CH-332

Medicinal chemistry

Goun Elena

Cursus	Sem.	Type
Chemistry	BA6	Opt.
HES - CGC	E	Opt.

Language of teaching	English
Credits	2
Session	Summer
Semester	Spring
Exam	Written
Workload	60h
Weeks	14
Hours	**2 weekly**
Courses	2 weekly
Number of positions	

Summary

The course tends to provide fondamentals to the following question: why and how a chemical compounds become a drug?

Content

The identification of hit compounds and their transformation to lead compounds with pharmacodynamic and pharmacokinetic properties that have to be optimized are the main subjects of the course.

Discussed aspects:

- Physicochemical and structural properties relevant to medicinal chemistry: ionisation, solubility, lipophilicity, conformation and configuration, stereoelectronic properties, intermolecular interaction forces, pharmacophore, molecular modeling, drug design, SAR, QSAR, linear and multilinear relations.

- Natural products as source of hit compounds.

- Drug metabolism: activation, inactivation, detoxifica-tion, toxification, enzyme catalysis, biochemical reaction mecanisms, enzyme induction and inhibition, pharmacogenetics, drug interactions.

- Combinatorial chemistry of focalized libraries of chemical compounds.