

Bioactive molecules

Special Subjects
Elective 2 credit

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1. Course Description

In this course, isolation, biosynthesis, and modes of action of bioactive molecules from a variety of organisms are studied. Skills obtained by this class are related to DP1 and DP2.

2. Course Objectives

The aim of this course is to obtain information for studying bioactive molecules at a molecular level.

3. Grading Policy

Evaluated by report 50% and original paper reading 50%.

4. Textbook and Reference

Textbook

Printed materials and original papers are distributed.

5. Requirements(Assignments)

nothing in particular

6. Note

7. Schedule

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| [1] | Learn about classification and study method of bioactive molecules. |
| [2] | Learn about biosynthesis of poliketides. |
| [3] | Learn about biosynthesis of terpenes. |
| [4] | Learn about biosynthesis of phenylpropanoids and flavonoids. |
| [5] | Learn about biosynthesis of sugars and peptides. |
| [6] | Learn about methods for studying biosynthesis. |
| [7] | Learn about molecules with bioactivity toward plants |
| [8] | Learn about hormones and pheromones of insects and molecules with bioactivity toward insects |
| [9] | Learn about signal molecules in microbes and molecules with bioactivity toward microbes. |
| [10] | Learn about toxic natural products. |
| [11] | Read an original paper concerning isolation and structural determination of a bioactive compound. |
| [12] | Read an original paper concerning biosynthesis of a bioactive compound. |
| [13] | Read an original paper concerning biosynthetic genes of a bioactive compound. |
| [14] | Read an original paper concerning determination of a target molecule of a bioactive compound. |
| [15] | Read an original paper concerning a mode of action of a bioactive compound. |