

Lecture Series "Riron": Advanced therapeutics**Subject Code****(Elective: 2 credits)****Course Director** : Yutaka Sasaki (Gastroenterology & Hepatology TEL: 373-5146)

sasakiy@kumamoto-u.ac.jp

Instructors :

Hirotsugu Kohrogi (Respiratory Medicine TEL: 373-5007 kohrogi@kumamoto-u.ac.jp

Eiji Yumoto (Otolaryngology-Head and Neck Surgery TEL: 373-5251

yu6167@gpo.kumamoto-u.ac.jp

Yukihiro Inomata (Pediatric Surgery TEL: 373-5613)

yino@fc.kuh.kumamoto-u.ac.jp

Masaki Yoshida (Urology TEL: 373-5240)

akkomaki@kumamoto-u.ac.jp

Hironobu Ihn (Dermatology TEL: 373-5230)

ihn-der@kumamoto-u.ac.jp

【Objectives】

Recent advances in molecular biology and medical engineering provide a new era in the treatment of various diseases. In this regard, the molecules, which play central roles in the pathogenesis of chronic inflammation and carcinogenesis, have been identified, leading to the development of molecular targeting therapies in clinical fields. In addition, it has been described how immune systems of the body contribute to pathogenesis of diseases, and immune-modulation has been employed in the clinical setting. Furthermore, organ transplantation, cell transplantation and artificial organs have been introduced to complement organ failures. On the other hand, advances in endoscopic machinery have established endoscopic treatment, and serve as less invasive treatments in early gastric cancer and biliary or pancreatic diseases. This course will focus on progress in treatments and future orientation of medicine.

【Content Description】

Basic concept of molecular targeting and clinical application using antibody, peptide will be reviewed. Because the relation between immune disorders and pathogenesis has been revealed, immune modulation serve as a therapeutic strategy for viral infectious diseases, auto-immune diseases, and cancer. This course provides rationale, current evaluation and problems of immune-modulation therapy. On the other hand, this course will introduce the basic research and progress to the establishment of organ transplantation, cell transplantation and artificial organs, and also focus on the current efficacy and limitations. In addition, progress in endoscopic treatments for gastrointestinal and biliary, pancreatic diseases will be reviewed. Future therapeutic strategies will be also discussed.

【Keywords】

molecular targeting therapy, immune-modulation therapy, organ transplantation, cell transplantation, artificial organ, endoscopic treatment

【Class Style】

Power-point and /or OHP will be used in the lectures, and active participants in the discussion will be encouraged. Extra classes or video lectures are considered for those who are regularly absent for unavoidable reasons.

【Textbooks】 Textbooks are not specified, and handouts will be distributed.

【Recommended Readings】

1) Molecular Cell Biology, sixth edition, by Lodish H, et al. W.H.Freeman, 2008

2)Carithers RL Jr. Liver transplantation. American Association for the Study of Liver Diseases. Liver Transpl 2000 Jan;6 (1):122-35.

【Office Hour】 If you have any questions on topics or schedule of the classes, please contact the instructors listed above.

【Evaluation for Grades and Credits】 Grading will be based on active class participation, paper summaries, and the final report.

【Lecture Schedule】 Please also refer to the timetable shown in the Section 5.

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.	Feb 2(Tue)5 th period	Yutaka Sasaki	Molecular target therapy in gastrointestinal diseases
2.	Feb 5(Fri)5 th period	Yutaka Sasaki	Progress in endoscopic treatment of gastrointestinal diseases
3.	Feb 9 (Tue)5 th period	Yutaka Sasaki	Immune disorders in gastrointestinal & hepatic diseases
4.	Feb 12(Fri)5 th period	Hirotsugu Kohrogi	Progress in diagnosis and treatment of respiratory diseases
5.	Feb 16(Tue)5 th period	Hirotsugu Kohrogi	Topics of allergic respiratory diseases
6.	Feb 19(Fri)5 th period	Hirotsugu Kohrogi	Topics of diagnosis and treatment of lung cancer
7.	Feb 23(Tue)5 th period	Eiji Yumoto	Progress in diagnosis and treatment of dysphagia
8.	Feb 26(Fri)5 th period	Eiji Yumoto	Cochlear implant as the treatment for deafness
9.	Mar 2(Tue)5 th period	Eiji Yumoto	Endoscopic treatment of head and neck diseases
10.	Mar 5(Fri)5 th period	Yukihiro Inomata	Organ transplantation; the past and the present
11.	Mar 9(Tue)5 th period	Yukihiro Inomata	Liver transplantation; basis and clinical application
12.	Mar 12(Fri)5 th period	Masaki Yoshida	Current therapeutic strategy for urogenital cancers
13.	Mar 16(Tue)5 th period	Masaki Yoshida	Endoscopic treatments for urinary diseases
14.	Mar 19(Fri)5 th period	Hironobu Ihn	Molecular mechanisms of autoimmune diseases in skin
15.	Mar 23(Tue)6 th period	Hironobu Ihn	Immune disorders in skin diseases