



Pre-Analytical Considerations

Richard Hegele, MD, PhD

Professor and Head, Department of Pathology and
Laboratory Medicine

University of British Columbia

NCI Biospecimen Best Practices Forums

Seattle, WA

January 28, 2008



Outline

- Private Knowledge
 - A personal anecdote
- The Targeted Audience
 - A definite improvement
- The BC BioLibrary
 - Expanding the audience

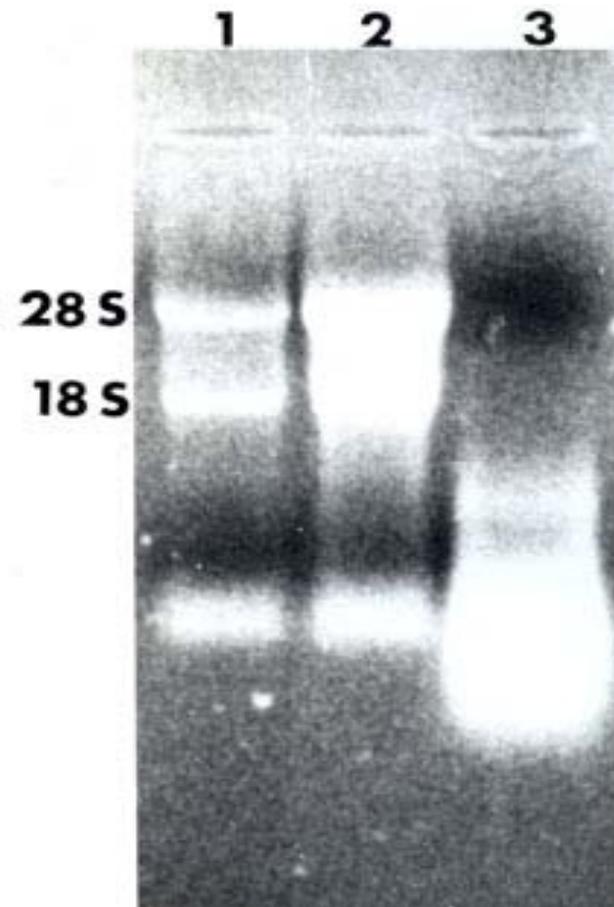


Private Knowledge





Gathering Dust on Library Shelf





Conclusion

Message: Garbage in = Garbage out

Publishing: “Tell me something I don’t already know”



A New Sense of Urgency

NIAID Sponsored Workshop

EVALUATING THE UTILITY OF GUINEA PIGS FOR MODELING HUMAN DISEASE



8 November 2006
Bethesda Marriott
Bethesda, Maryland

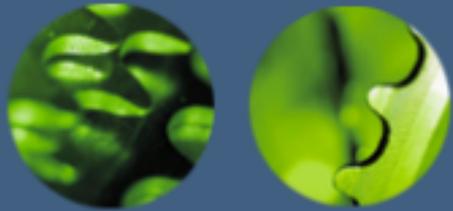


Division of Allergy, Immunology, and Transplantation
National Institute of Allergy and Infectious Diseases

