



# Research on drug action mechanism and prediction of drug-drug interaction based on network pharmacology and artificial intelligence

2022.2.19

# INTRODUCTION



Jun Liao is an associate professor, graduate supervisor, visiting scholar of the University of Michigan School of pharmacy, current director of the High-Performance Computing Center of China Pharmaceutical University.

And mainly engaged in network pharmacology of traditional Chinese medicine, pharmaceutical informatics, bioinformatics, clinical pharmacy. He is committed to applying deep learning to adverse drug reactions and clinical drug interactions, and has accumulated rich knowledge and experience in the application of artificial intelligence in medical big data.

# LAB INTRODUCTION

## Research direction

- Applying network pharmacology for high throughput omics data analysis, computer virtual computing and network database retrieval. Furthermore, based on the theory of systems biology, the network analysis of biological system is carried out to predict drug targets and improve the efficiency of drug discovery.
- Predicting of drug-drug interactions using machine learning support vector machines using similarity , extracting drug-drug interaction via hybrid neural networks on biomedical literature, extracting Adverse Drug Reactions-related entities from free-text section of Chinese Adverse Drug Event Reports.
- Using big data processing and statistical methods to explore the impact of meteorological and pollution conditions on clinical common chronic illness, so as to provide scientific basis for disease prevention and control.

# LAB INTRODUCTION



We are family  
~ ~ ~ /// (^v^ ) ¥¥  
¥ ~ ~ ~