

Research Blood Sample Collection at Yale Utilizing the Clinical Enterprise

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1. Creation of Epic Order for research and sample collection

Routine sample collection at North Haven

- A. Create tailored EPIC research specimen collection order: submit intake at YCCI
 - a. Link: <https://medicine.yale.edu/center-clinical-investigation/research-services/services-by-team/>
 - b. You will need: number and types of tubes, Human Investigation Committee approval number, processing instructions, billing information
 - c. 2-3-week turnaround for order set creation
 - d. Contact: Lynda Knaggs: lynda.knaggs@ynhh.org to get the order set established
- B. Post-baccalaureate associate or clinical coordinator
 - a. explains the study in greater detail
 - b. obtains informed consent
 - c. enrolls the research participant into OnCore
 - d. scans the signed consent form into REDCap or EReg
 - e. enters research blood draw orders into EpicCare for clinician signature
 - f. accompanies the research participant to clinical lab for phlebotomy by the YNHHS or YM phlebotomist who prints labels and affixes them to each research tube
 - g. ensures the tubes are filled, labeled, and placed in a biohazard bag with a brightly colored sticker attached that indicates the primary investigator and their contact information (*e.g.*, “Dr. Hinchcliff SSc Research | YNHHS or YM medical courier deliver To: YNHHS Biorepository 55 Park Street Lab 5th Floor”)
 - h. places the sample(s) in special bin in Oncology Unit, 4th floor, 6 Devine St. Clinic for courier pick up

Special sample collection (PBMCs) at North Haven

- A. Cell Preparation Tubes (CPT) for isolation of peripheral blood mononuclear cells require centrifugation within two hours of collection per the manufacturer’s instructions. Thus, CPT are spun on site at 8 Devine Street, North Haven, first floor, in the biorepository specimen holding room (1-149), for 20 min at 1500 RCF
 - a. Blood is transported between 6 Devine and 8 Devine in a secondary biospecimen carrying bucket to ensure temperature control and biohazard safety

2. YNHHS courier sample transportation and processing by Central Lab

- A. YNHHS or YM medical courier transports the research samples along with clinical samples to the Central Lab 55 Park St. New Haven, for processing and aliquoting

- i. Courier transports to Central Lab are scheduled at ~11:30am and 2:30pm

3. Central Lab

- A. Materials (FBS, DMSO, cryovials) provided by study team prior to sample collection
- B. Upon arrival to Central Lab, biohazard bag is routed to YM Biorepository
- C. Samples processed by YM Biorepository staff
- D. Lavender and SST: spun at 2000g for 10 minutes, then 0.5mL aliquots placed into cryovials and stored at -80°C
- E. CPT: spun at 450 RCF for 15 minutes then washed with PBS (x2), resuspended in 2mL freezing media (90%FBS + 10% DMSO), then 0.5mL aliquots placed into cryovials and stored at -80°C
 - a. 20uL aliquot separated and provided for cell counting by research coordinator
- F. Aliquots picked up next day by research coordinator
- G. Research staff collect the processed samples and affix research labels
- H. Site of storage: freezer, shelf, box and row recorded in REDCap
- I. Serum and plasma samples stored at -80°C freezer, and CPT samples are stored in liquid nitrogen tank

4. Routine sample collection (serum and plasma) at St. Raphael Hospital

- a. Investigators create a standardized EpicCare research blood draw order as above
- b. Post-baccalaureate associate or clinical coordinator responsibilities as above (1. B)
- c. The YNHHS medical courier transports the research samples (along with clinical samples to the Central Lab) 55 Park St. New Haven, for processing and aliquoting. Pick up times (11:30 AM and 2:30 PM)
- d. Samples are stored in Central lab free of charge until the researcher arranges for pick up (few days limit)
- e. The Central Lab can store the sample(s) long-term for a fee

5. Special sample collection at St. Raphael Hospital

- a. Cell Preparation Tubes (CPT) for isolation of peripheral blood mononuclear cells require centrifugation within two hours of collection per the manufacturer's instruction. Thus, CPT are spun on site at Yale New Haven Hospital, St. Raphael Hospital in Research space.

If interested, please contact David Ferguson: david.ferguson@yale.edu