環境遺伝医学
EPIGENETIC MEDICINE

General Description of the Department and the Course:
The genetic causes (mutation) of various diseases have recently been discovered. However, several lines of evidence indicate that epigenetic mechanisms (factors modulating genomic conformations) have also crucial effects on the diseases. In this sense, we conduct research to clarify the pathogenesis of neurodevelopmental and mental diseases through the epigenetic mechanism affected by various environmental factors.

FACULTY MEMBER (Areas of Research):
Professor: Takeo Kubota (Medical genetics, pediatrics, child neurology)
Associate professor: Kaoru Nagai (Neuroscience, Biochemistry)
Assistant Professor (internal): Takae Hirasawa (Neurochemistry)
Research Associate: Kazushi Endo (Environmental medicine)
Research Associate: Kunio Miyake (Neuroscience)
Administrative Official: Emi Okazaki

EDUCATION:
We give lectures in new fields of medicine such as medical genetics and medical informatics as well as conventional hygiene in order to foster future doctors with broad perspectives.

RESEARCH THEMES:
(1) Identify autism genes using genetic and epigenetic approaches.
(2) Discover genetic and epigenetic differences between identical twins.
(3) Assess epigenetic changes related to acquired neurodevelopmental diseases caused by social-environmental factors.
(4) Screen for natural products for preventing neurodegenerative diseases.
(5) Investigate sugar chains in the nervous system.
(6) Analyze glial cell functions on neurodevelopment and neurodegeneration.