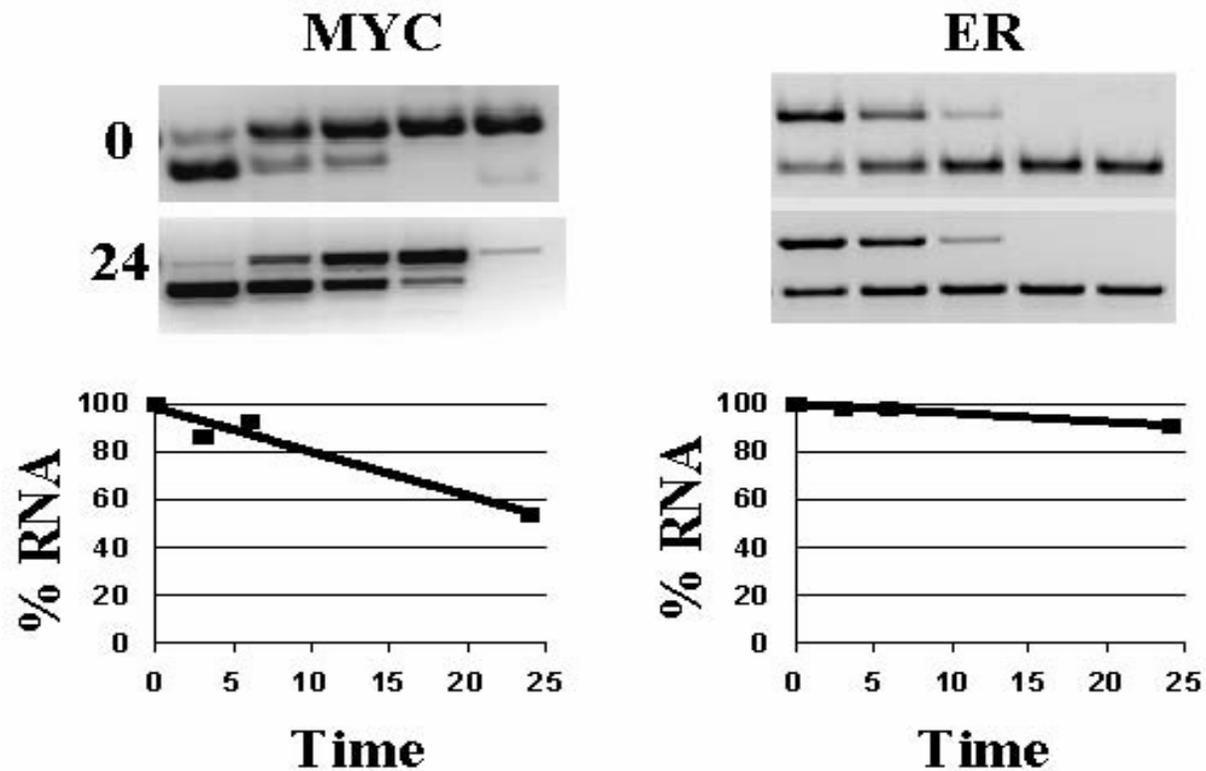


The Targeted Audience

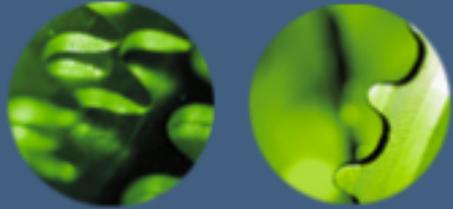
- *c-myc* and estrogen receptor (ER) mRNA levels in human breast tumors
- Standard protocol
 - Clinical handling
 - Tissue samples taken for research purposes
 - Snap frozen in liquid N₂ & maintained at -70°C
 - Homogenous portions aliquoted into cryovials
 - ***Stored on ice for 0, 3, 6, or 24 hrs prior to freezing @ -70°C***
- Competitive RT-PCR: *c-myc* and ER RNA (n=10 cases)



Results: Competitive RT-PCR



- Small decay in *c-myc* and ER levels in first 3 hours
- Level of *c-myc* mRNA declines significantly over 24 hrs



Conclusions

- Timing of collection can influence measured levels of mRNA expression
- Take home messages:
 - “Standardized” protocols: Oh really?
 - Documentation of timing: Is anybody is doing it?



BC BioLibrary: Expanding the Audience



Michael Smith Foundation for Health Research



Technology / Methodology Platform RFA
(broad range, cross-cutting, provincial scope)

with the support of...



BC Cancer Agency

CARE & RESEARCH

An agency of the Provincial Health Services Authority



Providence

HEALTH CARE

How you want us to be created.



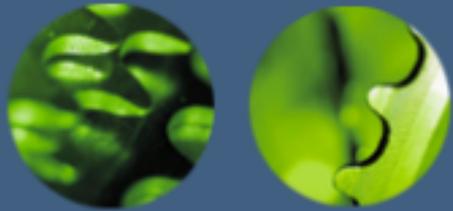
Vancouver Coastal Health



**CHILDREN'S & WOMEN'S HEALTH
CENTRE OF BRITISH COLUMBIA**

AN AGENCY OF THE PROVINCIAL HEALTH SERVICES AUTHORITY





Biobanking in BC

- **Variable access** to adequately collected and annotated biospecimens
- **Inadequate synergy** between biobanks and research collections
- **Lack of standardization** in collection of materials or material quality

