

DIAGNOSTICS AND THERAPEUTICS FOR ADRENOCORTICAL CARCINOMAS

SUMMARY

methods of diagnosing and treating malignant adrenocortical tumors, including adrenocortical carcinoma, using miRNA

REFERENCE NUMBER

E-026-2011

PRODUCT TYPE

- Therapeutics

KEYWORDS

- Therapeutic
- Diagnostic
- Cancer
- Adrenocortical Carcinomas (ACC)
- miRNA

COLLABORATION OPPORTUNITY

This invention is available for licensing.

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DESCRIPTION OF TECHNOLOGY

The National Cancer Institute's [Endocrine Oncology Branch](#) seeks parties to co-develop diagnostic that target altered human miRNA expression such as miRNA-483 and miRNA 100 to accurately predict if a patient's adrenal cortex tumor is benign or malignant.

Adrenocortical carcinomas (ACC) are rare but aggressive cancers and typically have a poor prognosis. Currently, there are limited options for molecular diagnosis to distinguish malignant tumors from benign tumors of this type. As a result there are few treatment strategies for ACC.

This technology describes that altered human miRNA expression such as miRNA-483 and miRNA 100 can accurately predict if a patient's adrenal cortex tumor is benign or malignant. Additionally, preliminary results suggest that altering the expression of this miRNA in ACC cells can effect cancer cell

growth. Therefore, inhibiting a miRNA may serve as a therapeutic option for ACC.

POTENTIAL COMMERCIAL APPLICATIONS

- Technology can be developed into a diagnostic and prognostic marker for ACC.
- Inhibiting miRNA can serve as a potential therapeutics for ACC.

COMPETITIVE ADVANTAGES

- Distinguishes malignant Adrenal cortex tumor from a benign tumor, options for such distinction are limited at this time.

INVENTOR(S)

- [Electron Kebebew, MD](#) (NCI)

DEVELOPMENT STAGE

- Pre-clinical (in vivo)

PUBLICATIONS

Patterson E.E., et al., PMID: [21472710](#)

Patterson E.E., et al., PMID: [22241719](#)

PATENT STATUS

- **U.S. Filed:** U.S. Provisional Application No. 12/961,298 filed 12/06/2010.

THERAPEUTIC AREA

- Cancer/Neoplasm