No. 2021-8

School of Life Sciences
Seminar Series

Thursday
4:00 PM
20 May

Online Seminar
Zoom ID 315 451 8934 (Password: 101320)

Artificial Intelligence and Systems Biology for Drug Discovery and Development

연사 류재용 교수

소속 덕성여자대학교

Host 이선재 교수

언어: 한국어

학력

2018 한국과학기술원 시스템생물학 박사
2013 광주과학기술원 시스템생물학 석사
2011 숭실대학교 생명정보학 학사

경력

2021.03 - Now 덕성여자대학교 바이오공학전공 조교수
2018.12 - 2021 한국화학연구원 정보융합신약연구센터 선임연구원
2018.02 - 2018 한국과학기술원 생물정보연구센터 박사후과정

Abstract

The drug discovery process includes identification of drug targets, screening of hit compounds, hit-to-lead, and lead optimization. These stages involve various scientific disciplines, including biology, chemistry, pharmacology, and computational science. The drug discovery process is slow, expensive, and complex and often relies on trial-and-error methods. Computational approaches, such as artificial intelligence (AI) and systems biology, have been employed to effectively accelerate the drug discovery process. In this seminar, I will focus on AI-assisted computational methods applied to the drug discovery and development process with case studies such as cardiotoxicity, metabolic stability, lead optimization, drug interaction, and drug repurposing. Also, I will briefly introduce the systems biology-based strategies used for drug target identification.