Clinical and Translational Science Center (CTSC) of Weill Cornell Medicine

The CTSC is a national consortium that is transforming how clinical and translational research is conducted. The CTSC partners include:

- Weill Cornell Medicine
- Weill Cornell Graduate School of Medical Sciences
- New York Presbyterian Hospital
- Cornell University, Ithaca
- Cornell University Cooperative Extension, New York City
- Memorial Sloan-Kettering Cancer Center
- Hospital for Special Surgery
- Hunter College of the City University of New York
- Hunter School of Nursing
- Hunter School of Public Health
- Hunter Center for Translational and Basic Research (CTBR)
- Animal Medical Center and Cornell College of Veterinary Medicine

Objective:

To provide translational researchers with 3D printing technology in order to rapidly develop novel biomedical products with application to improving human health.

Examples of proposal topics include:

- Biomedical devices
- Prototype development
- Medical diagnostic tools
- Veterinary medical technologies that have ultimate applicability to human health
- Anatomical models and surgical visualization aids

CTSC Core Laboratory

The CTSC Core Laboratory, operated and funded through the CTSC, offers a rich array of core laboratory-related resources to facilitate the translation of research from bench to bedside. The General Core develops and carries out research-related sample processing and analyses to investigators from any of the CTSC partner institutions. Current and prospective clinical and translational investigators are encouraged to inquire about any assay or analytical technique that may prove useful in their research.

The experienced staff of the Core Lab can work with investigators to prepare and test new assays for use. A QuickSelect 9600 and a Stratagene MX3005P multiple analyzer support rapid measurement of a variety of analytes using extremely small sample volumes. The Molecular Core offers an array of research-related regular and contemporary molecular and genetic analyses. The 3-D Core provides 3-D design software, consultation, and printing service to all investigators.

The CTSC general core laboratory is licensed by the New York State Department of Health and is CLIA certified.

Contact Information:

Core Lab Director: Dr. Yuan-Shan Zhu
Coordinator: Ms. Andrika Morant
Email: yuz2002@med.cornell.edu
Tel: 212-746-8348

Molecular Core

Investigators are provided with or trained in the following services for CTSC approved protocols:

- DNA, RNA and protein extraction
- Genotyping
- Oligonucleotide synthesis
- DNA sequencing
- Quantitative PCR
- RT-PCR
- Digital PCR
- castPCR
- Gene expression profiling
- Next-generation sequencing (NGS)
- Western blot analysis

Contact Information:

Specialist: Dr. Guoan He
Email: guh2002@med.cornell.edu
Tel: 212-746-6534

3-D Core

The CLIMS, a web-based system developed by our CTSC, enables:

- Investigators to submit sample assay requests, track sample status, and view and download assay results
- Laboratory staff to handle sample processing and storage, select samples for assays, import or enter assay results, and monitor sample status
- Administrators to manage lab activity, track core lab usage, and generate lab reports

Web site at: https://ctscweb7.ctsc.med.cornell.edu/CLIMS/MainMenu.cfm?CFID=30232&CFTOKEN=556517077

User-Run Services:

- SECTOR Imager 2400 for multiplex assays
- ChemiDoc MP system for imaging
- 3D software for 3D design

Reservation calendar at: https://ctscweb7.ctsc.med.cornell.edu/ReservationCalendar/login.cfm

CTSC Core Laboratory Information Management System (CLIMS)

Services Offered:

- Sample processing, storage and shipment: Samples processed in the core lab included but not limited to blood, urine, saliva, stool, cerebrospinal fluid, tissues and cells.
- Bulk immunodiagnostic and chemical assays: Over 130 different testing are offered.
- Various assays for cell biology including cell count & viability, cell proliferation, cell apoptosis, cell cycle, DNA damage, autophagy, etc.
- Multiplex assays: Up to 10 biomarkers are assayed in a single well of 96-well plate with small amount of specimen.
- Letter of Support for Grant Application: Strengthen your application with CTSC resource support.

