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Dated January 20, 2009

Chi-Ren Shyu, Ph.D.  
University of Missouri  
Columbia, MO 65211-2060, USA  
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Dear Dr. Shyu,

I am writing this letter as co-PI of the Gramene database project ([www.gramene.org](http://www.gramene.org)) and leader of the Plant Ontology Project ([www.plantontology.org](http://www.plantontology.org)), to collaborate on your proposal "Genome Virtual Phenotype center for Plant Genome databases" that you are planning to submit to the NSF. Based on the information provided to us, it seems the project will involve collaborations with other model and crop plant databases, including TAIR, MaizeGDB, OryzaBase, SGN and SoyBase. Our collaboration will involve participation of our project person for two of your meetings/year.

Based on our understanding besides many other specific goals of the project, you would like to specifically collaborate with us on:

- Developing standard protocols on computationally driven curation and annotation of phenotypes by making use of the Plant and Trait Ontologies being developed by our group.
- Sharing the ontology associations as part of the curated dataset on phenotype annotation with us in standard formats adopted/developed by us

We think that Gramene database and Plant Ontology projects are uniquely designed to meet the requirements of this collaboration. Based on our understanding we will make an effort to mirror the above datasets in the curated gene and ontology database section of Gramene and expect to provide the same in the GrameneMart. GrameneMart is our preferred tool to query the database and build associations between various datasets based on the existing experiments and analysis. In the process, we will mirror the ontology associations in the Plant Ontology project database as well. We also understand that during the tenure of this project we would need to add new terms to the gene, plant and trait ontologies to better suit the curatorial needs. Therefore, we would like to mention that we have the necessary resources and support to undertake this responsibility and your project personnel will work with our group of experts and ontology developers on creating SOPs and developing the ontologies as desired. As expected, this integration not only helps in common use of the language but also helps in cross database querying and comparative analysis of genomic and phenotype datasets.

We also understand that your project will have the necessary bioinformatics support and will provide us the datasets in the desired formats as and when they are ready for integration in the Gramene and Plant Ontology databases. We will establish a format for data exchange and update project information on a 6-month cycle with links back to your project database. We are pleased to know that unless specified, you will be the primary contact person to work with us on data exchange. We should note that we can only guarantee this arrangement through the end of our current round of NSF funding on the Gramene database project, which is until 09/30/2011.

Many thanks for agreeing to include travel support in your proposal for our project person to attend two project meetings/year. This will greatly help in the collaboration and understanding the informatics, curatorial and ontology needs of the project.

I wish you good luck with the project and look forward to work on this collaboration.

Sincerely,

Pankaj Jaiswal