

COLON CANCER BIOMARKERS TO IDENTIFY PATIENTS SUITABLE FOR THERAPEUTIC INTERVENTION

SUMMARY

The National Cancer Institute's Laboratory of Human Carcinogenesis is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize cancer biomarkers and therapeutic targets.

REFERENCE NUMBER

E-314-2008

PRODUCT TYPE

- Diagnostics

KEYWORDS

- microRNA
- biomarker

COLLABORATION OPPORTUNITY

This invention is available for licensing.

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DESCRIPTION OF TECHNOLOGY

Colon adenocarcinoma is the leading cause of cancer mortality world-wide. Adjuvant therapies improve survival for stage III colon cancer patients; however, it remains controversial if stage II patients should be given these therapies. While some stage II patients will benefit from therapy, for others, it will lower their quality of life and provide little therapeutic benefit. Thus, there is a need for biomarkers capable of accurately identifying high risk, stage II patients that would benefit from therapeutic intervention.

NCI investigators have identified an inflammatory gene and microRNA biomarker portfolio that can predict aggressive colon cancer, colon cancer patient survival, and patients that are candidates for adjuvant therapy. These biomarkers provide clinicians with a powerful tool to diagnose colon cancer patients and chose effective treatment methods.

Further R&D Needed:

- Conduct large-scale studies of the biomarkers on various populations
- Develop a standard referent RNA sample for comparison with test samples

IP Status:

- U.S. Provisional Application No. 61/194,340 filed 25 Sep 2008

POTENTIAL COMMERCIAL APPLICATIONS

- Method to predict aggressive form of colon cancer, especially in stage II cancer patients
- Method to determine appropriate colon cancer patients for adjuvant therapy
- Companion diagnostics to facilitate discovery and development of cancer therapeutics

COMPETITIVE ADVANTAGES

- Rapid, easy to use arrays to accurately predict colon cancer and patients suitable for adjuvant therapy
- Method to stratify colon cancer patients for adjuvant therapy to minimize negative side effects
- Method to identify stage II patients that are likely to have undetectable micro-metastases

INVENTOR(S)

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DEVELOPMENT STAGE

- Pre-clinical (in vivo)

PATENT STATUS

- **U.S. Filed:** US, Application No. 13/146,531 filed 25 Jan 2010
- **Foreign Filed:** PCT/US10/21909 filed 25 Jan 2010

THERAPEUTIC AREA

- Cancer/Neoplasm