

The header features a light blue background with several gears of varying sizes and colors (green, blue, purple) scattered across it. A horizontal bar with segments in yellow, green, and purple runs across the middle of the header area.

UC Virtual Biospecimen Discovery (VBD) Tool

A light green gear is positioned to the left of the text.

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Challenges in discovering existing biospecimen access for research

- Overall: Unbounded, inconsistent, often inconclusive comprehensive process
- Legacy, siloed, multi-focus biobanks with variable conditions for access
 - Majority of existing systems oriented around collection and management
 - Inconsistent data definitions (sample-oriented, patient-oriented, study-oriented), usually not linked to larger data sets
 - Limited access and feasibility pathways for investigators or organizations

Virtual biospecimen database advantages

- De-identified biospecimen data originates with contributing repositories
- Core data dictionary with domain-specific extensions
- Generalizable, lightweight and publicly accessible software framework
- Individual biorepositories retain autonomy for all legal, ethical and scientific decisions
- Provide sharable software, system architecture and ontology

Approach

- Define participation model that allows repository stakeholders to evaluate participation and value in providing descriptive inventory data
- Develop common and expandable data dictionary to allow support of heterogeneous collection types
- Reduce technical or expertise barriers to use through public web interface
- Ongoing: capture and address barriers to continued support by repositories and end-users

Current Status: Virtual Biospecimen Discovery (VBD) tool

- 15 UC Biorepositories
 - 10 – Human (Peds & Adult),
 - 5 – Animal (SOVM, Mouse Biology)
 - Reflect both closed clinical studies and ongoing collections
- >280K specimens indexed (50K pts)
- Self-service process for updating individual inventory changes
- Standard yet flexible schemas for engaging new collections

Ongoing:

- Adding new UCD repositories about every month (long waiting list)
- Expand to common repository types at UCLA, UCSF
- Integrate use into clinical trials and UC Core Facilities Programs

Current work

PA-18-591: Administrative Supplements to Existing NIH Grants and Cooperative A. Agreements (7/2018-5/2019)

PI: Theodore Wun, MD, FACP; Co-I: Nicholas Anderson

Clinical & Translational Science Center

University of California, Davis

“Virtual Biospecimen Resource Discovery Platform”

University of California, Los Angeles

Co-I: Stephen Dubinett, MD; Site Lead: Sarah Dry, MD

UCSF CTSI Collaboration (Site Lead: Scott Vandenberg, MD)

- Iterative pilot, evaluation and dissemination work with additional UC biobank stakeholders
- Characterize and evaluate VBD Network usage metric capabilities
- Promote/Market VBD framework to researchers UC-wide

<https://vbd.ucdmc.ucdavis.edu>