科目ナンバリング	U-LAS14 20059 SE68				
授業科目名<英訳>	Biological Sciences through Scientific Articles II-E2 Biological Sciences through Scientific Articles II-E2			担当者所属職名・氏名	理学研究科　准教授　TAKENAKA, Mizuki
群	自然科学科目群	分野(分類)	生物学(各論)	使用言語	英語
旧群	B群	単位数	2単位	週コマ数	1コマ	授業形態	ゼミナール（対面授業科目）
開講年度・開講期	2026・後期	曜時限	火5	配当学年	主として1・2回生	対象学生	全学向

[授業の概要・目的]

Chloroplasts and mitochondria are essential organelles for generating energy in plants. It is very important for plants to control and regulate their functions according to their developmental stage and environmental conditions. In this seminar, we will read several papers in English, mainly on the regulation of chloroplasts and mitochondria in plants. A deep understanding of their contents is expected. If necessary, supporting information such as scientific background, history, and experimental methods will be provided. Materials used in the seminar will differ from those used in the first semester.

【内容説明】葉緑体とミトコンドリアは、独自のゲノムをもつ細胞内小器官で、植物のエネルギー生成に不可欠である。植物にとって、発生段階や環境条件に応じてその機能を制御・調節することは、非常に重要である。本セミナーでは、葉緑体とミトコンドリアの機能制御に関する論文を中心に、英語で書かれた論文を読み解く。最終的に、その内容を深く理解することが期待される。各授業では必要に応じて、その科学的背景、歴史、実験方法などの補足情報を提供する。

[到達目標]

Students will learn how to read scientific reviews, essays, and articles.
To grasp the essence of the article and summarize it efficiently.
To find interesting points in scientific articles.
To find complementary articles if necessary.
To read articles critically and purposefully.
Students will understand the background of chloroplast and mitochondria in plants.

[授業計画と内容]

1) In the first week, I will give an instruction of the seminar course. I will discuss an article to show the style of presentation. Then I provide an article on chloroplasts and mitochondria in plants.

2) Brief lecture on the background knowledge of chloroplast and plant mitochondria.

3)-14) Each student prepares a presentation about the article with my support if necessary and presents it at the seminar in turn. Other students are expected to actively participate in the discussion. Complementary information for the article will be provided as needed. We will read 4-5 articles in a semester.

15) I will provide a course summary for the feedback session.

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Biological Sciences through Scientific Articles II-E2(2)

[履修要件]

This course is open to all students, BUT it is recommended that students have at least a high school "basic biology" level of knowledge.

[成績評価の方法・観点]

Class attendance and active participation (70%), presentation following questions and answer session (30%).

[教科書]

授業中に指示する

Several recently published biological articles (especially on chloroplasts and mitochondria) will be provided as candidates at the first lesson. We will read 4-5 articles in a semester.

[授業外学修（予習・復習）等]

Students should read the provided article in advance.

[その他（オフィスアワー等）]

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Any questions and requests are welcome by prior arrangements via E-mail.

[主要授業科目（学部・学科名）]

理学部