

## Gastroenterology and Hepatology

### 1. Staffs and Students (April, 2010)

Professor	Mamoru WATANABE
Associate Professor	Naoya SAKAMOTO (Department for Hepatitis Control), Ryuichi OKAMOTO (Department of Advanced Therapeutics in Gastrointestinal Diseases)
Junior Associate Professor	Kiichiro TSUCHIYA, Tetsuya NAKAMURA (Department of Advanced Therapeutics in Gastrointestinal Diseases), Sei KAKINUMA (Department for Hepatitis Control), Makoto NAGANUMA (Department of Advanced Therapeutics in Gastrointestinal Diseases), Akihiro ARAKI (Department of Endoscopic Diagnosis and Therapeutics), Shinya OOKA (Department of Professional Development)
Assistant Professor	Masakazu NAGAHORI, Shinji SUZUKI, Cheng-Hsin AZUMA, Takashi NAGAISHI, Mina NAKAGAWA, Eriko OKADA (Department of Endoscopic Diagnosis and Therapeutics)
Tokunin Assistant Professor	Yasuhiro NEMOTO (GCOE), Megumi FUJITA(April~)
Hospital Staff	Yuki SAKURAI, Toshimitsu FUJII, Yuko OSAJIMA, Junko AKIYAMA(April~), Masayoshi FUKUDA(April~), Kouhei YOSHINO(April~), Kento TAKENAKA(April~)
Medical Fellow	Michio ONIZAWA
Graduate Student	Izumi ONOZUKA, Sea Bong HYUN, Mayumi UEYAMA, Masahiro SUZUKI, Yusuke FUNAOKAKA, Osamu YAMAJI, Shiro YUI, Takako WATANABE, Akiko KITADUME, Tomohiro MIZUTANI, Yoshihito KANO, Kei KIYOHASHI, Sayuri NITTA, Xiu ZHENG, Hiromichi SHIMIZU(April~), Miyako MURAKAWA(April~), Tatsuro MURANO, Eiko OKAMOTO, Naoto TSUGE

### 2. Education Principles

We believe that the central role of clinical departments in the graduate school is to establish basis for the innovative medicine / medical treatment in the next generation. Basic research lead by clinical concepts, and development of novel therapeutics established upon basic research are both critically required to achieve our mission. Therefore, our primary goal is set to train highly educated and experienced clinician-researchers in the field of gastroenterology and hepatology.

In the clinical area, we pursue development and application of highly advanced technologies, including novel endoscopic procedures, for sophisticated diagnosis and treatment of gastrointestinal and liver diseases. In basic research, our principle is to achieve "clinical science", a research evoked from various clinical problems, and also directed to launch innovative therapeutic procedures to the daily clinical practice. Based on these principals, we are running research projects to 1) develop novel therapy for refractory inflammatory bowel diseases, 2) prevent progression of liver failure in chronic hepatitis patients and 3) improve anti-cancer therapy for the treatment of gastrointestinal malignancies, by expanding our distinct basic research findings in the area of mucosal immunology, liver immunology, regenerative medicine and virology, to various clinical settings.

Moreover, we promote both intra- and inter-national exchanges of researchers, and provide good opportunities to study abroad. The final goal of our education is to promote students to become a well-developed clinician-researcher, and also a leading expert in the field of gastroenterology and hepatology.

### 3. Basic Research Projects

- Elucidating the pathophysiology of inflammatory bowel diseases and development of treatment by disease-specific immune-regulation.

- Development of novel therapeutics for inflammatory and allergic diseases based on gut-specific mucosal immune regulation.
- Basic research and clinical application of regenerative medicine in gastrointestinal diseases.
- Analysis of interferon-resistant hepatitis C virus.
- Comprehensive analysis of susceptibility genes for various gastrointestinal diseases.

#### 4. Expert Areas in Clinical Practice

- Immune-regulation based treatment of inflammatory bowel diseases.
- Prevention of chronic hepatitis progression to hepatocellular cancer and liver failure, by virology-based treatment strategy.
- Clinical trial of innovative treatment for hepatocellular cancer.
- Diagnosis and treatment of small intestinal diseases by double-balloon enteroscopy.
- Advanced diagnosis and treatment of colonic diseases by colonoscopy.
- Development of minimally-invasive diagnostic modalities for gastrointestinal diseases (i.e. MR enteroclysis).
- Improved chemotherapy for gastric and pancreatic malignancies.

#### 5. Publications

1. Akiyama J, Okamoto R, Iwasaki M, Zheng X, Yui S, Tsuchiya K, Nakamura T, Watanabe M: Delta-like 1 expression promotes goblet cell differentiation in Notch-inactivated human colonic epithelial cells. **Biochemical and Biophysical Research Communications**. 393: 662- 667, 2010
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3. D'Haens GR, Panaccione R, Higgins PD, Vermeire S, Gassull M, Chowers Y, Hanauer SB, Herfarth H, Hommes DW, Kamm M, Löfberg R, Quary A, Sands B, Sood A, Watermayer G, Lashner B, Lémann M, Plevy S, Reinisch W, Schreiber S, Siegel C, Targan S, Watanabe M, Feagan B, Sandborn WJ, Colombel JF, Travis S: The London Position Statement of the World Congress of Gastroenterology on Biological Therapy for IBD With the European Crohn' s and Colitis Organization: When to Start, When to Stop, Which Drug to Choose, and How to Predict Response? **Am J Gastroenterol** (in press). 2010
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5. Ishige T, Tomomasa T, Takebayashi T, Asakura K, Watanabe M, Suzuki T, Miyazawa R, Arakawa H: Inflammatory bowel disease in children: epidemiological analysis of the nationwide IBD registry in Japan. **J Gastroenterol**. 45: 911- 917, 2010
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9. Kim KJ, Kim KH, Kim HY, Cho HK, Sakamoto N, Cheong JH: Curcumin inhibits hepatitis C virus replication via suppressing the Akt-SREBP-1 pathway. **FEBS Letter**. 584: 707- 712, 2010
10. Kurosaki M, Sakamoto N, Iwasaki M, Sakamoto M, Suzuki Y, Hiramatsu N, Sugauchi F, Yatsushashi H, Izumi N: Pretreatment prediction of response to peginterferon plus ribavirin therapy in genotype 1 chronic hepatitis C using data mining analysis. **J Gastroenterol**. 2010 (Epub ahead of print)
11. Kurosaki M, Tanaka Y, Nishida N, Sakamoto N, Enomoto N, Honda M, Sugiyama M, Matsuura K, Sugauchi F, Asahina Y, Nakagawa M, Watanabe M, Sakamoto M, Maekawa S, Sakai A, Kaneko S, Ito K, Masaki N, Tokunaga K, Izumi N, Mizokami M: Pre-treatment prediction of response to pegylated-interferon plus ribavirin for chronic hepatitis C using genetic polymorphism in IL28B and viral factors. **J Hepatol**. 2010 (Epub ahead of print)

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15. Naganuma M, Watanabe M, Hibi T: Safety and usefulness of balloon endoscopy in Crohn's disease patients with postoperative ileal lesions. **J Crohn's Colitis**. 2010 (Epub ahead of print)
16. Naganuma M, Ichikawa H, Inoue N, Kobayashi T, Okamoto S, Hisamatsu T, Kanai T, Ogata H, Iwao Y, Hibi T: Novel endoscopic activity index is useful for choosing treatment in severe active ulcerative colitis patients. **J Gastroenterol**. 45: 936- 943, 2010
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