

Methods for Selection of Cancer Patients and Predicting Efficacy of Combination Therapy

Summary (1024-character limit)

The Laboratory of Cancer Biology and Genetics of the National Cancer Institute (NCI) seeks parties interested in licensing methods for selecting cancer patients for combination therapy.

NIH Reference Number

E-013-2012

Product Type

- Diagnostics

Keywords

- Myeloma
- Melanoma
- Histone Deacetylase (HDAC)
- Rapamycin
- mTOR

Collaboration Opportunity

This invention is available for licensing and co-development.

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Description of Technology

Available for licensing from the [Laboratory of Cancer Biology and Genetics](#) of the National Cancer Institute (NCI) is a novel gene signature of thirty-seven drug-responsive genes that links changes in gene expression to the clinically desirable outcome of improved overall survival. Expression of these genes has been linked to prognosis in several cancers, including, but not limited to: multiple myeloma, melanoma, and lung and breast cancers. Patients identified by this signature would be predicted to benefit from combined HDAC inhibitor/mTOR inhibitor therapy.

Potential Commercial Applications

- Development of a clinical diagnostic test to identify cancer patients who would benefit most from

mTOR and HDAC combination therapy.

- Use as a surrogate biomarker related to drug response.
- Development of therapeutics targeting several cancers, including multiple myeloma.

Competitive Advantages

- Implements a smaller gene set compared to current diagnostic gene signatures.
- Provides a basis for the development of a diagnostic for patient stratification or a response measurement related to the combined use of mTOR and HDAC inhibitors for cancer treatment.

Inventor(s)

Beverly Mock (NCI)

Development Stage

- Pre-clinical (in vivo)

Patent Status

- **U.S. Patent Filed:** U.S. Patent Application Number 14/357,191, Filed 08 May 2014
- **Foreign Filed:** Foreign Filed - Patent Application PCT/US2012/064693, Filed 12 Nov 2012

Therapeutic Area

- Cancer/Neoplasm