

World Premier International Research Center (WPI) Initiative Comments on FY2007 WPI Project Progress by Program Committee

Host Institution	Osaka University	Host Institution Head	Kiyokazu Washida
Research Center	Immunology Frontier Research Center (IFReC)	Center Director	Shizuo Akira

1. Status of overall progress

The Immunology Frontier Research Center (IFReC), Osaka University has gotten off to a smooth start as a WPI center, and is making good headway. IFReC has recruited many outstanding basic scientists in the fields of immunology and imaging as core members including six foreign researchers from US satellite institutions. This is considered as the reflection of strong leadership by the Center Director, Dr. Shizuo Akira. Osaka University is giving the center strong support by providing a budget to build a new research building and helping to establish an administrative office capable of dealing in English with various matters. The Research Institute for Microbial Diseases (RIMD), Osaka University, is also committed to supporting IFReC by providing several facilities such as an animal facility with BSL2 and BSL3 and a cell sorter facility. In addition, IFReC and RIMD will share numerous committees so as to lighten the administrative duties of scientists in IFReC. An IFReC kick-off symposium was successfully held in March 2008 with more than 300 attendees and 21 speakers including six professors from satellite institutions in the U.S.

2. Points that need improvement

- (1) The final goal/outcome of IFReC should be more clearly stated in order to strengthen its appeal to young scientists, researchers from other disciplines, and tax payers. Scientifically, it seems unclear what enigmas in immunology IFReC will try to solve.
- (2) Though it may be early to say at this stage, IFReC seems not to be succeeding in assembling a heterogeneous group of scientists from around the world and from multiple disciplines. IFReC should make a serious effort to meet the WPI objective of creating a research center where first-class immunologists come from all over the world to engage in research for years.
- (3) To achieve the goal mentioned in (2), IFReC will need to be creative in recruiting foreign PIs and postdoctoral fellows. For example, IFReC may request its US satellite institutions to encourage postdoctoral applicants to consider IFReC as an alternative step in their career paths. Organizing IFReC symposia in other countries would be another way to advertise IFReC's activities and to recruit PIs as well as postdoctoral fellows.
- (4) Although the integration of imaging technology into immunology is an attractive approach, it is recommended that IFReC incorporate other new, cutting-edge technologies, such as structural biology, genomics, epigenetics and chemical biology, by recruiting outstanding scientists from those disciplines so as to strengthen IFReC as a genuine World Premier Center for Immunology.
- (5) Along these lines, the current satellite institutions are all specialized in immunology and imaging, which is similar to IFReC. Active cooperation and interaction with institutions specialized in different technologies/disciplines, such as epigenetics and advanced neuro-imaging, should be considered as being more beneficial to the IFReC program.
- (6) From the viewpoint of both the project's initial objective and clinical application of its results, it is advisable that IFReC integrate clinical researchers into its staff.
- (7) As an imperative, the team for developing new imaging techniques needs to be strengthened.
- (8) Under the Administrative Director, Dr. Norio Furushiro, a strong and well-trained support staff needs to be put in place to reduce the administrative duties of Drs. Shizuo Akira and Toshio Yanagida.

3. Others

In addition, the following are some opinions expressed by the program committee members.

- (1) Establishing a special grant system(s) for foreign PIs either by JSPS or overseas funding agencies could be another way to attract excellent foreign PIs, though the WPI program does not obligate a research center to do so.
- (2) Since the center's original rhetoric was that immunology needs new imaging technology, real plans or structures were expected that can interact with either forward-looking physics/engineering departments having imaging interests or with industrial suppliers of such equipment. However, in reality, neither imaging questions nor technology demands seems to be posed, although real immunology advances can be seen.
- (3) Although immunology is an area of research strength in Japan, IFReC appears to be behind schedule. There is concern about the level of activity, attempts to develop new interdisciplinary collaborations, and the number of women and foreign researchers recruited, given that the grant term began in October 2007. WPI funding appears to

have gone to allow existing investigators to continue their research as before, with the addition of a few new tools. Research into imaging does not appear to be supported, while research into the use of imaging is the focus.

- (4) The focus appears to be on furthering Japan's dominance in immunology as opposed to doing something truly innovative and creative along the lines of the WPI initiative especially in terms of global visibility.
- (5) It is not clear how IFReC will be transformational for Osaka University. The members of IFReC must ask themselves quite frequently how IFReC can contribute as a catalyst for transformational change in Osaka University.
- (6) Collaboration with other research institutions (RIKEN and so on) is very remarkable.
- (7) More young Asian researchers should be recruited.
- (8) The extent of "internationalization" is not satisfactory. Foreign PIs should be appointed immediately. Stronger management is needed.
- (9) Actual research appears to be done by the individual PIs' labs. There is no indication of how the research represents a new interdisciplinary approach that differs from that used before the WPI project started. By now, there should have been announcements of new teams of researchers from different disciplines. Note: The transfer of people is not the same as collaboration.
- (10) IFReC needs to develop measures for facilitating the stays of foreign researchers; otherwise, they will not be able to attract sufficient numbers of them.
- (11) It is odd that the (corporate) makers of imaging equipment do not play a part in IFReC. This is an ideal area for university-industry partnership.