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Scientific Laboratory Information Management System: Tissue Bank

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Tissue bank background

A bio-repository to collect, process, archive, and distribute human tissues and fluids for research has been established in the Department of Pathology and Laboratory Medicine, UTHSC. The tissue bank currently provides HIPPA-compliant, de-identified, high-quality specimens to facilitate researcher queries for translational research. The bank is archiving large numbers of paraffin-embedded tissues, and is also performing comprehensive management of bio-repositories for institutional projects. The tissue bank at Department of Pathology (see Figure 1) is an example of utilizing the "Scientific Laboratory Information Management **(SLIM)** System" to have a more organized system and improve the overall efficiency of the collecting process for Tissue Bank.

The effective scientific data retriever will provide fast access to a wide range of scientific data via the Web or directly from an application, facilitating data sharing with other research teams and the general public. Research teams can download data files from a large data provider, augment this "mini-archive" with their own datasets, and make the whole heterogeneous data collection accessible via the Web.

Users can interactively browse the contents of a file, examine a subset of the data, view a thumbnail image of the data, and download the desired subset. The **SLIM** system can be coupled with services for extracting, indexing, and searching metadata to create a complete repository service.

Conclusion

The effective scientific data retriever will enhance the effectiveness of scientific laboratory management. It will provide an application to collect laboratory materials, tools, and budgets for the scientific laboratory. The strategies for creating an application depend upon the nature of particular scientific research.

Figure 1
Screenshot of the SLIM system for a tissue repository.