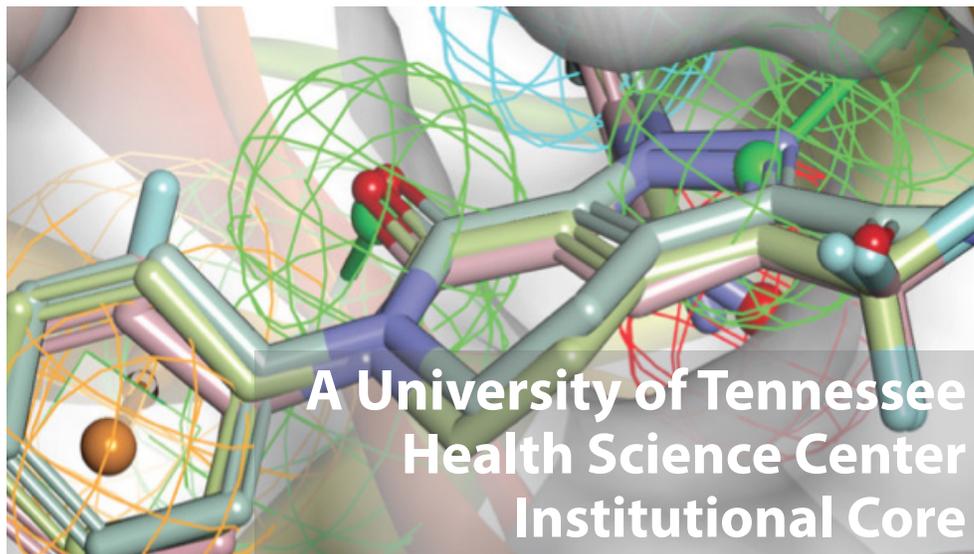


# Medicinal Chemistry (MedChem) Core



The MedChem Core's mission is to accelerate drug development and research at the UTHSC and Memphis area research community by providing consultation and laboratory services in the expertise of medicinal chemistry, synthetic chemistry, and analytical chemistry.

## Introduction & Services

The Medicinal Chemistry (MedChem) Core was established through the Office of the Vice Chancellor for Research in September of 2017. This new institutional core will assist the UTHSC investigators in all aspects of small molecule drug development and research, including, but not limited to, target validation, lead optimization, tool compound custom synthesis, small scale and multi-gram scale synthesis and purification, structural determination, and purity analysis. The core will be supervised directly by Dr. Gabor Tigyi (Chair of the Drug Discovery and Drug Development working group for the OSPR), and financial matters are managed by Dr. Tiffany Seagroves, Associate Vice Chancellor for Research.

## Facilities

The core located at Pharmacy Building with 400 sq ft synthetic chemistry laboratory. This laboratory space is equipped with 33 sq ft fume hoods, balances, heating mantles, stirrers, refrigerators, freezers, Buchi R-300 rotary evaporators with V-300 vacuum pumps, a lab oven, a Labconco Freezone 4.5 Liter lyophilizer, a Buchi Melting Point M-565, and a Reveleris PREP Purification System.

The core has the access to the shared analytical instruments directed by Dr. Wei Li at College of Pharmacy, which include NMRs (a Varian Inova 500 and a Bruker Avance III 400), LC-MS (Waters Xevo G2-S QTOF with waters Acquity UPLC and SCIEX TQ5500 with Shimadzu Nexera XR HPLC), and other essential small analytical instruments, such as IR spectrometers, UV spectrometers, and a polarimeter.

## Services

- Target Validation and Drug Design
- Lead Optimization
- Small Molecule Custom Synthesis
- Scale-Up Synthesis and Purification
- Structural Determination by NMR, MS, Elemental Analysis, et al
- Consultation on any Issue about Chemistry and Chemicals

## Core Director

Dr. Jiawang Liu, the core director, joined the UTHSC in September of 2017. He earned his B.S. degree in Pharmaceutical Science (2002) and his Ph.D. degree in Medicinal Chemistry (2007) from Peking University Health Science Center, College of Pharmaceutical Science, in Beijing, China. He has over 15 years of experience in drug design, synthesis, and screening, with 45 scientific papers published in the peer-reviewed journals.



## UTHSC Research Cores and Shared Resources

UTHSC Institutional Cores are dedicated to the success of your project. We serve the UTHSC research community by providing access to state-of-the-art equipment and to expert consultation services.

<http://www.uthsc.edu/research/institutional-cores/index.php>

## CORE INFORMATION

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