# Ensuring Your Biorepository Finances are In Order - Drilling Down on Operating Costs

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**Julie McDowell:**

"Most biorepositories have not traditionally paid attention to the financial aspects of their operations, which has led to problems in the long-term sustainability of some academic government and commercial biobanking operations," explained Dr. Jim Vaught, editor-in-chief of the Journal biopreservation and biobanking in this CAPcast.

Dr. Vaught has studied the challenges involved in the economics and sustainability over the past 10 years and has published several papers on these topics. In this CAPcast Dr. Vaught will discuss why all biorepository directors need to understand the cost of setting up and operating their facilities and how to develop a business strategy. Dr. Vaught, what are the major cost elements involved in setting up and operating a biorepository?

**Dr. Jim Vaught:**

The major categories of cost are biospecimen collection and shipping, processing, storage management, and retrieval and distribution. There are dozens of cost elements that are subsets of these four categories. In addition, there are personnel, equipment, building leases, and other facilities cost. At the National Cancer Institute, we published a JNCI monograph in 2011 that outlined, in several papers, the elements of the business plan to create a large cancer research biobank. Over the past 10 years, many researchers have published papers that go into more detail concerning the cost of operating a biorepository and experiences in recovering those costs through business planning.

**Julie McDowell:**

Now, are there any online tools that can be used to estimate biorepository user costs?

**Dr. Jim Vaught:**

Yes, there are several examples of such tools. For the purpose of this discussion, we'll use the example of the Canadian Tissue Repository Network or CTRNet, which has developed a very detailed online cost tool. The tool is available at www.biobanking.org. Use of the tool requires paying a fee as part of the CTRNet Biorepository Accreditation program, but it will be beneficial to many repositories to register and use the tool. Otherwise, there have been papers published in the journal, Biopreservation and Biobanking, that show examples of using the tool.

**Julie McDowell:**

What are some examples, such as annual costs of operating small, medium, or large repositories?

**Dr. Jim Vaught:**

From their work on the online cost tool, the CTRNet group has published several papers in Biopreservation and Biobanking that outline a variety of scenarios of user costs from biorepositories of varying complexity. In these papers, examples show specific cost of acquiring and distributing biospecimens based on the experiences of cancer research biorepositories. The cost of establishing and operating biorepositories of various sizes and complexity are difficult to predict, but can range from several hundred thousand dollars for a small biorepository to multiple millions of dollars for a large commercial or NIH operation.

**Julie McDowell:**

How can biorepositories become financially self-sufficient?

**Dr. Jim Vaught:**

As noted in part one of this series, for many academic biorepositories, long-term sustainability is difficult. Often they're dependent on a combination of public, for example, NIH or other public agency funds. Commercial, i.e., pharma or biotech support and cost recovery plans. Cost recovery is usually limited according to legal or institutional rules and regulations. There are some examples of biorepository programs that have become financially independent.

One program in Nottingham, England achieved financial independence through one, careful cost control and operational efficiencies, two, working with a team of expert consultants and three, developing partnerships with pharma companies to strategically collect specimens that meet their needs. This plan allowed the biorepository program to support the university's various research programs.

There are other examples where academic biorepositories established partnerships where, for example, a pharma company provides funding for a program in exchange for priority access to certain patient specimens, allowing the biorepository to use external funding to establish a translational research program. Such a partnership was formed between Merck Pharmaceuticals and the Moffitt Cancer Center in Florida about 10 years ago.

**Julie McDowell:**

Finally, Dr. Bott, what are some options for a biorepository if financing is marginal or lost?

**Dr. Jim Vaught:**

A custodianship plan should address the possible loss of financing. In the case of NIH-funded biorepositories, the institution may want to request that the collection be returned to NIH. That is, if NIH decides that the samples are still useful for research purposes. In some cases, there may be private research institutes that will be interested in particular samples related to their research mission.

In addition, as financial difficulties are anticipated, cost reduction measures should be implemented, such as discarding samples that are no longer needed. In addition to the financial considerations, the NCI best practices for biospecimen resources includes a very comprehensive section on principles for responsible custodianship, including recommendations for developing specimen and data access, as well as requirements for specimen retention.

**Julie McDowell:**

Thank you, Dr. Vaught. For more resources related to biobanking and biorepository, including the CAP'S Biorepository Accreditation program, please visit CAP dot O-R-G and search for biorepository.

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