

Biobank and Molecular Analysis Program (BMAP)

The Biobank and Molecular Analysis Program (BMAP)

is an enterprise-wide, state-of-the-art facility that houses a tissue biorepository as well as a wet lab specializing in molecular biology instrumentation and methodologies. Formed from the merger of the Biobank (established in 2009), the Biomolecular Core Laboratory (established in 2001), and the Pediatric Genomic Laboratory (merger June 2023), BMAP has a combined 21 years of expertise to guide the research goals of clinicians, clinician scientists and investigators at Nemours Children's Health, partner institutions and surrounding communities. We are a fully staffed laboratory under the direction of Diana Corao-Urbe, MD. We are supported by many federal and non-federal grants throughout Nemours Children's.

The Biobank is a tissue biorepository storing more than 10,000 specimens (solid/liquid tumor, tissue, cells, blood, stool, etc.) and is fully accredited by the College of American Pathologists. We offer clinical trial support as well as basic specimen processing, including serum and plasma isolation; mononuclear cell isolation; liquid nitrogen flash freezing; as well as cell culture of surgery specimens (bone, cartilage, skin, etc.).

The Molecular Analysis Program houses multiple instrumentation that allows for immediate specimen processing, including but not limited to, nucleic acid extraction and QC; specimen identification and profiling; Real-Time qPCR and gene expression analysis; CNV (copy number variation) detection and digital PCR; as well as DNA sanger sequencing. Next-generation sequencing services (such as whole exome, transcriptome, and targeted panels) are provided through the Pediatric Genomic Lab. In addition to bulk sequencing, single cell applications are supported via 10X.

We manage a shared instrumentation facility with access to the following: QIASymphony; Nanodrop; Qubit; Biomek liquid handler; and a QS7 Flex Real-Time PCR system. In addition to our fee for services, BMAP offers experimental design and project development for molecular biology applications.

Services Provided

- Biorepository (solid/liquid tumor, tissue, cells, blood, stool, etc.)
 - Nucleic acid (DNA/RNA) extraction and QC (Qubit/Fragment Analyzer)
 - DNA Sanger sequencing
 - DNA fragment analysis
 - SNP analysis
 - Cell line authentication and specimen profiling
 - Gene expression analysis
 - Digital PCR
 - Microarray assays
 - Custom oligonucleotide synthesis
 - Robotic liquid handling procedures
 - Mycoplasma testing
 - Next Generation Sequencing: 10X Single Cell, Microbiome, RNA/DNA NGS Sequencing
 - Specimen processing (serum/plasma isolation) and storage
 - Mononuclear cell isolation
 - Liquid nitrogen flash freezing
 - Cell culture (surgery specimens, bone, cartilage, skin, etc.)
 - Clinical trial support through specimen processing
- Shared Instrumentation:**
- QIASymphony (two)
 - Nanodrop/Nanodrop One
 - Qubit
 - Biomek Liquid Handler (Biomek 3K/Biomek 4K)
 - QS7 Flex Real-Time PCR System

Shipping

Our team is fully trained for human biospecimen shipping. BMAP does not offer free shipping, nor do we supply the materials needed for shipping. However, we can assist or advise in packing/shipping your specimens if needed. Many factors go into the cost of shipping including date and delivery time, season of year, temperature of specimen, packaging, etc. We use FedEx and receive a discount. Please contact us to discuss your specific needs.

Special Considerations

Autopsy samples are not considered human subjects and are therefore excluded from IRB regulations.

We can help establish protocols or we can use already established protocols by the PI.

Included on the next page is an outline of our basic fees. We offer many additional services. Please contact us to discuss your specific needs.

