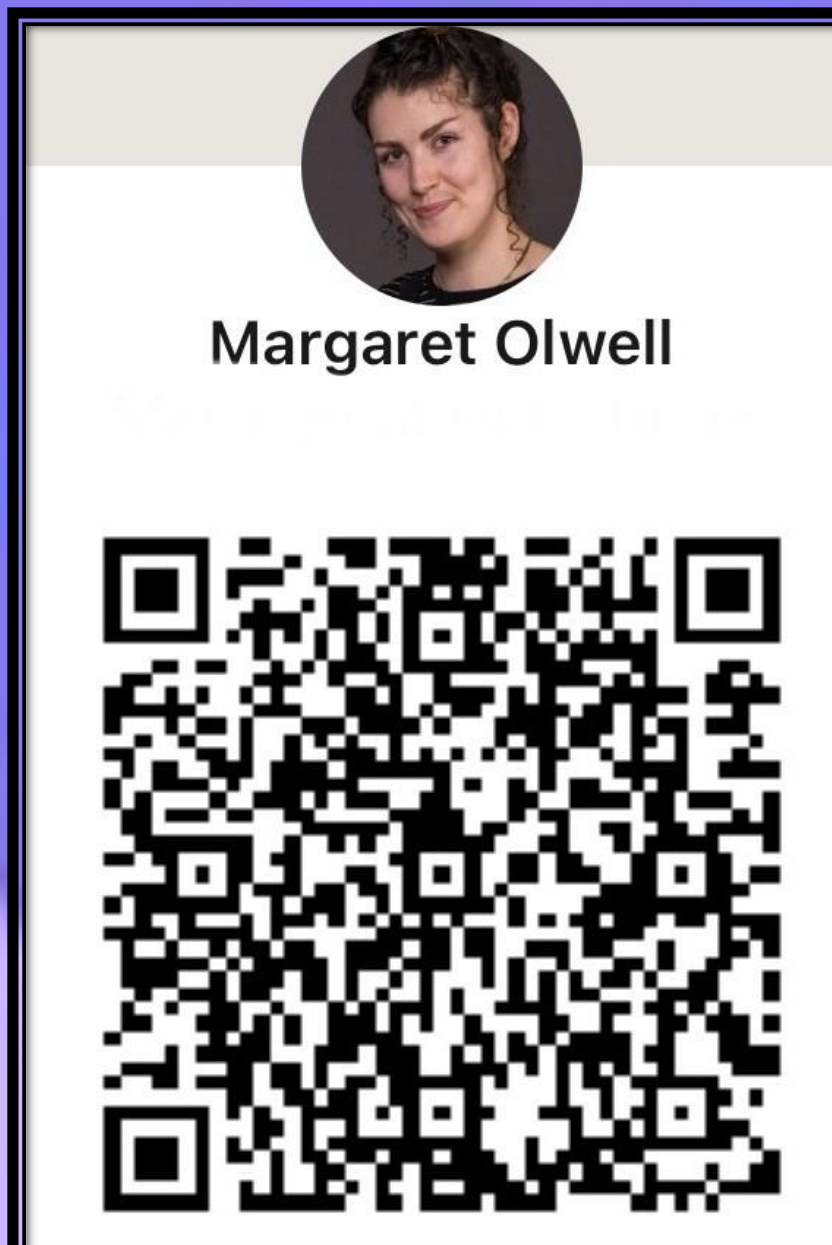




**Fred Hutch  
Cancer Center**

# Biospecimen Processing & Biorepository

Margaret Olwell  
Shoreline Community College  
Biotechnology Lab Specialist



## About Me

**College:** Shoreline Community College  
**Favorite Classes:** Bioinformatics and Tissue Culture  
**Career Interest:** Biotechnology and Community-Driven Science  
**Hobbies:** Skiing, Mountaineering, Playing Harp  
**Motivation to Apply to Lab Launch:** To get hands on experience in a professional lab and make connections!

