

Retrosynthesis - synthon approach towards the synthesis of biologically active molecules

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The aim of this course is to introduce synthon approach for planning synthesis of organic molecules. This approach is analytical: it starts with the molecule we want to make (the target molecule) which is then broken down by a series of disconnections into possible starting materials. During the course, the retrosynthetic methods are shown on simple as well as on more complicated structures, preferably on biologically active molecules.

1. The disconnection approach. Introduction. Basic principles. Transformations.
2. Synthons. Umpolung. Basic principles to control organic synthesis.
3. C-X disconnections. The way to prepare mono- and difunctional compounds.
4. C-C disconnections. Building skeleton of a molecule.
5. Disconnecting aromatic compounds. Regioselectivity control.
6. Alkenes and alkynes. Stereochemistry control.
7. Two group disconnections – the way towards more complex structures.
9. Optimizing synthesis of acyclic compounds.
10. Strategy of ring synthesis.
11. Synthesis of heterocyclic and heteroaromatic compounds.
12. Towards natural compounds synthesis.

Cours n°	Jour	Horaire	Salle
1	Mardi 6/10	8:30 – 10:00	B203
2	Mercredi 7/10	8:30 – 10:00	B203
3	Vendredi 9/10	8:30 – 10:00	B203
4	Lundi 12/10	8:30 – 10:00	B203
5	Mercredi 14/10	8:30 – 10:00	B203
6	Vendredi 16/10	8:30 – 10:00	B203
7	Mardi 10/11	16:15 – 17:45	B203
8	Jeudi 12/11	16:15 – 17:45	B203
9	Vendredi 13/11	14:00 – 15:30	B203
10	Lundi 16/11	8:30 – 10:00	B203
11	Mercredi 18/11	8:30 – 10:00	B203
12	Jeudi 19/11	8:30 – 10:00	B203