

AUBURN UNIVERSITY

Rapid, Simple Screening and Identification of Cancer Targets

Overview

Auburn University is seeking development partners or collaborators for a technology that is capable of rapidly and inexpensively identifying cancer targets: both cell surface markers that could serve as potential targets, and peptides that specifically bind to cancer cells. This technology has potential applications in therapeutics, diagnostics, imaging and as a research tool. This methodology is rapid, not technically complex, and inexpensive.

Description

This technology uses a *phage display* technique: An approach capable of producing valuable binding molecules to known and, importantly, *unknown* cell surface markers. The binding molecules are selected from libraries of peptides displayed on the surfaces of bacterial viruses called phage. Once selected, each phage particle can be multiplied to large numbers, labeled, and used to probe for specific binding to cancer cells and tissues. This can in turn be used to:

- Identify tumor subtypes and molecular profiles for individual patients
- Identify tumor-targeting peptides
- Identify candidate cell surface markers for targeting

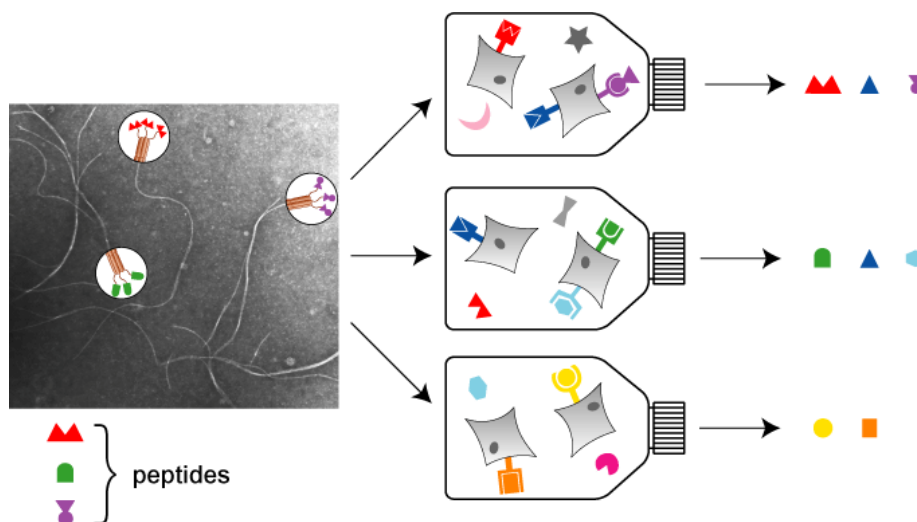
Downstream work includes coupling of targeting peptides with cancer-killing and imaging agents, both for broad and individualized formulations.

Status

- Technology is being performed and is ready for use

Commercial Opportunities

- Development opportunities include funded research, joint venture or clinical trials
- Implementation can begin almost immediately



Identification of targeting peptides. Phage libraries (left) containing phage particles expressing billions of different peptides are mixed with tumor cells (middle). Phage particles that selectively bind to specific tumor cells can be captured and the corresponding targeting peptides isolated (right).

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