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Novel treatment for drug resistance offers new hope for stage IV hematological and specific tissue malignancies

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Purpose: The purpose of this study was to investigate the effect of Glutathione-S-Transferases on endocrine markers associated with drug resistance in the following hematological and tissue malignancies; Hematological Malignancies: Hodgkin's Lymphoma, Acute Myelogenous Leukemia, and Multiple Myeloma; Tissue Malignancies: Lung Cancer, Kidney Cancer, Bladder Cancer, Esophageal Cancer, Stomach Cancer and Breast Cancer.

Results: GSTOmega1 inhibition elevates 4-hydroxynonenal, which eliminates repression of genes associated with differentiation in K562 Erythroleukemia. Therefore, GSTO1 is a viable drug target for differentiation of Erythroleukemia, reducing pre-leukemic blasts in Acute Myelogenous Leukemia; Murine studies on MCF7 xenografts in nude mice demonstrated a 50% reduction of tumor sizes and weights. Novel siRNA against a non-disclosed GST is effective for 94% reduction of drug resistance to one of the most highly prescribed stage IV chemotherapies in several oncology regimens. Treatment of drug resistance via non-disclosed intellectual property is now under non-provisional USPTO patent for the following malignancies: Lung Cancer, Kidney Cancer, Bladder Cancer, Esophageal Cancer, and Stomach Cancer.

Conclusion: Cell specific GSTs are outstanding enzymatic drug targets for endpoint control in hematological and tissue malignancies. Thus, GSTOmega1 is a novel biochemical drug target, which alters the etiology of failure to differentiate, a well-known cause of Leukemia in Erythroleukemia; RLIP76 depletion is effective for induction of apoptosis in MCF7 breast cancer cells *in vitro* as well as in MCF7 murine xenografts. A log-fold reduction of tumor weights is possible. Oncology solutions seeks investors to develop our novel intellectual property for drug resistance to both stage IV chemotherapy regimens for tissue and hematological malignancies.

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