

Lecture Series “Riron” : C4 Reproductive and Developmental Medicine

**Subject Code 20130
(Elective: 2 credits)**

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【Objectives】

The lecture of “Reproductive and developmental medicine” aims to understand followings: (1) Basic knowledge for physiology and pathology of human fertilization and pregnancy. (2) medical interventions before and during pregnancy, and social issues related to these interventions. (3) Basic knowledge for physiology and pathology of development and growth of man. (4) Social problems related to child health. (5) Basic knowledge for disorders which affects children including genetic diseases.

【Content Description】

This class will introduce the most recent and important progress in the field of reproductive and developmental medicine. The lecture related to pregnancy and delivery will discuss medical and social issues in addition to the physiology of reproductive system. Maturation of eggs is the important step for fertilization, and function of placenta is another important factor for normal development of fetus. We will discuss biological and medical aspect of the reproductive system, and social and ethical problems. The ethical problems of assisted fertilization including in vitro fertilization, ICSI (Intra Cytoplasmic Sperm Injection) , oocyte donation , cryopreservation of embryos, cryopreservation of sperm will be discussed.

The class for neonatal medicine, we introduce principal physiology of newborn infants and various pathological conditions of this period. The participant will learn many different disorders. One of the important topic of this course is normal development of brain function during childhood. The normal development of young brain is supported by surrounding environment of children which included social conditions. We will discuss the social problems which affect healthy development of children in recent years.

【Keywords】

development medicine, pregnancy, fertilization, germ cells, placenta, premature baby, assisted fertilization, ethics, pediatrics, genetic disorders, inborn errors of metabolism, muscle dystrophy, allergic disorders, school phobia, sleep disorders

【Class Style】

Power point presentation, report.

【textbooks】 not specified.

【Office hour】 8:30AM~5:30 PM

【Evaluation for Grades and Credits】

Grading will be based on active class participation, paper summaries and the final report.

【Lecture Schedule】

The sessions marked with "e" are under preparation of e-learning contents. In some cases, the session that is not marked with "e" will be done by utilizing e-learning system, as soon as the e-learning contents are ready for use. Therefore, you must check the updated syllabus cited on the home page of the Graduate School of Medical Sciences, Kumamoto University to check the current status of the session before you take a session. If you cannot obtain enough information from the home page, please make contact with the instructors of the sessions.

There are six types of e-learning, those marked with "eE0", "eEL", "eJ0", "eJL", "eEJ-0" and "eEJ-L". To know the meanings of these six markings and to learn how to use e-learning system, please see the section explaining about the e-learning system in this syllabus.

Session	Date & Time	Instructors	Topics
1	Oct15(Thur) 6 th Period	Fumio Endo	Inborn errors of metabolism (1)
2	Oct22(Thur) 6 th Period	Fumio Endo	Inborn errors of metabolism (2)
3	Oct29(Thur) 6 th Period	Kimitoshi Nakamura	Obesity in childhood
4	Nov5(Thur) 6 th Period	Hitoshi Nakazato	Urine abnormality and hereditary nephropathy
5	Nov12(Thur) 6 th Period	Hiroshi Mitsubuchi	Etiology, Pathophysiology and Treatment of premature infants
6	Nov19(Thur) 6 th Period	Hidetaka Katabuchi	Placental physiology and pathology
7	Nov26(Thur) 6 th Period	Takashi Ohba	Pathogenesis, treatments and prevention of preterm labor
8	Dec3(Thur) 6 th Period	Takashi Ohba	Prenatal diagnosis
9	Dec10(Thur) 6 th Period	Takashi Ohba	Physiology of oocyte and ovarian follicular development
10	Dec17(Thur) 6 th Period	Yoshinori Okamura	Assisted reproduction update
11	Dec24(Thur) 6 th Period	Sigemi Kimura	Knowledge from various muscular dystrophy patients
12	Jan7(Thur) 6 th Period	Sigemi Kimura	Analysis of muscular dystrophy based on molecular biology
13 eJ-O	Jan14(Thur) 6 th Period	Tomoaki Matsumoto	Mitigation of the allergic action of foods with electrical energy
14	Jan21(Thur) 6 th Period	Takako Jodoi	Sleep and a cerebral function development
15	Jan28(Thur) 6 th Period	Akemi Tomoda	Neurobiological and behavioral consequences of exposure to childhood traumatic stress and preliminary evidence for sensitive periods in the effect of childhood abuse on regional brain development.