

科目ナンバリング		U-LAS70 10002 SE50					
授業科目名 <英訳>	ILAS Seminar-E2 :Introduction to Human Genetics and Genetic Disease (人類遺伝学と遺伝病入門) ILAS Seminar-E2 :Introduction to Human Genetics and Genetic Disease			担当者所属 職名・氏名	医学研究科 講師 Marco,Marques Candeias		
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	2025・前期	受講定員 (1回生定員)	15 (15) 人	配当学年	主として1回生	対象学生	全学向
曜時限	水5	教室	1共04			使用言語	英語
キーワード	Human Genetics / Genetic Disorders / Cancer Genetics / Genetics Research / Molecular Therapy						
【授業の概要・目的】							
An overview of human genetic disorders and how current research is creating new treatments. Topics include: single gene disorders, multifactorial disorders; cancer genetics; identification and analysis of human disease genes. Students will learn from recent research articles as well as from a recent text book on human genetics. After learning about the several subjects, the students will present recent research in class and active discussion will be encouraged.							
【到達目標】							
The classes will be interactive. Recent exciting research discoveries about human genetics and genetic disease will be introduced and discussed. The students will learn about gene structure and function, mutations and diversity, inheritance, detection and treatment.							
【授業計画と内容】							
<p>The following topics will be viewed during a total of 13 classes in the classroom:</p> <ol style="list-style-type: none"> 1. The Human Genome: Gene Structure and Function 2. Human Genetic Diversity: Polymorphism or mutation? 3. The Chromosomal and Genomic Basis of Disease: Disorders of the Autosomes and Sex Chromosomes 4. Single-Gene Inheritance 5. Complex Inheritance (known and unknown molecular mechanisms) of Common Multifactorial Disorders 6. Genetic Variation in Populations 7. Identifying the Genetic Basis for Human Disease 8. The Molecular, Biochemical, and Cellular Basis of Genetic Disease 9. The Treatment of Genetic Disease 10. Developmental Genetics and Birth Defects 11. Cancer Genetics <p>One class will be in the laboratory to observe first-hand the power of gene mutations on human disease, in particular cancer.</p> <p>(Total: 14 classes and 1 feedback)</p>							
<div style="text-align: right;">ILAS Seminar-E2 :Introduction to Human Genetics and Genetic Disease (人類遺伝学と遺伝病入門) (2)へ続く</div>							

【履修要件】

特になし

【成績評価の方法・観点】

Evaluation will be based on active participation and small assignments (~20 %), group presentations (~30%) and quizzes/tests (~50 %). Those who are absent more than four times will not be credited.

【教科書】

Robert L. Nussbaum, Roderick R. McInnes, Huntington F Willard 『Thompson & Thompson Genetics in Medicine』 (Elsevier Health Sciences) ISBN:0323392067, 9780323392068

【授業外学修（予習・復習）等】

Some time will be necessary weekly to prepare for the class. Handouts will be available to help with the preparation. During the assignment weeks extra time will be necessary in order to prepare for the presentation in class.

【その他（オフィスアワー等）】

Questions and discussions during class are highly encouraged.
Questions and discussions will also be addressed, happily, any other time, even outside the official office hours.