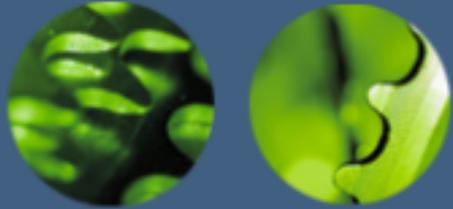
Gap between pace of research and improved health outcomes



BC BioLibrary Approach

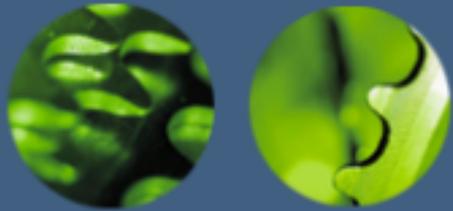
A “**BioLibrary**” is a collection of biospecimens organized to provide physical, bibliographic and intellectual access to a target group [*biobanks, clinical trials and research studies*]

www.bcbiolibrary.ca

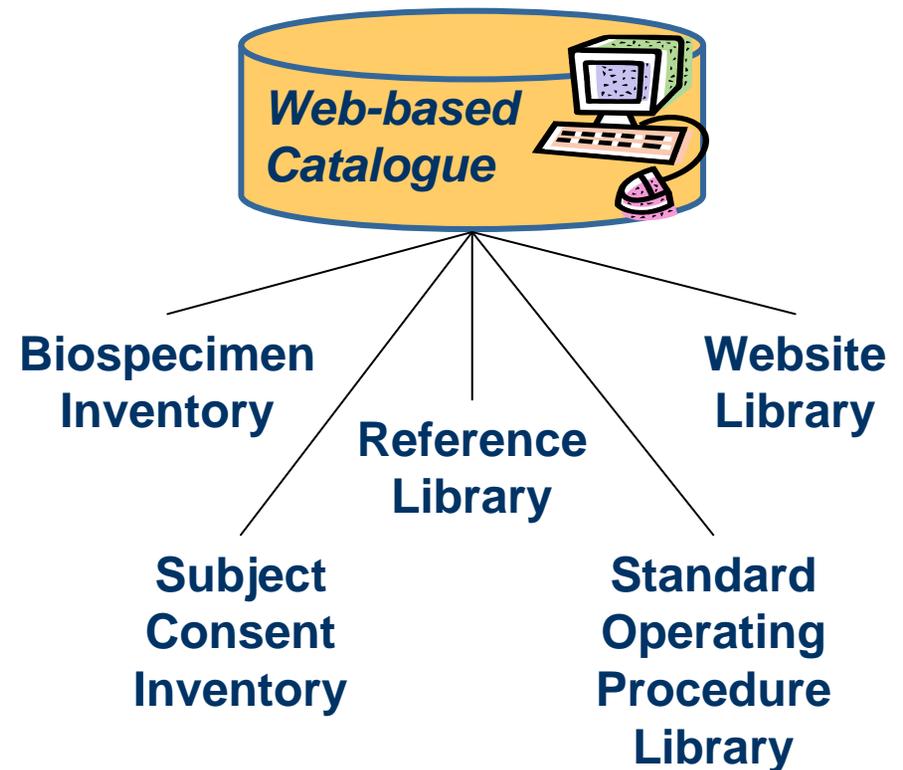
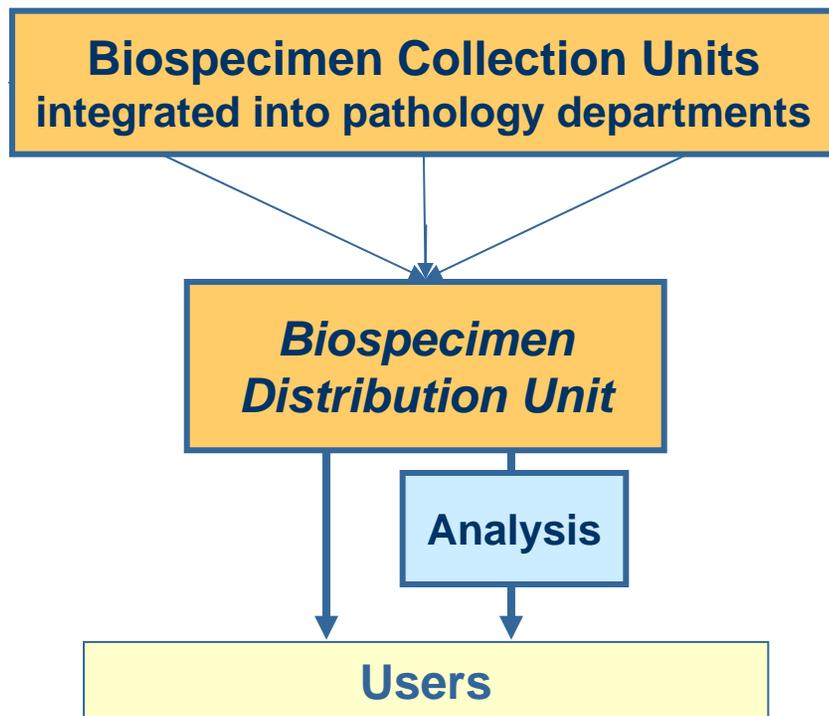


