

**BIC Genetics Committee Meeting Minutes**  
During the 2017 BIC Meeting

**Meeting location:** Kellogg Center, Michigan State University, East Lansing, MI  
**Date:** Nov 1, 2017                      **Time:** 11:30 AM

**Committee Members and Guests present:**

Phil Miklas - BIC president and acting Chair

Thiago Souza

Jim Kelly

Paul Gepts

Ted Kisha

Maria Celeste Gonçalves-Vidigal

Talo Pastor-Corrales

Pedro Vidigal-Filho

Bodo Raatz

James Beaver

Juan Osorno

Carlos Urrea

Frédéric Marsolais

**1. Old Business:**

**Approval of the Genetics Committee meeting minutes at the** Niagara Falls Marriott Gateway Hotel, Niagara Falls, Ontario, Nov. 4, 2015 (AIF)

**Genotype ID ontology** – (update from Bodo Raatz) developing a universal naming convention for lines and cultivars to facilitate combining data and reducing duplicates from data sets is recommended but difficult to enforce –this effort remains a work in progress outside the purview of the BIC Genetics Committee.

**Trait symbol ontology**– (update by Jim Kelly) placed a list on the BIC website for QTL names used in the literature

([http://bic.css.msu.edu/pdf/Published\\_Symbols\\_used\\_in\\_Naming\\_QTL\\_in\\_Phaseolus\\_vulgaris.pdf](http://bic.css.msu.edu/pdf/Published_Symbols_used_in_Naming_QTL_in_Phaseolus_vulgaris.pdf))

Symbols (abbreviations) used for naming various traits lack consistency across publications which creates confusion (eg. gy, sy, yld have been used to name QTL for seed yield) making it difficult to integrate results among studies and to conduct meta-analysis across combined data sets. The BIC Genetics Committee recommends researchers use previously published symbols and to work towards developing consensus for naming the same trait with a common symbol. Efforts to review BIC reports for use of established symbols will be made.

Updated “List of Genes- *Phaseolus vulgaris*”

**Co-16 gene symbol** (Maria C. Gonçalves-Vidigal) received final approval as a gene but its proximity to *Co-3* and other *anthracnose resistance loci* mapped in the same proximal region of Pv04 will be noted in the gene list.

The descriptions for *Co-17*, *Phg-1*, *Phg-2*, *Phg2<sup>2</sup>*, *Phg-3*, *Phg-4*, *Phg-5*, *Pkp-1* gene symbols approved in 2015 were fine tuned in the updated “Gene List 2017”.

**2. New Business**

**Gene symbols to review:**

**Co-Pa** (temporary symbol used by Maria C. Gonçalves-Vidigal) maps to *Co-1* locus but allelism tests show independence (this contradiction needs to be resolved before a gene symbol can be approved). Discussion about the difficulty in conducting allelism tests for genes within clusters led to review and revision of the “List of Evidence” necessary for reviewing a symbol (underlined sections b. iii and iv below)

- a. The committee will evaluate the data to determine:
  - i. if sufficient evidence exists to establish the inheritance hypothesis
  - ii. whether any issue of potential allelism of the trait has been met
  - iii. whether the proposed gene symbol has been previously assigned to another gene.
- b. The evidence must include:
  - i. data from one generation to formulate an hypothesis
  - ii. data from subsequent generations to test that hypothesis
  - iii. for hyper-variable pathogens: family mean testing (F2:3 progenies, or recombinant inbred lines – RILs), and use of multiple, specific races of the pathogen to separate effects of individual genes in gene clusters
  - iv. molecular marker data and genetic linkage map and physical map (preferred) positions when available

In addition it was recommended that a section ‘c’ be added to the “List of Evidence” which addresses availability of materials with the described genes so that others will be able to conduct allelism tests with the new genes in the future.

- c. Lastly – parent, germplasm line, or cultivar source of new genes accepted by the committee must be made publically available via seed deposit with the U.S. National Plant Germplasm System - Plant Introduction Station in Pullman, WA, as a Genetic Stock (this enables others to access the gene source for subsequent allelism tests, genetic studies, etc.). This requirement is unnecessary for widely known and easily accessible materials.

**These edits and addition of gene source to the “List of Evidence” will be circulated to absent committee members for their input by the next meeting (AIF).**

**The review of a new symbol for powdery mildew resistance** (was postponed; and awaits submission of evidence in summary form from the publication submitted by Juan Jose Ferreira).

**3. Next meeting:** UC-Davis (with P. Gepts as local host) sometime in late July – early August 2018, in conjunction with the W-3150 and PCGC meetings (AIF).

**4. Membership:** Kirstin Bett rotated off as Chair and was replaced by Jim Kelly as the new Chair – Michigan State University (AIF).

AIF = all in favor