

**BETH ISRAEL DEACONESS
MEDICAL CENTER**
Technology Ventures Office



BIDMC 1253: FLIP Antagonists for Treating Cancer

➤ **Cell-Permeable Small Peptides as Pro-Apoptogenics and Anti-Proliferative Agents**

TRAIL signaling selectively kills tumor cells via apoptosis. Advanced clinical trials are underway to test drugs that target this pathway. Such emergent drugs include recombinant TRAIL and antibodies that activate death receptors DR4/5.¹

From the lab of Dr. Roya Khosravi-Far, this invention adds a new and complementary weapon to the arsenal of apoptosis drug developers. These new compounds have a dual effect. Acting at the level of the death-inducing signaling complex (DISC), they simultaneously activate apoptosis by displacing c-FLIP_L from the DISC and turn off PI3K/Akt proliferative signaling.

The technology covers small, cell-permeant peptides and the 5-mer essential for bioefficacy. Also featured are methods for patient stratification and for formulation and administration of therapies using this discovery.

Stage of Development:

In vitro discovery and characterization
In vivo proofs-of-concept in mice

Patent / Licensing Status:

US patent # 61/217,521 pending
Exclusive license available

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Market: Oncology

Lead Indications:

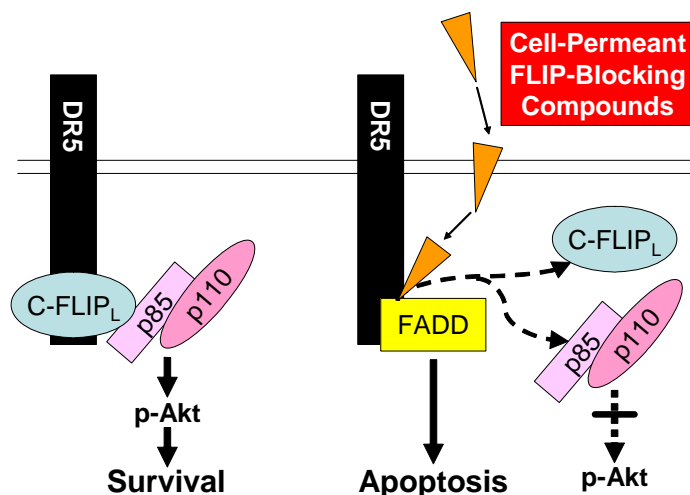
- ✓ Solid tumors and hematological malignancies; current TRAIL drugs target non-hodgkin lymphoma as well as melanoma, colorectal, ovarian, pancreatic, and lung cancers
- ✓ In U.S. alone, >520,000 new cases were diagnosed with these cancers in 2009

Commercialization:

- ✓ Peptide composition of matter, therapeutic and diagnostic use claims
- ✓ Potential to stratify patients by detection of c-FLIP_L in tumor biopsy
- ✓ Flexible partnering options

Competitive Advantages:

- ✓ Novel target for apoptosis drugs with a dual mode of action
- ✓ Evade TRAIL resistance with combo Rx



(1) Wu (2009) Cancer Lett. 285:1; Herbst (2006) Am. Soc. Clin. Oncol. 24: 3013