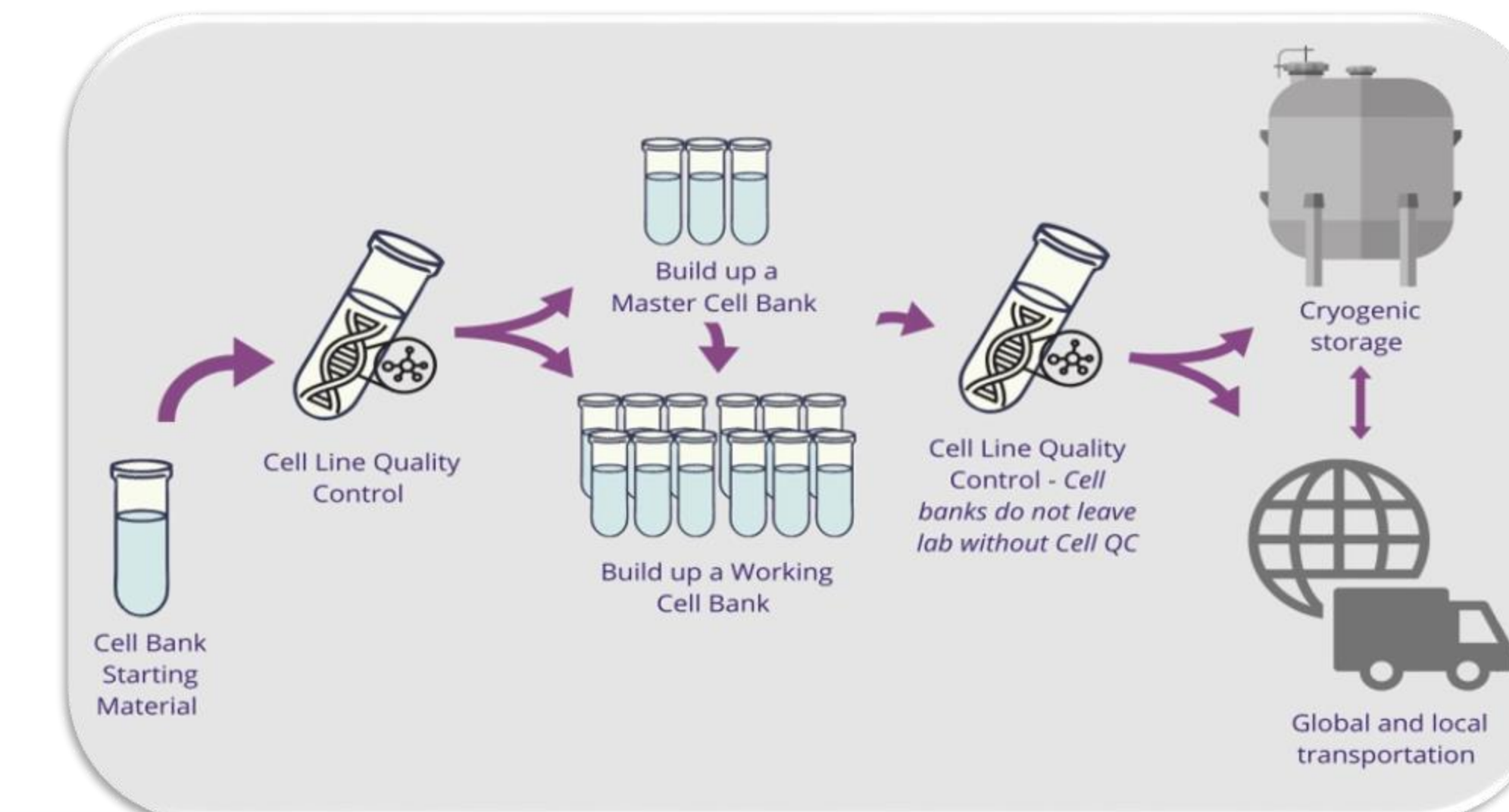
## BPB and Fred Hutch

Fred Hutch's Biospecimen Processing & Biorepository shared resource lab provides investigators with high-quality biospecimen sample processing, DNA/RNA extraction and biorepository services to advance their laboratory research and preclinical studies.

