

Launch of Plant Gene Nomenclature Committee (PGNC)

Background/Objective

- The need to standardize gene symbols and nomenclature has been recognized since 1957. In other organisms, particularly humans, this effort is very mature and has paid off in scientific dividends by standardizing communications. Prior to this work, no such resource existed for plants.

Approach

- We partnered with the development team behind the HUGO Gene Nomenclature Committee (HGNC) and adopted their approach to formalize the PGNC. We leveraged previous work and lessons learned over more than 30 years of gene naming in humans and other vertebrates to quickly launch the PGNC and its associated website, social networks, and infrastructure.

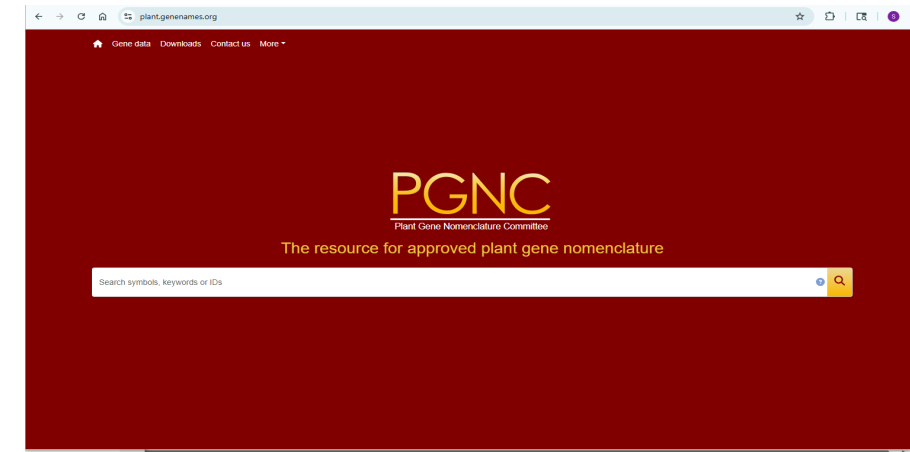
Results

- This work resulted in the public release of the PGNC website, and a publication entitled “Towards an official gene nomenclature for *Populus trichocarpa*” which describes the recommendations of the committee for standardized gene names and symbols in that species. We socialized the PGNC formally to the community during the 2024 IUFRO Tree Biotech conference and gathered recommendations from numerous researchers who specialize in *P. trichocarpa* related research. Based on insights from the community we were able to formally establish names and symbols for 439 *P. trichocarpa* genes and create a protocol that others can follow.

Significance/Impacts

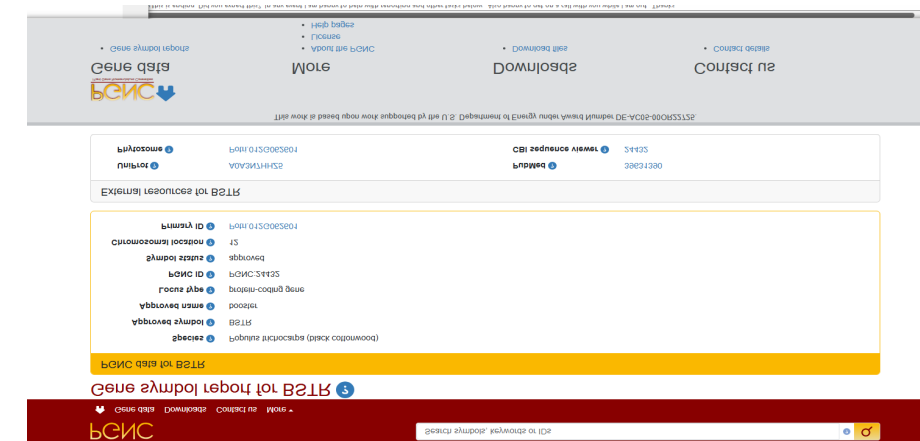
- This is, to the best of our knowledge, the first formal, international effort for the standardized naming of genes in a plant. The impact of harmonizing the nomenclature in a species makes data interoperability between disparate groups within the community much easier and allows for more rapid understanding. We expect that this will be the catalyst to complete the work in *P. trichocarpa* where there are still ~44,500 genes to be characterized and named. We anticipate other communities of plant researchers to follow suit and look forward to establishing gene names for other organisms of interest to the global community.

Tweedie, S. et al. *Tree Physiol.* (2025) doi: 10.1093/treephys/tpaf054.



Home Page of Plant Gene Nomenclature Committee

<https://plant.genenames.org>



PGNC entry for BOOSTER, a gene discovered by CBI in *Populus trichocarpa*

