

## SorghumBase Newsletter - Summer 2024

Dear SorghumBase Community,

We hope this finds you well as we bring you updates from the summer of 2024.



Conferences were an important part of the SorghumBase team's work in the second quarter of the year, giving members an opportunity to interact with the larger research community. At the [CROPS](#) conference, Dr. Nicholas Gladman (CSHL, USDA-ARS) presented his research on gene regulation of inflorescence architecture, as well as a poster on the SorghumBase platform. The American Society of Plant Biologists ([ASPB](#)) conference included an AgBioData workshop titled, "Plant Bioinformatics Resources for FAIR Agricultural Data Discovery and Reuse" organized by Dr. Sunita Kumari (CSHL). Sharon Wei, also from the Ware Lab at CSHL, gave a talk, "SorghumBase 2024: Building Partnerships and Integrating Genetic Knowledge for the Sorghum Community," updating the community with the progress on the database and showcasing the FAIR elements in SorghumBase. Over 60 attendees participated in the workshop.



Plant Bioinformatics Resources workshop speakers at ASPB 2024. Presenters from left to right : Dr. Sushma Naithani (OSU); Dr. Dorrie Main (WSU); Dr. Sunita Kumari (CSHL); Asher Pasha – BAR (University of Toronto); Dr. Lukas Muller (Cornell University); Annarita Marrano (Phoenix Binf); Dr. Leonore Reiser (Phoenix Binf); Sharon Wei (CSHL). Photo credit Ware Lab.

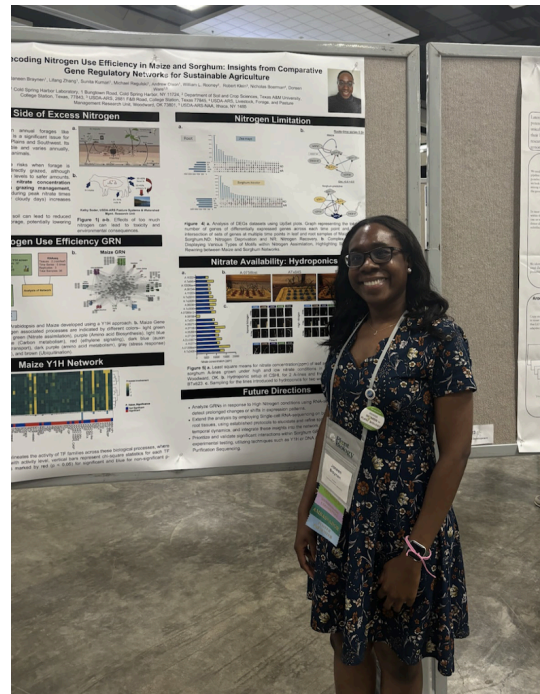
Updates to the SorghumBase website include SICNA conference proceedings from [2022](#) and [2024](#) - all abstracts are searchable. This summer, the site posted 19 community news items and added 54 recent papers to the database (14 of which were highlighted in collaborative blog posts). The genomic database team has also been busy staging over 90 new genomes for incorporation in the next release of SorghumBase in early Fall 2024. These genomes are being prepared in collaboration with scientists from Danforth, Salk, UNCC and JGI and will feature

wild sorghum genomes, disease resistant accessions, and a set of ex-PVP breeding lines (i.e., accessions with an expired Plant Variety Protection Act certificate). The genetic variation team curated three new data sets adding up to approximately 76 million SNPs and nearly 3 million indels, and sampling the genetic diversity of 940 lines from the Gates-funded [Global Sorghum Initiative](#), 332 Bioenergy Association Panel (BAP) lines (Kumar et al, 2024), and 1943 georeferenced landraces (Lasky et al, 2015).

In May of 2024, SorghumBase team members Dr. Marcela Karey Tello-Ruiz and Kapeel Chougule, successfully concluded mentoring seven undergraduate students from Mercer University. The project focused on structurally curating sorghum genes and marking potentially flawed gene models as part of their coursework activities with Professor John Stanga during the Spring semester (see [News blog](#)).

SorghumBase team members also mentored three summer students working on projects involving gene expression, climate related genetic variation, and genotype visualization software.

As we move forward, the SorghumBase team remains committed to fostering collaborations and delivering cutting-edge resources to the sorghum research community. We are excited about the upcoming release of new genomic data and grateful for the continued support of our partners, collaborators, and the broader research community. Together, we are building a platform that will empower future discoveries in sorghum genetics!



Dr. Janeen Braynen, from CSHL, standing at her poster on Gene Regulatory Networks. Photo credit Sharon Wei.

Best regards,

Doreen Ware & Nick Gladman  
SorghumBase Team