

20 percent of cancer patients resistant to chemotherapy — tweaking gene expression could help

Approximately 20 percent of all cancers have a mutation that makes them incredibly resistant to chemotherapy – a gene called KRAS. KRAS-mutant cancers also have very low survival rates because they are much harder to treat. Given this, researchers have focused their efforts on ways to inhibit KRAS activity. But scientists...have taken a unique approach that may prove to be more effective.

“Instead of trying to deter KRAS itself, we took the approach of looking for other molecules that, when inhibited, are lethal to cells only when KRAS is also mutated,” said Tariq Rana, PhD, professor of pediatrics at the University of California San Diego School of Medicine....

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The new study...focuses on inhibiting other genes to create combinations lethal to cancer cells driven by a KRAS mutation. For the study, researchers used microRNAs – which normal cells use to control what genes are turned on or off, and are less active in cancer cells.

Screen Shot at PM
Screenshot of a tweet from @UCSDHealth

The researchers found that one microRNA, miR-1298, could effectively suppress KRAS-dependent cell growth in colorectal and lung cancer cells. Credit: UC San Diego Health.

Their findings revealed microRNAs as relevant tools for possibly identifying therapeutic methods of treating cancer in the future.

[The study can be found [here](#).]

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion, and analysis. Read full, original post: [Genetics Breakthrough Could Give Us a Way to Target and Kill Cancer](#)