

# Drug Combination Acts Synergistically on Cancer Cells

## Competitive Advantages

- ☑ Shown to reduce viability of cancer cell cultures.
- ☑ Potentially useful against a wide range of cancer types.
- ☑ Individual components well tolerated in clinical trials.
- ☑ Cell testing predicts individual response to treatment.

Cancer chemotherapies are often toxic, ineffective, or both. The limitations of these compounds are especially evident in treatment-resistant cancers such as breast and lung tumors.

## A New Approach

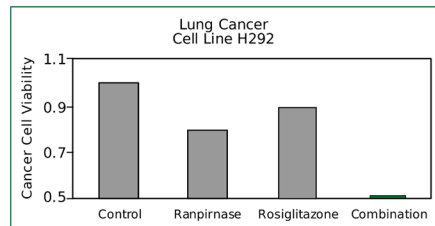
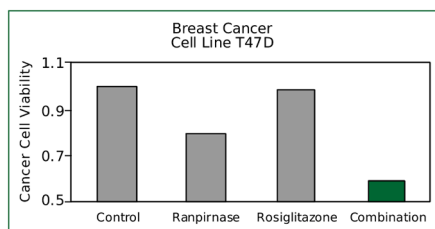
Now a novel combination therapy has been shown to dramatically increase the kill rate in cancer cell cultures compared to either drug alone.

The combination includes:

- A ribonuclease such as ranpirnase, an investigational drug now in Phase III clinical trials for use in thoracic cancer.
- A thiazolidinedione such as rosiglitazone, an FDA-approved medication currently prescribed for the long-term treatment of diabetes. This compound has also shown a potential antitumorogenic effect.

## Effect on Cancer Cells

These charts illustrate the synergistic effect on breast and lung cancer cells:



## Lower Toxicity

In clinical trials, both components have been used with little or no toxicity. Thus, the combination is likely to be very well tolerated in clinical practice. Also, the synergistic action allows lower doses of the two drugs, resulting in a less toxic effect on normal cells.

## Versatile Treatment

The combined therapy is potentially effective in a wide range of cancerous and precancerous conditions, including breast, ovarian, prostate, and lung cancer.

## Personalized Medicine

This invention includes a method for assessing the therapeutic potential in a given patient. Cancer cells can be biopsied and exposed to the treatment to determine whether viability is reduced.

## Next Steps

Small-scale animal testing begins in 2008.

## Patent / Licensing Status

Patent pending. Exclusive rights available.

## Learn More

Drug combination abstract  
[mct.aacrjournals.org/content/7/7/1871.abstract](http://mct.aacrjournals.org/content/7/7/1871.abstract)

## Primary Investigator

Benjamin Littenberg  
[www.med.uvm.edu/medicine/gim/WebBio.asp?SiteAreaID=558](http://www.med.uvm.edu/medicine/gim/WebBio.asp?SiteAreaID=558)

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