

FY2012

JSPS Core-to-Core Program
Strategic Research Networks-
Research Report

Project No.	22002
Research Theme	Cooperative international framework in TGF- β family signaling
Duration of Project	April 1st, 2010 – March 31st, 2012 (24 months)
Core Institution in Japan	University of Tokyo, Graduate School of Medicine

Implementing Organizations

Country	Japan
Core Institution	The University of Tokyo, Graduate School of Medicine
Co-Chair (name and title)	Kohei MIYAZONO (Professor)
Number of Cooperating Institutions	6
Cooperating Institutions	University of Tsukuba Yamanashi University University of Toyama Showa Pharmaceutical University Tokyo University of Pharmacy and Life Sciences Ehime University

Country	Sweden
Core Institution	Uppsala University, Ludwig Cancer Institute
Co-Chair (name and title)	Carl-HENRIK HELDIN (Director)
Number of Cooperating Institutions	4
Cooperating Institutions	Karolinska Institute Umeå University Lund University The University of Gothenburg
Matching Fund	Funding from Ludwig Institute for Cancer Research

Country	the Netherlands
Core Institution	Leiden University Medical Center
Co-Chair (name and title)	Peter TEN DIJKE (Professor)
Number of Cooperating Institutions	0
Cooperating Institutions	
Matching Fund	Funding from Le Ducq Foundation

Result of Program Implementation

Before we started this JSPS core-to-core program, we had exchanged some senior and young researcher between Japan and Sweden/Netherlands in order to conduct the collaborative research projects. We also had TGF- β meetings in Sweden and the Netherlands at which only a limited number of students were able to participate from Japan. However, since we started this program, the number of exchanged researchers between Japan and Sweden/Netherlands significantly increased, which greatly helped conducting the collaborative research projects. We were also able to send more senior and junior researchers to the TGF- β meeting in the Netherlands. Furthermore, thanks to the support of this program, we held the international symposium on TGF- β family signals (the 2nd JSPS International Symposium on TGF- β family signals) with 100 participants including many of the members of this project.

Achievements in FY2012 (Self Review)

Thanks to this JSPS core-to-core program, the number of exchanged researchers between Japan and Sweden/Netherlands significantly increased, which greatly helped conducting the collaborative research projects. We were also able to send more senior and junior researchers to the TGF- β meeting in the Netherlands. Furthermore, we held the international symposium on TGF- β family (The 2nd JSPS International Symposium on TGF- β family signals) with 100 participants including many of the members of this project. In summary, this program implementation strengthened the cooperative international framework in TGF- β family signaling.

(1) Collaborative research projects

Due to the previous collaborative researches on TGF- β family signaling, we have published 53 scientific articles. In addition, the following collaborative research projects were conducted successfully.

1. ALK-1 in endothelial cells and stem cells: Uppsala University, Karolinska Institute, Leiden University and the University of Tokyo
2. Elucidation of TGF- β -induced transcriptional regulation by ChIP-sequencing: Uppsala University and the University of Tokyo
3. In vivo imaging of TGF- β family signaling: Uppsala University, Leiden University and the University of Tokyo
4. Development of novel therapeutic strategies targeting TGF- β family signals as regulators of tumor microenvironment: Uppsala University, Leiden University and the University of Tokyo

(2) Seminar

We held the following international symposium at which many of the participants of this program attended, presented their works, and collected international information in the research field.

1. JSPS TGF- β Meeting, Leiden University Medical Center, the Netherlands
2. The 2nd JSPS International Symposium on TGF- β family signals, Showa Pharmaceutical University, Japan

(3) Researcher Exchanges

Some of the researchers at the University of Tokyo participated in the International Vascular Biology Meeting in Germany in order to present the results obtained from the collaborative research projects and collect international academic information.

Future Plan (Measures toward Achieving Research Objectives)

(1) Collaborative research projects

The following collaborative research projects will be conducted:

1. ALK-1 in endothelial cells and stem cells: Uppsala University, Karolinska Institute, Leiden University and the University of Tokyo
2. Elucidation of TGF- β -induced transcriptional regulation by ChIP-sequencing: Uppsala University and the University of Tokyo
3. In vivo imaging of TGF- β family signaling: Uppsala University, Leiden University and the University of Tokyo
4. Development of novel therapeutic strategies targeting TGF- β family signals as regulators of tumor microenvironment: Uppsala University, Leiden University and the University of Tokyo

(2) Seminar

The following seminars will be held in FY2013:

1. TGF- β Meeting (May 30th-Jun 1st, 2013) Uppsala, Sweden
2. JSPS TGF- β Workshop for Young Scientists, Tokyo, Japan
3. JSPS International Symposium on TGF- β family signaling (October 28th-30th, 2013) in Ehime, Japan

(3) Researcher Exchanges

Participants of this program will attend at international meetings held in the U.S.A. (FASEB Summer Research Conference) to present their works and collect international information in the research field.