**BPB Goal:** "To do our part in the development of new treatments that save lives from cancer and related diseases"

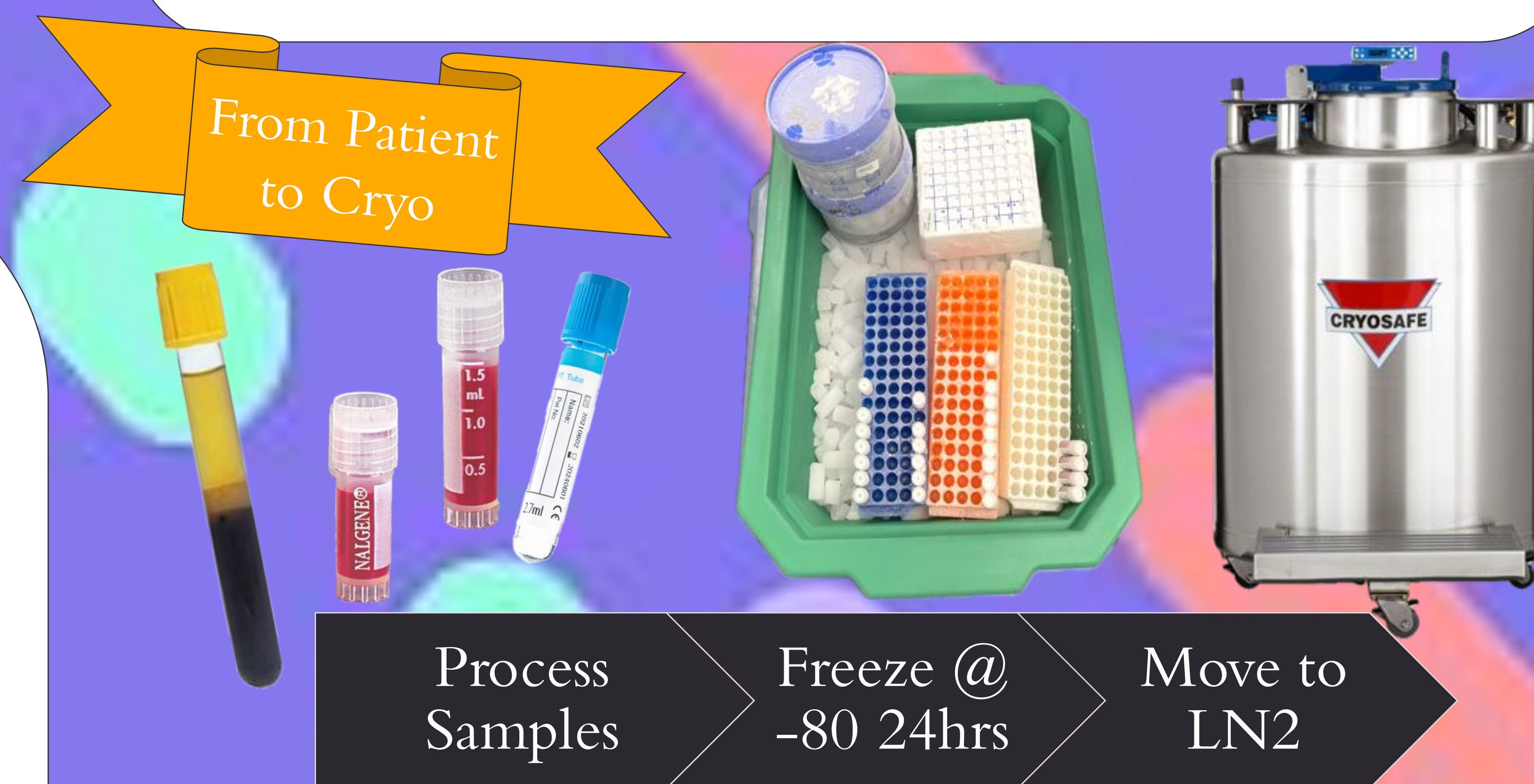
## Highlights

### Learning About:



## Overview of BPB

**Employees:** 10  
**BPB Director:** Jianhong Cao, Ph.D.  
**BPB Lab Supervisor:** Kristy O'Brien  
**BPB Lab Manager:** Lorna Nolan  
**Services:** Large-volume biospecimen processing, PBMC Isolation, Cryopreservation and Cell Immortalization, DNA/RNA Extractions, Transformation of B-Cell Lines, Hematopoietic Cell Therapy Research Cell and DNA Bank (HCT-RCB), International Histocompatibility Work Group (IHWG) Biorepository, Isolation of RNA in Trizol, Mycoplasma testing  
**Samples Processed:** Whole Blood, Cord Blood, Plasma/Serum, Bone Marrow  
**Protocols and Assays:** PBMC Isolation with Ficoll-Hypaque, Plasma/Serum Isolation from Whole Blood, Specialized Study SOPs, Fresh Cord Blood Processing, Guava Flow Cytometry, Cell culturing, Cell harvesting, B-LCL Transformations  
**Data Generated:** Samples and data support labs and trials within Fred Hutch, University of Washington, Seattle Cancer Consortium, and outside contract studies



**International Histocompatibility Work Group (IHWG) Biorepository:** maintains a comprehensive inventory of HLA reference genes, with more than 1,000 B-lymphoblastoid cell lines, to support global immunogenetics research

**Hematopoietic Cell Therapy Research Cell and DNA Bank (HCT-RCB):** maintains a centralized transplant genomics repository, containing frozen blood cells and DNA from hematopoietic cell transplant patients, donors, and family members dating back to the 1970s

## What I Did this Summer

- Diabetic Retinopathy Clinical Research Network Study (DRCR) Sample Processing
- Sodium Citrate Plasma Isolation from Whole Blood
- Serum Isolation from Whole Blood
- Aliquoting: Ficoll-Hypaque, PBS+EDTA, FBS+DMSO, ViaCount, Plasma/Serum, DNA
- Nanodropping IHWG DNA samples
- Flow Cytometry Cell Counting with Guava
- Biorepository Inventory and Stocking
- Shadowed Senior Technicians on a variety of study specific SOPs and assays (highlight being fresh cord blood)
- Laboratory Documentation
- General Lab cleanup, QC/QA, and maintenance

## PBMC Isolation

