



PATHOGEN DETECTION AND QUANTIFICATION CORE

RRID: SCR_024614

The Pathogen Detection and Quantification Core (PDQC) provides services for maintaining the SPF (Specific Pathogen Free) status in macaque breeding colonies. Services include antibody detection in serum or plasma by Luminex-based assays and/or ELISA for SPF-agents like SIV, SRV, STL, B virus, SFV, CMV, RRV, SVV, SV40, and LCV, and non-SPF infectious agents like measles, Burkholderia pseudomallei, Tripanosoma cruzi, Mycobacterium tuberculosis, and SARS-CoV-2. The PDQC also offers services of cytokines quantification, and molecular assays for detection of SRV, CMV, SFV and RRV. In addition, the PDQC performs nucleic acid purification from blood and tissue samples as well as qPCR for SIV viral load in plasma, cells, or tissue.

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UNIT OF COLLABORATIVE RESEARCH AND TISSUE AND REAGENT DISTRIBUTION PROGRAM

RRID: SCR_024610

The Unit of Collaborative Research (UCR) is committed to delivering full or partial support for non-affiliate researchers interested in NHP research. UCR offers outside scientists access to NHP samples for preliminary studies and assay development. It affords opportunities to conduct NHP studies and opens avenues for collaboration between scientists and guidance in study design, management, budgets, and regulatory requirements.

The Tissue and Reagent Distribution Program (TRDP) has a long history of providing biological samples and research support to fulfill the needs of affiliate scientists and private industries worldwide. The TRDP facilitates the collection and distribution of nonhuman primate tissues and reagents from one of several sample bank inventories or in coordination with other cores within TNPRC. TRDP personnel and laboratory are experienced and committed to providing full or partial support for researchers seeking NHP tissues and reagents.

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VECTOR-BORNE INFECTIOUS DISEASE AND DIAGNOSTIC PARASITOLOGY CORE

RRID: SCR_024680

The Vector-Borne Infectious Disease component of this core produces tick vectors for research on Lyme disease and other tick-borne diseases. The Diagnostic Parasitology component provides diagnostic services to clinical veterinarians and core and affiliate investigators when parasitic diseases are suspected in resident nonhuman primates. Services for affiliate investigators include blood parasite detection via microscopic examination of prepared blood smears and quantitative buffy-coat analysis, and intestinal parasite detection via microscopic examination of direct wet mounts, zinc sulfate flotation prepared slides, or parasite-specific assays.

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VIRUS CHARACTERIZATION, ISOLATION, PRODUCTION AND SEQUENCING CORE

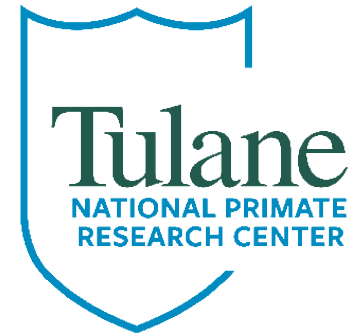
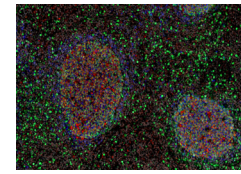
RRID: 024679

The Virus Characterization, Isolation, Production and Sequencing Core (VCIPS) is divided into two primary components: 1) virus characterization, isolation, and production and 2) next generation sequencing. The Virus Characterization, Isolation and Production component provides virus expansion and characterization, viral titer by plaque and TCID50 assays, live virus neutralization and inhibition assays at both BSL-2 and -3 (including SARS-CoV-2). The Next Generation Sequencing component provides expertise in next generation sequencing and timely genomic services including whole genome, epigenetics, targeted amplicons, scRNA seq and 16S metagenomics. The sequencing core also provides NGS based major histocompatibility complex (MHC) typing.

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CORE SERVICES

Available to Affiliate Investigators

TULANE NATIONAL PRIMATE RESEARCH CENTER
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985-892-2040

For more information, visit tnprc.tulane.edu/core-services



ANATOMIC PATHOLOGY CORE

RRID: SCR_024606

The Anatomic Pathology Core (APC) is responsible for post-mortem examinations, tissue collection and distribution, fixation, processing, slide preparation, routine and special staining, and diagnostic gross and histologic pathology services. The APC also processes and interprets biopsy specimens for both research and diagnostic purposes and provides tissue trimming, paraffin processing, sectioning, and routine and special staining for clinical and research staff and faculty. The APC works closely with clinical veterinarians, and through diagnostic pathology on biopsies and necropsies, plays a major role in monitoring and maintaining the health of the animals in the breeding colonies.

