2025年度大学院共通科目　共通基礎科目・特論（コア講義）概要
2025　General Basic Subjects （Core Lectures）　Outline

講義番号	講義題目	担当教員（分野）	内　　容
1	Molecular and cellular biology of neuronal circuit formation in the mammalian brain	Mitsuharu Endo, Cell Physiology （細胞生理学）	I will provide an overview of neurogenesis, axon guidance, and synaptogenesis in the developing brains. This lecture will help you to understand how neuronal circuits are properly formed in the mammalian brains, and what cell types and molecules are involved in their regulation.
2	The Co-evolution of HSC research, Immunology, and Single-Cell Technologies	Masanori Miyanishi, Cellular Medical Sciences （細胞医科学）	In this lectre, I will introduce the hematopoietic system, focusing on hematopoietic stem cells. I will also discuss how analytical technologies and advances in immunology have contributed to our understanding of this system.
3	Foundations and Current Advances in Neuropsychopharmacology	Shinohara Ryota, Pharmacology （薬理学）	This lecture offers an overview of the foundations and recent advances in neuropsychopharmacology, with a particular emphasis on the neurobiology of stress and depression, as well as the mechanisms of action of antidepressants.
4	Immunohistochemistry– its benefits and drawbacks.	Tomoo Itoh, Diagnostic Pathology （病理診断学）	Immunohisotchemisty is an essential method for diagnostic and research activities. Approproated knowledge of this technique is required. In this lecture, the importance and pitfalls of IHC will be introduced.
5	Introduction to Virology	Ikuo Shoji, Infectious Disease Control （感染制御学分野）	The general basics and the current topics of Virology will be lectured. I will give you the basic knowledge of virus structre, virus life cycle and virus propagation. Then I will discuss the history of basic research on hepatitis C virus.
6	Drinking and Brain injury – why does head trauma after drinking result in poor prognosis?	Ryuichi Katada, Legal Medicine （法医学）	Alcohol is one of the world's most popular and socially-accepted forms of drugs. However, alcohol affects several health problems including central nervous system, and increases death rate. In this lecture, I am going to deliver the presentation about alcohol and brain edema pathology.
7	Introduction to Stem Cell Biology and Medicine	Takashi Aoi, Stem cell medicine （幹細胞医学）	This lecture will introduce basics of stem cell biology and medicine, including stories about induced pluripotent stem (iPS) cells.
8	Real world data driven hypothesis and solution by bioresources.	Hiroshi Matsuoka, Yoshinori Nakamura, Integrated Analyses of Bioresource and Health Care （バイオリソース・ヘルスケア統合解析科学）	This lecture will introduce how experimental data-driven hypotheses could be translated into clinical applications using bioresources, with case studies on chronic inflammation, biobanks and a data-linkage platform.