

Project:

JSPS Core-to-Core Project on “Center for Magnetic Resonance Molecular Imaging of In Vivo Redox System”

Japanese Coordinators: Prof. Hideo Utsumi (to 2010) and Prof. Keiji Yasukawa (from 2010), Kyushu University

Description of project

The project was concerned with the development and use of methods for detection and imaging of free radicals in biological samples, with applications in biomedicine. My research group specialises in the development and use of hybrid magnetic resonance imaging (MRI) scanners using a method called Proton Electron Double Resonance Imaging (PEDRI). The teams involved in the Core-to-Core project were a mix of developers of the technology (physicists and engineers such as my research team) and biomedical scientists who were interested in using the technology, especially in redox systems. I found the mix of backgrounds and skills of the people involved in the project to be ideal, resulting in novel and stimulating projects and research meetings.

Departments and institutions involved

The Core-to-Core project was initiated and coordinated at Kyushu University. It involved partners in the UK, USA, Australia, Germany and China. I was the UK coordinator.

How collaboration started

I became involved in the Core-to-Core project through interactions with Professor Utsumi over a number of years. Prior to the JSPS programme we had previously visited each other's laboratories, and had met at international conferences on many occasions. I had no hesitation in accepting when Prof. Utsumi asked me to join the Core-to-Core project as UK coordinator.

Amount of money awarded

N/A – funds were awarded to the Japanese team, who funded the research visits and symposia.

How the matching funds were sourced from your side

Matching funds were sourced through research grants held by me, which were relevant to the topic of the Core-to-Core project.

How participants are benefitting from the scheme

During the Core-to-Core project four young Japanese researchers visited my laboratory, for periods of 1 or 2 months. The researchers gained experience of our PEDRI free radical imaging method, and also attended lectures on MRI Physics at the University of Aberdeen. My research group benefited enormously from these visits, and I know that members of my group have maintained contact with some of the visitors.

Collaborative developments since the project started and plans for the future

I have maintained contact with researchers at Kyushu University, and also with one or two of the Japanese researchers who worked my laboratory. During a trip to Japan in March 2012 I was able to visit Dr. Emiko Sato in Sendai. In September 2012 another researcher from Sendai (Dr. Tada) visited my laboratory for discussions on possible collaborations.

Further applications to JSPS for funding or plans for this

There are no plans for this at the moment.

Dr. Emiko Sato (Tohoku University) and Prof. David Lurie, sampling Japanese curry during Dr. Sato's visit to the University of Aberdeen (November 2010).



Mr. Masahisa Kato (Kyushu University), standing beside an experimental PEDRI free radical scanner at the University of Aberdeen (September 2008).