Contact Information:

Web: http://weill.cornell.edu/ctsc/
Tel: 212-746-4745

Instrumentation

- MSD SI2400 and QuickFlex SQ120
- VICTOR3 Multi-Label Reader
- COBRA Auto- Gamma Radiation Counter
- Chronolog700 4-Clot Detection System
- Star™4 semi-automated hemostasis analyzer
- DCa2000+ Plasma Hba1c and urinary albumin/creatinine Analyzer
- CholesTech LDX Lipid profile + Glucose Analyzer
- Eppendorf Master Thermal Cyclers
- Fluorescent Microscope
- Multiple -20 and -80 Freezers, and centrifuges
- Muse Cell Analyzer

Contact Information:

Web: http://weill.cornell.edu/ctsc/services_and_resources/general_core_laboratory.html
Coordinator: Ms. Andrika Morant
Email: anm2134@med.cornell.edu
Tel: 212-746-8910

Clinical and Translational Science Center Core Laboratory – Translate Your Research From Bench To Bedside

Translate Your Research From Bench To Bedside

Clinical and Translational Science Center (CTSC) of Weill Cornell Medicine

The mission of the CTSC is to provide an environment that allows optimal use of our considerable multi-institutional assets and the diversity of our patient population to move translational research seamlessly from bench to bedside and to the community. The CTSC acts as a conduit through which essential resources, technological tools and education programs for all partners can be efficiently shared and managed. It is funded through the NIH Clinical and Translational Science Awards (CTSA), a national consortium that is transforming how clinical and translational research is conducted. The CTSC partners include:

- Weill Cornell Medicine
- Weill Cornell Graduate School of Medical Sciences
- New York Presbyterian Hospital
- Cornell University, Ithaca
- Cornell University Cooperative Extension, New York City
- Memorial Sloan-Kettering Cancer Center
- Hospital for Special Surgery
- Hunter College of the City University of New York
- Hunter School of Nursing
- Hunter School of Public Health
- Hunter Center for Translational and Basic Research (CTBR)
- Animal Medical Center and Cornell College of Veterinary Medicine

Weill Cornell Graduate School of Medical Sciences

Weill Cornell Graduate School of Medical Sciences offers an array of research-related regular and contemporary molecular and genetic analyses. The 3-D Core provides 3-D design software, consultation, and printing service to all investigators.

The experienced staff of the Core Lab can work with investigators to prepare and test new assays for use. A QuickSelect 9600 and a Stratagene MX3005P multiple analyzer support rapid measurement of a variety of analytes using extremely small sample volumes. The Molecular Core offers an array of research-related regular and contemporary molecular and genetic analyses. The 3-D Core provides 3-D design software, consultation, and printing service to all investigators.

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Contact Information:

Core Lab Director: Dr. Yuan-Shan Zhu
Coordinator: Ms. Andrika Morant
Email: yuz2002@med.cornell.edu
Tel: 212-746-8348

Administrators

- to submit sample assay requests, track sample status, and view and download assay results
- to manage lab activity, track core lab usage, and generate lab reports

Contact Information:

Web: http://weill.cornell.edu/ctsc/services_and_resources/core_laboratory_services.html
Coordinator: Ms. Andrika Morant
Email: anm2134@med.cornell.edu
Tel: 212-746-8910

3-D Printing Core Lab and Software:

- Stratasys uPrint Material: ABSplus in ivory
- Stratasys Fortus 250mc Material: ABSplus in multiple colors
- Go!Scan 3D Scanner Scanning area: 380 x 380 (15 in. x 15 in.)
- Build envelope (XY): 254 x 254 x 305 mm (10 x 10 x 12 in.)
- Layer thickness: 0.150 mm (.006 in.)
- Layer thicknesses: 0.015 inch (0.330 mm)
- Texture Colors: 24 bits
- Accuracy: Up to 0.100 mm (.004 in.)

Contact Information:

Coordinator: Ms. Andrika Morant
Email: anm2134@med.cornell.edu
Tel: 212-746-8910

Sponsorship:

- Letter of Support for Grant Application:

Strengthen your proposal by including support from the CTSC.

3-D Printing Core Lab and Software:

- 3D Doctor
- Sketch up
- Auto Desk Inventor
- Solid Works
- Space claim
- Slicer

Contact Information:

Coordinator: Ms. Andrika Morant
Email: anm2134@med.cornell.edu
Tel: 212-746-8910

Contact Information:

Web: http://weill.cornell.edu/ctsc/services_and_resources/molecular_core.html
Specialist: Dr. Guoan He
Email: guh2002@med.cornell.edu
Tel: 212-746-6534

3-D Printing Core Lab and Software:

- 3D Doctor
- Sketch up
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- Solid Works
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Contact Information:

Coordinator: Ms. Andrika Morant
Email: anm2134@med.cornell.edu
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Contact Information:

Web: http://weill.cornell.edu/ctsc/services_and_resources/3-d_printing_core.html
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