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Dated: March 28, 2011

Dr. Todd Mockler

Dept. of Botany and Plant Pathology

Oregon State University

mocklert@cgrb.oregonstate.edu

Subject: Letter of collaboration with Gramene and Plant Ontology projects for the DOE-USDA project.

Dear Todd,

As PI of the NSF supported Plant Ontology (www.plantontology.org) and Co-PI on Gramene (www.gramene.org) projects, I am happy to write this letter of collaboration in support of your proposal titled “Modulation of Phytochrome Signaling Networks for Improved Biomass Accumulation Using a Bioenergy Crop Model” submitted to the DOE-USDA joint funding opportunity. I understand that the phenotype data (e.g. quantitative measurements, digital images) generated in this project will be mirrored on Brachypodium.org and available for download. These data will also be provided along with relevant descriptive and functional annotations on the ‘gene pages’ available on BrachyBase.org.

To support the development of standards applicable not just to your project, but to similar opportunities for a wider community of researchers, we request that your group participate in the meetings that we have planned to develop standard descriptors for the phenotypic data, metadata and images that you will be contributing. The use of these descriptors will support data integration and interoperability with other data resources. Gramene will also host web-based meetings at least quarterly to support training of collaborators in the use of standard descriptors and formats needed to support data integration and interoperability. We require a member from your group attend these meeting 6 months prior to the release of the data within Gramene. We understand that unless specified you will be the team member responsible for this activity. To facilitate access and enhance user experience with your data, your group will be responsible for a collaborator’s page on Gramene and Plant Ontology that will include information on the project and example links to available data within our projects. We request that your group produces a video tutorial that demonstrates how to navigate to your data within Gramene. You will be responsible for providing twice-yearly updates to the collaborators page to coincide with Gramene updates, including the development of the content and the video tutorial. If needed, Gramene would be happy to

host a person from your project for a short visit to Cold Spring Harbor or here at OSU, if appropriate. If this is requested please include appropriate resources within your budget.

Please note that there currently is no large scale national and/or international repository of phenotypic datasets generated in large scale automated digital phenotypic screens. Therefore, your contribution and our interactions with the Australian Phenomics Facility in Adelaide, Australia (<http://www.plantaccelerator.org.au/>) together with a community of experts would be an excellent platform to develop such a project. Needless to mention, unless our project funding gets renewed 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 and the Plant Ontology project, which is until 02/14/2013.

My group would be happy to collaborate with you on the controlled vocabulary development as related to the Plant Ontology. In addition my group would be happy to collaborate on development and use of phenotype trait ontology (TO), Gene Ontology (GO), Environment ontology for plant treatments (EO), which are currently utilized by Gramene. Use of these vocabularies will support your data mining and annotation objectives. It will also allow for cross species comparisons with genomes that are not currently part of your project. I see this work as a natural extension on the work our groups have collaborated on and I look forward to work with you if the proposal is funded.

Sincerely,

A handwritten signature in black ink, appearing to read 'Pankaj'.

Pankaj Jaiswal