

# 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

- [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.