorectal Cancer in a True Screening Setting", in Cancer Research July 15 2015

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ABOUT THE DKFZ INNOVATION MANAGEMENT

Working at the interface of research and industry, the Innovation Management of the German Cancer Research Center (DKFZ) helps to get new cancer medications, diagnostic tests, and research instruments onto the market as quickly as possible.

The DKFZ with its more than 3,000 employees is the largest biomedical research institution in Germany. At the Center more than 1,300 scientists investigate how cancer develops, identify cancer risk factors and endeavor to find new strategies to prevent people from getting cancer. They develop novel approaches to make tumor diagnosis more precise and treatment of cancer patients more successful. DKFZ is a member of the Helmholtz Association of National Research Centers, with ninety percent of its funding coming from the German Federal Ministry of Education and Research and the remaining ten percent from the State of Baden-Württemberg