Services and Fees*

Discounts available for start up/pilot projects

Service		Internal/Affiliates	Extramural	Corporate
Biobank Storage and Processing - 70% discount applied to cost				
Biobank storage and basic specimen processing: includes preservation, basic specimen processing as needed, serum & plasma isolation, and centrifugation.	Per specimen	\$18.00	\$90.00	\$120.00
Biobank Administration Fee - 70% discount applied to cost	Per specimen	\$2.55	\$12.75	\$17.00
Advanced Biobank Processing				
Biobank Cell Culture (Bone)	Per specimen	\$371.00	\$556.50	\$742.00
Biobank Cell Culture (Cartilage)	Per specimen	\$318.00	\$477.00	\$636.00
Biobank Cell Culture (Skin)	Per specimen	\$324.00	\$486.00	\$648.00
Biobank Cell Culture (Other)	Per specimen		Custom cost	
Biobank Cell Count - stand alone only		\$5.00	\$7.50	\$10.00
Mononuclear Cell Extraction	Per specimen	\$32.00	\$48.00	\$64.00
Biobank Clinical Trial Processing				
Biobank Clinical Trial Processing	Per encounter		Custom cost	
Nucleic Acid Isolation				
DNA Isolation from FFPE	Per sample	\$53.00	\$79.50	\$106.00
DNA Isolation from stool	Per sample	\$27.00	\$40.50	\$54.00
DNA Isolation from whole blood, cell pellets, tissue and buccal	Per sample	\$29.00	\$43.50	\$58.00
RNA Isolation - PAXgene tubes	Per sample	\$36.00	\$54.00	\$72.00
RNA Isolation from Purple top blood tubes, cell pellets, tissue	Per sample	\$38.00	\$57.00	\$76.00
RNA Isolation from stool	Per sample	\$35.00	\$52.50	\$70.00
Nucleic Acid Quantitation				
DNA/RNA Quantification via Qubit	Per sample	\$3.60	\$5.40	\$7.20
DNA/RNA Quantification via Nanodrop	Per sample	\$1.00	\$1.50	\$2.00
DNA/RNA Quantification via both Qubit and Nanodrop	Per sample	\$4.60	\$6.90	\$9.20
Nucleic Acid QC				
Fragment Analyzer (1-10 sample per run)	Per run	\$110.00	\$165.00	\$220.00
Cell Line Authentication and Specimen Profiling				
Cell Line Authentication and Specimen Profiling	Per reaction	\$50.00	\$75.00	\$100.00
DNA Sequencing Analysis				
DNA Sanger Sequencing	Per reaction	\$8.40	\$12.60	\$16.80
Full DNA Sanger Sequencing	Per reaction	\$17.00	\$25.50	\$34.00
Charged Reruns	Per reaction	\$6.00	\$9.00	\$12.00
Fragment Analysis				
Fragment Analysis (100-600 bp length)	Per reaction	\$8.40	\$12.60	\$16.80
Charged Rerun	Per reaction	\$8.40	\$12.60	\$16.80
Long Fragment (50-1200 bp length)	Per reaction	\$8.40	\$12.60	\$16.80
PCR				
QiaQuick Column Purification	Per sample	\$6.70	Not offered	
ExoSAP IT Purification	Per 5ul of PCR product	\$4.00	Not offered	
Agarose gel of PCR Products	Per gel	\$27.00	Not offered	
QS 3D PCR				
QS 3D PCR		\$29.00	\$43.50	\$58.00
Real-Time PCR				
SNP Genotyping - 1rxn = 1 sample + 1 NTC (no assay cost)	Per reaction	\$3.00	\$4.50	\$6.00
Custom Gene Expression Projects	Per project		Custom cost	
Custom Genotyping Projects	Per project		Custom cost	
Mycoplasma Testing				
Mycoplasma Testing	Per sample	\$30.00	\$45.00	\$60.00
Covaris				
Covaris Shearing	Per sample	\$14.00	\$21.00	\$28.00
Pediatric Genomics Laboratory Next Generation Sequencing				
10X Single Cell Service	Per sample	Custom Cost		
Next Generation Sequencing Service: RNA and/or DNA	Per sample	Custom Cost		
Microbiome Genomic Analysis	Per sample	Custom Cost		
Custom Genomic Sequencing Projects	Per sample	Custom Cost		

*Updated 2023. Please note, fees are adjusted annually.

Learn More

BMAP Services

If you would like to use BMAP services, please contact Program Coordinator Paige Blanco, who will set up a meeting including Jennifer Holbrook, program manager, Deepti Anand, research scientist, and Diana Corao-Uribe, director.

Paige Blanco

Program Coordinator
p 302.287.9310
e paige.blanco@nemours.org

Sending Specimens

If you are sending specimens to external institutions, you will need an MTA (Material Transfer Agreement) and DUA (Data Use Agreement). For an MTA and/or DUA, please contact:

MTA & DUA Contact:

Dr. Thomas Shaffer

Director of Technology Transfer Office
e thomas.shaffer@nemours.org

Using Specimens

If you are using specimens immediately for a project, you will need IRB approval. For IRB approval, please contact:

Soniya Anis

Nemours IRB Coordinator
p 302.651.6807
e soniya.anis@nemours.org

Contacts

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Questions

FEES, FUNDING AND BILLING

For questions related to fees, funding and billing, please contact Program Manager Jennifer Holbrook at 302.358.7648 or email jennifer.holbrook@nemours.org.

If you do not have the appropriate funding, we will consider financial options on a case-by-case basis and offer discounts for pilot projects.

OBTAINING CONSENTS

We encourage clinical teams to obtain consents since they already have an established relationship with patients and families, but the BMAP can assist in special circumstances. For more information, please contact our Program Coordinator Paige Blanco at 302.287.9310 or email paige.blanco@nemours.org.



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