## **RIKEN BioResource Center**





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# Technology and Development Unit for Knowledge Base of Mouse Phenotype

#### Hiroshi Masuya Unit Leader

- 1. Are the proposed goals appropriate for this Team (Division or Unit)?
- Are these goals meaningful and valuable for the BRC?
   Are the goals of this team in accordance with the BRC's own goal of "facilitating the finest bioresources of the global standard"?

Both a standardized basis for information and the construction of a phenotype database are needed to improve the added value of the resources, and are in great demand from the user side, so this is an appropriate goal. We hope them to keep in mind the viewpoint of contributing to human health during the development of the database.

Are there defined programs or plans to accomplish their goals and to contribute to achieving the BRC's goals?

As the methodology in order to reach the goal, construction of ontologies for phenotype information and experimental procedure, and the establishment of semantic web technology for a phenotype database are reasonable. They should keep the international perspective in mind, and think about developing strategies for usage of the technologies.

2) Are the goals achievable within this Midterm of five years?

The main parts of the plan have already cleared the first stages, and achieving it will not be a problem. However, they need to set goals within a broader perspective, for example, the integration of mouse phenotype and human disease information.

3) Are the goals proposed from the international paint of view? (Does this goal lead to international leadership?)

They are already working within an international consortium, and may be able to take an international initiative depending

on results from now.

## 2. Are the proposed plans adequate to achieve the goals of this Team (Division or Unit)?

1) Are these plans realistic and specific to achieve the goals?

They have already started on the construction of ontology of experimental genetics ontology. This will enable the development of the phenotype database. However they need to investigate user needs more. Furthermore, they need to make the ontology into a more user friendly format for experimental biologists in the future.

2) Are these plans high priority in BRC and critical for the BRC?

This is an essential plan for fundamental research and development for improvement of resource-related information. If we think more about usability of the database, it becomes a higher priority.

3) Do the plans have originality in ideas and technology? (not merely a follow up?)

There is a possibility of making a superior database from existing phenotype databases by the establishment of an ontology and the semantic web. If they examine user needs more closely, more originality and more social usefulness will help them to take a world-leading position.

4) Are the plans achievable with the allocated research resources (budget and man power)?

A paper on the development of experimental genetic ontology is already in preparation, so the pursuit of the entire plan does not seem to present a problem. In addition, if the research resources are increased, there will be even more possibilities. From the point of view of cost performance, partial outsourcing should also be considered.

5) Does the Team (Division or Unit) have sufficient experience and a record of achievements to carry out the plans?

Looking at their publication record and collaborations with foreign countries, there is no problem with their achievements and experience.

#### 3. Other

We hope that the experimental genetic ontology they developed will become a worldwide standard, and the



protocol will help to extract new and original biological meaning from phenotype information. In addition, we suggest that strategies to prevent being left behind are also important, and we would like them to think about that.



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