

Micro-RNA Profiles Associated with Endometrial Cancer Development and Response to Cisplatin and Doxorubicin Chemotherapy

Researchers at the University of South Florida have developed a method to predict the response of endometrial cancer cells to one or more chemotherapeutic agents.

Cancer of the endometrial is the most common gynecologic malignancy and accounts for 6% of all cancers in women. It is estimated that there were 39000 new cases and approximately 7400 deaths due to this type of cancer in 2007. Yet it is considered highly curable if diagnosed and treated with the right therapy early.

The medical field's ability to treat patients with advanced stage and recurrent endometrial cancer is hampered by an incomplete understanding of the molecular basis of disease development and response to therapy. MicroRNAs (miRNA) are a new class of RNAs, whose differential expression our inventors found may contribute to carcinogenesis and further influence sensitivity of cancer cells to chemotherapeutic agents.

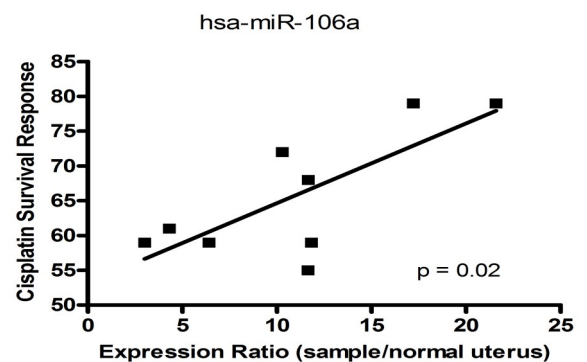
The new invention provides a method for predicting chemoresponse of a population of cancer cells. Samples from population of a patient's cancer cells are assayed and the miRNA expression profile are compared with miRNA profiles from cancer cells with predetermined sensitivities to one or more chemotherapeutic agents.

Results indicated that miRNA profiles and their gene targets have potential as biomarkers of endometrial cancer response to chemotherapy and as a novel therapeutic targets for patients.

ADVANTAGES:

- **Diagnostic for cancer**
- **Novel therapeutic targets for patients with endometrial cancer.**
- **Provides a better understanding of the role of altered miRNA gene in cancer development.**

Predicts Tumor Response to Chemotherapy



Regression Analysis of Endometrial Cancer Cell Line Response to Cisplatin and miRNA Expression

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