Center for Cell Therapy

1. Staffs and Students (April, 2010)
   Director Tomohiro Morio (Department of Pediatrics)
   Vise Director Michiko Kajiwara (Department of Blood Transfusion Medicine)
   Product manager Norio Shimizu (Division of Virology, Medical Research Institute)
   Quality control manager Michiko Kajiwara (Chief administrator)
   Technicians Shizuko Minegishi, Atsushi Ohyama
   Technicians (From Collaborative Research) Takashi Kosaka
   Clerical Assistant Akiko Hoshikawa, Ayako Tsuji

2. Purpose of Education
   Our center is the first ISO9001:2000(2008)-certified cell processing center in Japan. We provide assistance to prepare standard operation procedure (SOP) and offer on-the-job training for cell processing/manipulating procedures and that for quality assurance at the center.

3. Research Subjects
   1. Development of innovative techniques for quality assurance of cell products
   2. Development of a novel measure for rapid and sensitive detection of multiple pathogens
   3. Clinical study on ex-vivo expanded donor T-cell infusion for patients who underwent hematopoietic stem cell transplantation (HSCT)
   4. Study on ex vivo-activated cord blood T-cells for various conditions post-cord blood stem cell transplantation.
   5. Development of short tandem repeat method as a molecular ID for personal identification
   6. Research on a regeneration system of the cartilage bone from the synovial membrane (Department of Orthopedic Surgery)
   7. Basic research on neuroregeneration and its clinical application (Department of Neurology and Neurological Science)
   8. Development of novel peptide-pulsed dendritic therapy for adult T-cell leukemia (Department of Immunotherapeutics)

4. Clinical Services
   Our center has four independent cell processing rooms (class 10,000 clean rooms) and has received ISO9001:2000(2008) certificate. All the rooms are equipped with a bio-safety cabinet. The hardware as well as software used in our center fulfills all the guidelines that are required for the preparation of cell products of clinical grade.

   The cell products prepared in our centers include
   #1 Ex-vivo expanded T-lymphocytes
   #2 Synovium-derived mesenchymal stem cells
   #3 Bone marrow-derived mesenchymal stem cells
   #4 Processed peripheral blood stem cells

   The center offers our novel detection system for 12 different viruses in rapid and sensitive manner for the doctors in our medical hospital. We also measure virus loads of the detected virus using a real time PCR system. We measured 1,488 samples in year 2010 in total.

5. Publications
   Original articles


