



PharmacoAnalytics Program

<https://www.pharmacy.pitt.edu/programs/grad/pharmacoanalytics.php>

University of Pittsburgh



University of
Pittsburgh | School of
Pharmacy

Graduate Programs



Pharmacometrics

Systems Pharmacology

(PSP)

Specialization in PharmacoAnalytics Track

www.pharmacy.pitt.edu/programs/grad/psp.php

www.CBLigand.org/CCGS

www.CDARcenter.org



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Pharmacometrics

Systems Pharmacology

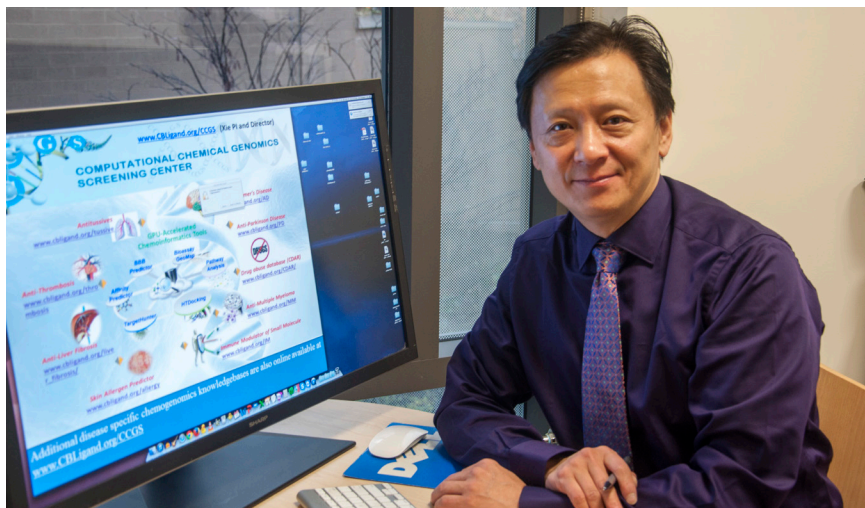
(PSP)

Specialization in PharmacoAnalytics Track

The University of Pittsburgh School of Pharmacy

<http://www.pharmacy.pitt.edu/programs/grad/psp.php>

https://www.cbligand.org/CCGS/PSP/PSP_page.html



PSP Program Director Xiang-Qun (Sean) Xie, MD, PhD, EMBA
Associate Dean for PharmacoAnalytics; Director Computational
Chemical Genomics Screening Center and National Center of
Excellence for Computational Drug Abuse Research;
Director of Pharmacometrics & System Pharmacology

Pharmacometrics and Systems Pharmacology (PSP) is an interdisciplinary science to study drug actions and rational design, discovery and development of new drugs through multitype-multiscale modeling and simulations **“mechanism-driven”**, as well as data analytics **“data-driven”**. The PSP track is a leading education and training track of pharmacometrics and computational systems pharmacology PharmacoAnalytics program.

Education Goals

- Develop broad knowledge on pharmacometrics and systems pharmacology
- Develop strong computational modeling and simulation expertise to be able to proficiently use two mainstream software packages, NONMEM and SIMCYP to conduct both population PK/PD and PBPK modeling/simulation
- Acquire skills to use software to conduct network analysis
- Proficiently use R and/or Python as tools for PSP studies and research
- Gain systematic training to become a pharmaceutical professional in either academia or industry

The mission of the PSP track is to train the next generation of pharmaceutical professionals dedicated to developing novel drugs and improving health outcomes through precision and personalized medicine.

PSP Education

The established Pharmacometrics and Systems Pharmacology (PSP) program track at PITT focuses on applying pharmacometrics and computational systems pharmacology techniques to advance “Big Data” computing preclinical and clinical PharmacoAnalytics research.

The established Pharmacometrics and Systems Pharmacology specialization focuses on applying modeling and computational techniques to advance the use of “Big Data” computing in the discovery and development of new drugs as well as improved use of existing medications.

Individuals will:

- Acquire knowledge and gain hands-on experience of applying PSP to advance drug discovery
- Develop strong computational modeling and simulation expertise for conducting PSP research
- Receive systematic training to become a pharmaceutical professional working in either academia or pharmaceutical industry

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Why PITT?

University of Pittsburgh

The University of Pittsburgh is one of the world's foremost research institutions (**Ranked 45th Best Global Universities in 2022 by US News**). University of Pittsburgh fosters multidisciplinary approaches and rigorous scientific training – providing an ideal environment for growth as a professional in academia or industry. Pitt attracts and retains preeminent researchers while maintaining a culture that promotes research in diverse areas.

The School of Pharmacy

The University of Pittsburgh School of Pharmacy has one of the best pharmacy programs (**Ranked 13th in 2020 by US News**). It provides versatile educational programs at both the MS and PhD/PharmD levels. The School also hosts two innovation computing centers: Computational Chemical Genomics Screening Center (CCGS) and National Center of Excellence for Computational Drug Abuse Research (CDAR) researchers while maintaining a culture that promotes research in diverse areas.

CCGS and CDAR Centers Research

We are applying sophisticated computational techniques, such as network analysis, multitype and multiscale modeling simulations, and machine learning to study drug actions, and to rationally design new drugs.

More details:

www.CBLigand.org/CCGS

and

www.CDARcenter.org/CDAR

Apply Now

- Go to: http://www.pharmacy.pitt.edu/programs/grad/ms_thesis.php
- Login
- Complete basic information and faculty mentor preference
- Within the first line of your required essay indicate your interest in the Pharmacometrics and Systems Pharmacology (PSP) program

More Information:

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PharmacoAnalytics Faculty and Graduate Students