TRANSLATION TECHNOLOGY

The UCLA-CTSI provides many state of the art technology cores and specialized service cores available to investigators. The technology core described below is available at Lundquist/Harbor-UCLA. Applications for utilization of these resources are reviewed by the Scientific Advisory Committee of the UCLA-CTSI at Lundquist/Harbor-UCLA. Support for investigators using this core is provided through a voucher system. Please contact the UCLA-CTSI office at 310-222-2503.

GUENTHER MOLECULAR BIOLOGY CORE

Description

The Henry L. Guenther Core Molecular Laboratory is located in the Walther P. Martin Research Building at the Lundquist at Harbor-UCLA Medical Center. It supports Lundquist investigators performing morphological, biochemical, cell and molecular biological studies both at cellular and subcellular levels. This core can provide consultation and training services for localization of genes, RNA transcripts and proteins in complex tissues as well as subcellular distribution in tissues. The laboratory houses five types of state-of the art equipment: Two Applied Biosystem StepOne Plus Sequence Detection Systems, one Applied Biosystems 7900HT 384 well real-time quantitative PCR system, two TaqMan PCR platforms (96 well format), one Leica Confocal SP8 platform, two flow cytometers (BD LSR II and FACSymphony A5), as well as Olympus IX83 and Echo microscopes. Guenther Core also has facility for immunohistochemistry studies.

- **Leica Confocal SP8 platform** is capable of at least 4 channel simultaneous acquisition. It has 405 laser (DAPI), 488 multi line lasers, 561 laser and several far-red lasers. It has DIC capability and can do FRET or FRAP applications. Leica is proud of super high sensitivity of their SP8 system.

  Recharge Rates:

Two Hour Minimum	Lundquist Users	Non-Lundquist Users
Assisted Microscopy	$95.00/hour	$105.00/hour
Unassisted Microscopy	$55.00/hour	$65.00/hour

Please contact Ming Gong (mgong@lundquist.org; 310-222-8178) for Confocal training/usages.

- **ABI real-time PCR systems**. Two ABI StepOne Plus systems (96 wells) and one 7900HT ABI detection system (384 wells). Coupled with acquisition of the laser capture instrumentation, the availability of real-time PCR should allow the quantification of low abundance mRNAs in samples derived from either single cells or from small cell clusters.

Recharge Rates:

Recharge	Price:
Assisted Probe and Primer Design	$60.00
One Plate	$20.00 Taq; $30.00 HT
Assisted fee	$10.00 more /plate

Please contact Ming Gong (mgong@lundquist.org; 310-222-8178) for RT-PCR training/usages.

- **BD LSR II, dual-laser (Blue-488nm and Red He-Ne-633 nm) flow cytometer**. Flow cytometry is a powerful tool allowing individual, fluorescently-labeled cells to be detected and analyzed in a high-throughput manner. The LSRII machine is capable of digital (rather than analog) data acquisition, allowing additional parameters to be detected, and more information to be collected on a per-cell basis. Multicolor experiments (standard 6 colors) involving complex compensation calculations are now straightforward, using the FACSDiva software package. This cytometer has been used for an array of different studies by multiple investigators, including immunophenotyping, cell-cycle determination, apoptosis analyses, membrane depolarization studies, protein expression, and pathogen detection.

- **BD FACSymphony A5, Five-laser (UV, Yellow, Violet, Blue-488nm and Red He-Ne-633 nm) flow cytometer**. Flow cytometry is a powerful tool allowing individual, fluorescently-labeled cells to be detected and analyzed in a high-throughput manner. The A5 machine is capable of digital (rather than analog) data acquisition, allowing additional parameters to be detected, and more information to be collected on a per-cell basis. Multicolor experiments (standard 27 colors) involving complex compensation calculations are now straightforward, using the FACSDiva software package

Recharge Rates:

Academic Recharge Rates	Price:
Unassisted Cytometer Acquisition/Analysis	$60 /hr. / LSRII; $80 /hr. for A5
Assisted Cytometer Acquisition/Analysis	$130.00 / hr.

Both of them are available for use by investigators on the Lundquist/Harbor-UCLA campus and for CTSI investigators. Please contact Ming Gong (mgong@lundquist.org; 310-222-8178) for flow cytometer training/usages

- **Immunohistochemistry facility** includes Leica TP1020 tissue processor, Leica EG1150 embedding paraffin and chiller unit; Microm HM 340 E rotary Microtome; Leica CM3050s Cryostat; Leica MZ16 Dissecting Microscope. It also has Zeiss fluorescence microscope equipped with Axiocam color digital camera, Axiovision, Image Pro-Plus software and an advanced computer workstation with graphic accelerators and high storage capacity for image processing. In addition, Immunohistochemistry facility also has Leica Olympus IX83 inverted light and fluorescent Microscope. This inverted microscope equipped with DAPI, FITC and Texas red filters is suitable for observing cultured cells, and live cells transected with fluorescent vectors carrying gene of interest. Leica is located in Room 234 in Liu Building and Olympus IX83 in Room 285 in MRL. Recently, we bought one Echo microscope located in Room 164 in RB1, Echo microscope 2-in-1 (Upright and Inverted) is the world's first hybrid microscopes that can easily convert between either configuration, also equipped with DAPI, FITC and red filters.

Please contact Dr. Lue Yan-he or Ming Gong for the immunohistochemistry facility usage.

Contact Information

Director – John Torday, PhD

Yan-He Lue, MD, 310-222-1889, lue@lundquist.org (for immunohistochemistry)

Ming Gong, 310-222-8178, mgong@lundquist.org; (for other services)