**FACILITIES & OTHER RESOURCES**

**Investigators preparing grant proposals or manuscripts that involve subject consenting, phlebotomy, biospecimen collection/processing or translational genomics technologies are encouraged to contact Dr. Robin Leach or Dr. Teresa Johnson-Pais for a consultation, letter of support or resource section that is tailored to the goals of the grant proposal.**

**UT Health San Antonio Biospecimen and Translational Genomics Core**:

The Biospecimen and Translational Genomics Core provides state-of-the art services primarily in the areas of collection, processing, and banking of biological specimens, including regulatory document assistance, subject consenting and phlebotomy, histology services for tissues, isolation of nucleic acids from biological specimens with integrity analysis, SNP genotyping (single SNPs by TaqMan methodology) and absolute and relative quantification of RNA expression. The core also provides users access to a BioRad real time PCR system, BioRad droplet digital PCR system and Leica Aperio Versa200 digital slide scanning system. The core directors counsel all users to help them select the optimal platform for their experiment within their financial limitations and to assist in experimental design.

*Laboratory*: The biospecimen processing and histology services are provided at the UT Health San Antonio Biobanking Facility RAB 1.108 that is located on the Greehey Research Campus. This facility consists of a freezer room and processing laboratory. The close location of the biospecimen laboratory to the Medical Arts Research Center (MARC) and Mays Cancer Center (MCC) enables the timely processing of clinical specimens, many of which are obtained from subjects enrolled in clinical trials. The translational genomics services are provided in a laboratory located on the 5th floor of the medical school on the Joe R. and Teresa Lozano Long Campus.

*Instruments and Equipment*:

Instruments

The BioRad CFXTouch Real Time PCR system enables the robust quantification of DNA and cDNA templates using fluorescence methodologies.

The BioRad QX200 Droplet Digital PCR system allows the absolute quantification of both DNA and cDNA molecules using florescence technologies.

The Purigen Biosystems Ionic Purification System enables the extraction and purification of nucleic acids from formalin-fixed paraffin-embedded tissue sections.

A NanoDrop spectrophotometer measures nucleic acid concentrations.

The Agilent Bioanalyzer is used to analyze the quality of RNA samples prior to genomic analyses.

The Leica Aperio Versa200 digital slide scanner is optimized for precision brightfield scanning and analysis of stained tissue sections.

Sample Processing Equipment - The core has a specimen banking laboratory equipped with three biological safety cabinets, tissue culture incubators, a phase contrast microscope, table-top centrifuges, refrigerators, and -20°C, -70°C and -135°C freezers with temperature monitoring probes.

Histology Equipment - Microtome, Cryostat, Drying oven, Tissue Microarray System, Tissue-Tek TEC6

embedding station

*Services:*

Genotyping-Allelic Discrimination of Single SNPs using the TaqMan methodology

Gene Expression-Gene Expression Analysis using Quantitative Real Time PCR and Droplet Digital Methodologies

Nucleic Acids Isolation

Nucleic Acids Integrity Analysis

Biological Specimen Processing/Cryopreservation-Blood, Urine, Stool, Peripheral Blood

Mononuclear Cells, Adipose Tissue, Saliva and Buccal Cells, Tumor and Normal Tissues

Shipping of Biological Specimens

Histology-Processing of Specimens for frozen and FFPE blocks

Sectioning of Frozen and FFPE blocks

Imbedding Tissues into Blocks

Creation of Custom Tissue Microarrays

H&E staining of Pathological Specimens

Gathering of Clinical Data for Subject Outcome

Support for Preparation of Regulatory Documents for Clinical Studies and MTAs

Collection of Biospecimens from Research Subjects, Including Phlebotomy

Aperio Versa 200 Digital Slide Scanning and Analysis

*Personnel:*

Robin J. Leach, Ph.D., is the overall director of the Biospecimen and Translational Genomics Core. Dr. Leach is a Professor in the Department of Cell Systems and Anatomy. She has been directing a core facility for the cancer center since 1999.

Teresa Johnson-Pais, Ph.D., is the co-director of the institutional core. She is a Professor in the Department of Urology and has a long history of collaborating with Dr. Leach and her laboratory group.