**Nephrology**

1. Staffs and Students (April, 2012)

**Professor**
Sei SASAKI

**Associate Professor**
Shinichi UCHIDA, Tatemitsu RAI (Dept. of Blood Purification)
Yumi NODA (Dept. of Chronic Kidney Disease)

**Junior Associate Professor**
Tomokazu OKADO

**Assistant Professor**
Naofumi YUL, Eisei SOHARA (Dept. of Blood Purification)
Katsuyuki OI (Dept. of Blood Purification)

**Project Assistant Professor**
Soichiro IIMORI

**Hospital Staff**
Miyuki SAZUKA, Yoshihito TSUZAKI
Fumiaki ANDO (2012.7~), Yuki YOSHIZAKI (Dept. of Blood Purification, 2012.7~)
Keita KUSAKA (Dept. of Blood Purification, 2012.6~)

**Technician**
Motoko CHIGA

**Secretary**
Asa MURANO, Miki SAKIYAMA, Yukiko ITO

**Graduate Student**
Mai WAKABAYASHI, Hidenori NISHIDA
Muhammad Zakir Hossain Khan, Koichiro SUSU, Kiyoshi ISOB, Takayasu MORI, Yuichi INOU, Daiei TAKAHASHI, Moko ZENIYA, Eriko KIKUCHI, Yuya ARAKI, Yutaro MORI

2. Purpose of Education

The policy of the **Department of Nephrology** is to accomplish trustworthy medicine and to educate excellent academic scientists and nephrologists.

Our department is one of the initial institutes that started the hemodialysis therapy in Japan, and thus, has a long experience of clinical practice of kidney diseases. Through the activities our department has brought up a number of leading nephrologists who contribute to establishing nephrology in Japan and in the world. Academic research is another important mission of our department. Research from bench experiments to clinical studies has been performed to understand the pathogenesis of the diseases and to develop new therapeutic strategies. Especially, our study on “water-electrolyte transport in the kidney and related diseases” is well known worldwide for its originality and high quality. We hope new young scientists and physicians join us for future science and nephrology.

3. Research Subjects

We have been studying renal membrane transporters and channels for more than 20 years. Most of the AQP water channels and CLC chloride channels were cloned in our laboratory in 1990s (*Nature*1993, *PNAS*1994, *JBC*1993&1994, *Neuron*1994, etc) and the physiological roles in vivo have been analyzed by generating the KO mice (*Nature Genet*1999, *PNAS*2006, etc). Recently, we are interested in regulators of transporters and channels (*JCB*2008), and discovered a novel kinase cascade (WK-OSR1/SPAK-NCC) regulating NaCl balance in the body (*Cell Metab* 2007, *Hum Mol Genet* 2010, *JCS* 2011, *PLoS One* 2011). Based on the molecular mechanisms we identified, we hope to find the way to regulate renal transporters and channels.

4. Clinical Services

We are taking care of a variety of kidney diseases including acute kidney injury, chronic kidney disease, blood purification, and renal transplantation. We routinely perform renal biopsy.

5. Publications

**Original Articles**


2. Chang JM, Hwang SJ, Tsukamoto Y, Chen HC. Chronic kidney disease prevention - a challenge for Asian countries:


**Review Articles**


**Books**