

Department of Anesthesiology

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General Summary

The 2011 academic year is the seventh year that the Department of Anesthesiology has been directed by Shoichi Uezono, M.D. The functions of the Department of Anesthesiology are to provide quality patient care, to teach, and to perform research in perioperative medicine, intensive care medicine, and comprehensive pain management. In 2011 we made further advances and great achievements with the support of our faculty, institutional administration, and the Dean of The Jikei University. Below we highlight some of our research achievements in 2011.

Research Activities

Research continues as a growing and important component of the department's activities. The department is committed to enhancing academic productivity and resources by dedicating time to research and granting clinical access to research cases.

The investigators have been successful each year in obtaining peer-reviewed research grants, such as Grants-in-Aid for Scientific Research (*kakenhi*) and contract grants. The department continues to build on the strengths of several outstanding programs: cardiovascular anesthesia, thoracic anesthesia, pediatric anesthesia, regional anesthesia, neuro-anesthesia, obstetric anesthesia, intensive care medicine, and comprehensive pain management. Faculty recruitment is targeted at individuals with demonstrated academic and research activities as well as excellent clinical management and teaching skills. In 2011, the department was able to invite Takahiro Matsumoto, M.D., from Tsukuba University as an assistant professor. Doctor Matsumoto is a nationally recognized expert in teaching medicine, particularly with the aid of simulators. He is expected to promote the quality of our education program for residents and fellows. Doctor Hobo successfully finished a 2-year research fellowship at Wake Forest University in the United States and has rejoined our faculty. Our faculty and residents were both well represented at the Japanese Society of Anesthesiologists' annual meeting in Kobe and the American Society of Anesthesiologists' annual meeting in San Diego, California. In addition, members of the department continue to be invited as visiting professors or guest speakers at national and international meetings. Listed below are the ongoing research projects in which the principal investigators are faculty members of the Department of Anesthesiology.

Doctor Uezono's research focuses have been pulmonary vascular physiology and the

treatment of pulmonary hypertension associated with congenital heart disease. Doctor Hidano and Dr. Uezono retrospectively investigated maternal and neonatal outcomes in pregnant women undergoing cesarean section and found that pulmonary hypertension is a factor predicting maternal cardiac complications. Doctor Taniguchi has been interested in temperature regulation during surgery and its effects on postoperative outcomes, such as shivering. Doctor Uchino continues to be active in clinical research in the intensive care unit and has been extremely productive in the field of acute kidney injury.

Basic science investigations included studies of gene therapy for experimental pulmonary hypertension (Dr. Uezono), studies of the effects of sustained release of intrathecal morphine (Dr. Kondo), mechanisms of anesthetic postconditioning in myocardial mitochondria (Dr. Mio), gene polymorphism of vitamin D receptors in patients after cardiac surgery (Dr. Sanui), in-vivo nanoimaging techniques in cardiac disease (Dr. Terui), and prodrugs of opiates in the treatment of pain (Dr. Yasui).

The appended bibliography of the department shows that a wide range of investigative and scholarly activities were conducted over the past year.

Publications

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