

The Office of Technology Management

UNIVERSITY OF TEXAS  ARLINGTON

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Injectable and Degradable Cancer Trap to Reduce Metastasis Cancer

INVENTOR: Dr. Liping Tang

TECHNOLOGY NEED

Over 1.5 million cases of cancer will be diagnosed in 2017. One of the complications associated with cancer is its ability to spread itself out through one's body, metastasis. Many treatments work to treat the primary tumor, but do little to prevent metastasis, and any stray cancer cells from re-locating to another part of the body. This is especially dangerous since surgical removal of cancerous tissue can spur the spread of cancer. Although there are drugs that can be given to patients after surgery to prevent cancer cells from adhering to one another or other tissues, these drugs do not rid the body of cancer cells or collect them to allow an assessment of a patient's current status.

INVENTION DESCRIPTION/SOLUTION

Researchers at UT Arlington have developed an injectable cancer trap to combat metastatic cancer. The trap releases different chemokines locally to attract circulating metastatic cancer cells. Further, these cells are exposed to chemotherapeutic agents to eliminate potential metastasis. After implantation in animals, the cancer traps can capture 80% of circulating cancer cells. As a result, reducing cancer metastatic by 90% thus increasing survival rate of cancer bearing animals by 50% (3 times). The cancer trap can be used in combination with traditional chemotherapy and radiation therapy. It can also be used to diagnose presence of cancer cells after treatment.

APPLICATIONS

- Cancer Diagnostic
- Cancer Treatment

KEY BENEFITS

- Injectable and degradable device to attract cancer cells.
- Can be loaded with any chemotherapeutic agent to target the cancer cells.
- Ability to isolate metastatic cells for diagnostics and chemotherapy screening.
- Distracts metastatic cancer cells
- Potential improvement of survival rate of cancer patients.

STAGE OF DEVELOPMENT

Prototyped

INTELLECTUAL PROPERTY STATUS

Patents pending

PUBLICATION

[C. Ko et al., The use of chemokine-releasing tissue engineering scaffolds in a model of inflammatory response-mediated melanoma cancer metastasis. Biomaterials. 33, 876-885 \(2012\).](#)



More about the Inventors:
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