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CLINICAL PATHOLOGY CORE

RRID: SCR_024609

The Clinical Pathology Core (CPC) performs clinical diagnostic testing for all research and colony animals. This includes complete blood counts, routine chemistry panels, and microbial culture workups. The lab is equipped with the Sysmex XN1000v veterinary hematology analyzer, the Beckman AU480 chemistry analyzer, and the Matrix-assisted laser desorption ionization-time of flight (MALDI-TOF) instrument for microbe identification. This data provides essential information to research staff, veterinarians, and affiliated scientists for research objectives, as well as health information about the animals in our care. The CPC is staff with three American Society of Clinical Pathologist certified licensed Medical Technologists.

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CONFOCAL MICROSCOPY AND MOLECULAR PATHOLOGY CORE

RRID: SCR_024613

The Confocal Microscopy and Molecular Pathology Core (CMMPC) provides research support and training with molecular pathology skills, confocal microscopy, image analysis, and multicolor immunohistochemistry and in-situ hybridization techniques for internal and affiliate scientists. Services include assistance with experimental design, antibody selection, molecular probe selection, fixation and staining protocols, operating fluorescent and confocal microscopes, acquiring and storing imaging data, interpretation of results, and generation of

publication-quality images. Image analysis services include assistance with capturing images for evaluation and with use of various image analysis software.

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FLOW CYTOMETRY CORE

RRID: SCR_024611

The Flow Cytometry Core provides analytical flow cytometry services and live cell sorting under enhanced Biosafety Level 2 (BSL2+) conditions. Instruments available include six analyzers ranging from 4-30 color acquisition and three sorters using 1-,2-,4-way, and plate sorting between 6-18 colors. We provide experimental and panel design consultation as a service. The core is heavily utilized and supports research projects for a significant number of core and affiliate scientists.

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GENETICS AND GENOME BANKING CORE

RRID: SCR_024615

The Genetics and Genome Banking Core assists in the design of breeding groups and monitors genetic diversity among the colony's breeding animals. This core is responsible for maintaining a genome bank including DNA and cryopreserved primary fibroblast cell lines, including 700 cell lines and DNA samples representing nearly 9,000 animals. Genotype data using the NPRC standardized SNP array is available for 8,000 individuals and whole genome sequence is available for over 520 animals. Genomic data is available via mGAP and can be integrated with physical resource and records by contacting the core. Targeted genotyping for new model development and specialized breeding is also available.

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HIGH CONTAINMENT RESEARCH PERFORMANCE CORE

RRID: SCR_024612

The High Containment Research Performance Core (HCRPC) provides full or partial support for researchers seeking to perform BSL3 and BSL2/BSL3 Select Agent studies and provides services for

bacterial/viral culture and propagation, sample preparation, and processing of blood, BAL, single cell isolation, flow cytometry, and more. This core offers project management assistance in study design, budgeting, and IACUC and IBC preparation. Our standard operating procedures have been tested to ensure consistent practices and have undergone rigorous quality assurance processes to ensure reproducibility. The HCRPC offers assay services for qPCR, O'link Q100, Biorad Bioplex 200, Meso QuickPlex SQ120 Imager and the Microscope Axio Observer.

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IMMUNOLOGY ASSAY CORE

RRID: SCR_024607

The Immunology Assay Core (IAC) provides several immunology services to core and affiliate investigators. The core offers multicolor staining for flow cytometry, access to an inventory of commonly used antibodies, reagent compounding, sample processing such as cell isolation, automated cell separation through RoboSep, and irradiation of biological samples. The IAC also offers multiplex assays using a MESO QuickPlex SQ 120 Imager to investigators.

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INFECTIOUS DISEASE AEROBIOLOGY CORE

RRID: SCR_024608

The TNPRC houses one of the only scientific cores within the collective NIH-funded resources that specifically focuses on infectious disease aerobiology. This is an important distinction because of the demonstrated expertise and corresponding equipment and facilities required for this type of research to be performed. The Infectious Disease Aerobiology Core facilitates biomedical research efforts that require the unique demands of aerosol and aerobiology in their respective performance.

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