

강의개요

Chemoinformatics

본 강의에서는 생물학이나 생물정보학 전공자들이 약물이나 소분자 정보의 활용 과정에 필요한 기초 이론, 지식 및 관련 데이터베이스 정보를 전달하는 것을 목표로 한다. 화합물 데이터베이스 종류 및 DB 내에서 활용할 수 있는 정보의 가공 방법 등을 간단히 소개하며, 추후 기계학습 등에 활용할 수 있도록 분자 구조를 다차원 수치 벡터로 변환하는 기법 등을 다룬다.

강의는 다음의 내용을 포함한다:

- Representation of chemical compounds
- File formats in chemoinformatics
- Chemical databases
- Bioassay databases
- Numerical representation
- Molecular fingerprints
- Hadoop/Spark Programming

* 강의 난이도: 초급

* 강의: 이민호 교수 (동국대학교 생명과학과)

Curriculum Vitae

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Research interest : Precision medicine

Educational Experience

2005 B.S. Dept. of BioSystems, KAIST
2013 Ph.D. Dept. of Bio and Brain Engineering, KAIST

Professional Experience

2013-2014 Post Doc, Information & Electronics Research Institute, KAIST
2014-2016 Assistant professor, Dept. of Biological Sciences, Sangji University
2016-2020 Research assistant professor, Catholic Precision Medicine Research Center, College of Medicine, Catholic University of Korea
2020- Assistant Professor, Dept. of Life Science, Dongguk University

Selected Publications (5 maximum)

1. Lee K. et al., Utilizing random Forest QSAR models with optimized parameters for target identification and its application to target-fishing server, BMC Bioinformatics, 2017
2. Lee M. et al., Genomic structures of dysplastic nodule and concurrent hepatocellular carcinoma, Human pathology, 2018
3. Lee M. et al., Whole-exome sequencing reveals differences between nail apparatus melanoma and acral melanoma, Journal of the American Academy of Dermatology, 2018
4. Lee M. et al., Circulating microRNA expression levels associated with Internet gaming disorder, Frontiers in psychiatry, 2018
5. Lee M. et al., A novel loci of the HR gene in Marie-Unna hereditary hypotrichosis using whole-exome sequencing, Indian Journal of Dermatology, Venereology, and Leprology, 2020