

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

Host Institution	Kyoto University	Host Institution Head	Kazuo Oike
Research Center	Institute for Integrated Cell-Material Sciences (iCeMS)	Center Director	Norio Nakatsuji

## 1. Status of overall progress

The Institute for Integrated Cell-Materials Sciences (iCeMS), Kyoto University, was launched under the guidance of the Center Director, Dr. Norio Nakatsuji. He and his team proposed an interdisciplinary research field, spanning biosciences, chemistry, material sciences, and physics, with the key concepts being meso-space and stem cells.

The center's program includes outstanding projects such as on induced pluripotent stem (iPS) cells and porous crystals. In fact, Dr. Yamanaka has succeeded in establishing human iPS, which promises to change the paradigm of related biology and medicine.

It is very appreciable that a Center for iPS Research and Application (CiRA) has been established, and that a new building for the iPS research center will be constructed. Two buildings will also be renovated for the WPI project.

## 2. Points that need improvement

1) As the project proceeds, its milestones need to be stated more clearly. Each research theme in biology, chemistry and physics must be linked to the mission; however, it is still not clear how such linkage will be achieved. Concrete measures must be considered to achieve this linkage.

2) The key to the success of this project will be how effectively the investigators collaborate in establishing this new material-cell science and produce integrated achievements. Specific strategies must be established and shared with the PIs as soon as possible. Without this important step, the whole project risks ending up with just a cluster of outcomes.

3) How CiRA is organized within iCeMS will be critical both in terms of administration and funding. The respective missions of the two programs need to be clarified. As scientific progress on iPS is very rapid, a strategic reorganization of iCeMS might be required within a few years. An organization and management strategy for intellectual properties is also needed, especially in CiRA.

4) The communication strategy is not clear. It is expected that the WPI center will actively and globally communicate with institutes and researchers through multiple methods both on a daily basis, such as communicative webpages, and on a periodic basis, such as symposiums or seminars. Researchers of iCeMS need to communicate constantly using such tools. To facilitate these activities, newsletters and retreats might also be useful.

5) iCeMS should more actively recruit foreign PIs and postdoctoral fellows to work within its center.

## 3. Others

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

1) Concerns were voiced about the WPI director and vice-directors who are performing these roles in parallel with their tenure as professors of other institutes. They should devote their highest efforts to the WPI, including fostering young researchers, especially postdoctoral fellows and graduate students, in iCeMS.

2) The CiRA program is a test case for academic integration amidst global competition on iPS. This is not just an academic matter as the major competitors are in the US. Intellectual property rights, entrepreneurship and competence in this process (vs the US) will be a key criterion and big challenge.

3) Developing more globalized core partners for CiRA is suggested, especially for business development from iPS seeds. This is not an academic matter; the right partners, which may not be available in Japan, are needed.

4) As the major competitors of CiRA are in the US, the center's intellectual property rights strategy has to be compatible with US policy and rules.

5) The presentation made no mention about what in detail is planned for the new and renovated buildings. At this stage, iCeMS should be directly involved in the planning their content – what kind of lab space, etc. There is concern that the timing of the construction may slow down the progress of research at iCeMS, and that iCeMS is missing an important opportunity to build something that will encourage new patterns of collaboration.

6) Need to think ahead to a future when CiRA may become an independent research center.