A Method to Detect and Monitor the Presence of Most Major Human Cancers From Blood Samples

Title: A Method to Detect and Monitor the Presence of Most Major Human Cancers from Blood Samples

Invention: A blood sample analysis of common strings of DNA can be used to detect cancer. Because cancer disrupts the epigenetic makeup of DNA, the analysis of specific markers in DNA and filtering for discrepancies makes it possible to identify when any major form of human cancer is present.

Background: Cancer is often not discovered until it has spread and once it has been detected, the biopsy of cancerous tumors can be an invasive and physically enduring process. In an effort to prevent late diagnoses and the spread of cancer, this method involves a blood test to identify cancerous properties. If used at yearly checkups, this blood test would help identify the early signs of cancer in addition to monitoring cancer levels throughout treatment with a liquid biopsy.

Applications:

• Detection of cancer cells
• Monitoring of cancer levels during treatments
• Blood sample biopsy could be used whenever blood samples are taken to provide a more comprehensive image of overall health

Advantages:

• Aids in early identification of all major/common types of cancer
• Minimally invasive approach via blood test
• Cost effective
• Identifiable single DNA marker that can be examined for all common types of cancer

Licensing Manager:

Contact Rakhi Gibbons
Asst. Director, Life Sciences
rakhig@tla.arizona.edu
(520) 626-6695

The University of Arizona, Tucson, Arizona
Rakhi Gibbons

RakhiG@tla.arizona.edu

(520) 626-6695

Inventors

Lukas Vrba
Assistant Research Scientist, Cancer Center Division

Bernard Futscher
Professor, Pharmacology & Toxicology