

## A Specialized Tissue Collection Device for the Preservation and Transportation of Needle Biopsies

### Summary (1024-character limit)

The National Cancer Institute (NCI) seeks research co-development opportunities and/or licensees for a new biomedical device for biopsy tissue collection and storage in a sterile, well-defined environment.

### NIH Reference Number

E-128-2017

### Product Type

- Devices

### Keywords

- Tissue, Storage, Collection, Transportation, Preservation, Fixation, Sterile, Needle Biopsy, Kidney, Liver, Pancreas, Lung, Device, Hewitt

### Collaboration Opportunity

This invention is available for licensing and co-development.

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### Description of Technology

The ability to hold and transport tissue, especially needle biopsies in a pre-defined and controlled environment is critical for the preservation of biopsy samples in downstream analytic applications. Currently, tissue specimens are placed in open containers with variable, poorly controlled solutions applied to them, often in less than sterile conditions. Evaluation of the tissue by examination through a stereoscope or similar approaches to determine adequacy is limited and requires manipulation of the tissue that can further damage the tissue. The entire process lacks standardization, which is in stark contrast to the handling of blood, that is collected and transported in well-defined containers that have individualized pre-analytic preservatives and downstream protocols.

Researchers at National Institutes of Health (NIH) have developed a tissue collection and storage container that allows for the direct deposition of tissue into the container while stabilizing the sample for

transport in a specific solution and/or gas. This new device will primarily be used for needle biopsies to collect tissue samples and maintain their integrity for subsequent analysis. Additional features of the tissue storage container will include materials to physically stabilize and allow for direct examination of the sample by microscopy.

This system is available for co-development or licensing to interested companies.

### Potential Commercial Applications

- Tissue storage container for collecting samples obtained by biopsy gun, manual biopsy, or interventional radiology such as computed tomography (CT)-guided transvascular, transcutaneous, transvascular sampling, or needle aspiration
- Sterile and controlled storage environment for the transport of tissue, cell, and liquid samples. Can be combined with the tissue fixative agent, BE70 [[NIH Reference # E-139-2015](#)]

### Competitive Advantages

- No devices currently allow for tissue storage in a sterile, pre-defined, and controlled environment, and can be used to prepare the sample for further analysis

### Inventor(s)

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### Development Stage

- Prototype

### Patent Status

- **U.S. Provisional:** U.S. Provisional Patent Application Number 62/490,415, Filed 26 Apr 2017
- **U.S. Patent Filed:** U.S. Patent Application Number PCT/US2018/029623, Filed 25 Apr 2018

### Related Technologies

- [E-139-2015 - Novel Fixative for Improved Biomolecule Quality from Paraffin-Embedded Tissue](#)
- [E-173-2015 - Module to Freeze and Store Frozen Tissue](#)

### Therapeutic Area

- Cancer/Neoplasm
- Cardiovascular Systems
- Gastrointestinal
- Kidney and the Genitourinary
- Musculoskeletal
- Reproductive
- Skin and Subcutaneous Tissue