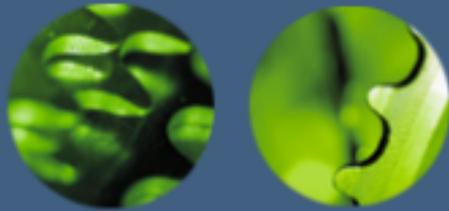
BC BioLibrary

- Modeled after a public library, the BioLibrary is intended to help all interested BC researchers and educators
- The BioLibrary is a facilitator, not a biobank
- The BioLibrary enhances quality and accessibility of biospecimens
- The BioLibrary helps pathologists streamline and improve biobanking activities
- The BioLibrary contributes to the sustainability of biobanking in BC by developing and upholding ***public trust***



BC BioLibrary





BC BioLibrary: Public Trust

- Transparency through *public engagement*
<http://biobanktalk.ca/>

Biobanking in British Columbia

a deliberative public consultation

HOME ABOUT US EVENT INFO TRAVEL/HOTEL READINGS WHAT IS A BIOBANK?

Developed by

GE3LS Arch Project
W. Maurice Young Centre for Applied Ethics
University of British Columbia

Private website

Participants can log on here

Welcome



Biobanking in BC: A Deliberative Public Consultation
This consultation was run in April/May 2007 by an interdisciplinary research group at the University of British Columbia.

Funded by

GE3LS Arch
Genome Canada
Genome BC
BC BioLibrary (MSFHR Platform)
CIHR Ethics Office
Canadian Biotechnology Secretariat
Western Canadian Policy Collaboration
James Hogg iCAPTURE Centre
Biomarkers in Transplantation
Canadian Tumour Repository Network
BC Cancer Agency Tumour Tissue Repository
CIHR Institute of Genetics



BC BioLibrary Team

Governance Oversight Committee

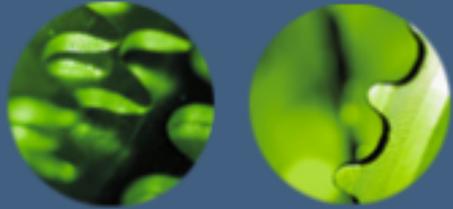
Chair: *Bruce McManus*
Translational Research: *Martin Gleave*
Health Innovation: *Janet Joy*
Business Finance: *Gary Sutherland*
External Linkage: *Bruce Ritchie*
Industry Linkage: *Carl Roy*

Executive

Peter Watson, Ian Mackenzie, Anne Junker, Rick Hegele, David Huntsman, Sam Aparicio, Mike Burgess

Management Teams

Public Engagement: Mike Burgess
Biospecimen Collection Units: Ian Mackenzie, Blake Gilks, Peter Watson, Anne Junker, Rick Hegele, Margaret Luk, Mark Elliott, Lise Matzke, Rebecca Barnes
CTAG Analytical Technology: David Huntsman, Sam Aparicio
Informatics and Databases: Mark Wilkinson, Sam Aparicio, Nathan Wang, Joe Comeau, Simon Dee
Training: Rick Hegele, Jacqui Brinkman, Lise Matzke
Ethics, Privacy, and Consent Harmonization: Jacqui Brinkman
Management: Janet Wilson-McManus, Sara Giesz



Summary

- Private Knowledge: Not good enough
- Targeted audience: A definite improvement
- BC BioLibrary:
 - Expanding the audience
 - Accelerating the process
 - Fulfilling the promise