科目ナンバリング	U-LAS70 10002 SE50						
授業科目名<英訳>	ILAS Seminar-E2 :Decoding the Fundamentals of Cancer Biology（がんの生物学） ILAS Seminar-E2 :Decoding the Fundamentals of Cancer Biology			担当者所属職名・氏名	医学研究科　教授　THUMKEO, Dean		
群	少人数群	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・前期	受講定員(1回生定員)	9 (9) 人	配当学年	主として1回生	対象学生	全学向
曜時限	火5	教室	共北38			使用言語	英語
キーワード	Human Diseases / Medicine / Immunology / Cancer / Biomedical Sciences						

[授業の概要・目的]

This ILAS seminar is designed to provide freshmen undergraduate students who are interested in cancer, a brief introduction to biology of cancer and the current therapeutics. Students will start to learn from this seminar about the introduction of molecualr and cellular biology, and then subsequently the biology principles of cancer. Moreover, recent topics on cancer immunotherapy will also be discussed in this seminar. Finally, students will conduct a presentation on their selected paper and discuss about the current and future therapeutics.Also noted that language that is accessible to students without a medical background will be used in this seminar to help their understanding.

[到達目標]

By participating in this ILAS Seminar, students will gain fundamental knowledge of the current understanding of human cancer.

[授業計画と内容]

The seminar comprises interactive lectures, reading circles, and student presentations.

Introduction
1. Central Dogma & basic cell biology
2. Cell cycle and chromatin architecture
3. gene expression
4. The nature of cancer
5. Oncogenes 1
6. Oncogenes 2
7. Ras/Tumor suppressor gene 1: pRb and control of cell cycle
8 Tumor suppressor gene 2: p53 and control of cell cycle
9. Tumor microenvironment and angiogenesis
10. Cancer immunology 1
11. Cancer immunology 2
12. Cancer immunotherapy 1
13. Cancer immunotherapy 2
14. Summary & Presentation
15. Feedback

Note: The schedule is subject to adjustments based on the number of students and specific needs of the class.

ILAS Seminar-E2 :Decoding the Fundamentals of Cancer Biology（がんの生物学）(2)へ続く↓↓↓

ILAS Seminar-E2 :Decoding the Fundamentals of Cancer Biology（がんの生物学）(2)

[履修要件]

特になし

[成績評価の方法・観点]

Attendance and Active participation to the lectures (60%)
Quality of student presentations and discussions (30%)
A report (10%)

[教科書]

Handouts and reading materials will be provided when necessary.

[参考書等]

（参考書）
Robert Weinberg 『the biology of cancer, 3rd edition』（GARLAND Science, 2023）ISBN:978-0-393-88766-2

[授業外学修（予習・復習）等]

I recommend students to confirm the handouts for each lecture and the relevant reference textbook to learn about the lecture content in advance of the class. Handouts for each lecture will be uploaded on LMS few days before each class.

[その他（オフィスアワー等）]

Consultation via email or online meetings such as Zoom is possible. For those students who prefer to discuss directly with the instructor, please arrange appointments by email in advance.

[主要授業科目（学部・学科名）]