

## New target to enhance anti-cancer drug sensitivity found in translation

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The development of resistance to anticancer chemotherapeutic agents remains a large problem. In some cases, such resistance is associated with altered control of a cellular process known as translation, which is central to the generation of proteins.

New data, generated by Jerry Pelletier and colleagues, at McGill University, Montreal, have identified a drug that can enhance the sensitivity of mouse cancer cells to standard anticancer chemotherapeutic agents.

In the study, small molecules were screened for their ability to inhibit the initiation of translation by modifying the function of a protein known as eIF4A, which has a central role in translation initiation.

**A class of natural drugs known as cyclopentabenzofuran flavaglines were found to have the desired effects and one member of this class of compounds was shown to reverse the resistance of cancer cells to anticancer chemotherapeutic agents in a mouse model of lymphoma.**

**The authors therefore suggest that developing approaches to inhibit translation initiation by targeting eIF4A might provide a way to altering drug resistance in cancers exhibiting altered control of translation initiation.**

**Source: Journal of Clinical Investigation**

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