

SorghumBase Newsletter: Summer 2025



photo credit: Christopher Olson, in Cold Spring Harbor, NY

Dear SorghumBase Community,

We're pleased to share some recent updates to the database, student contributions, and upcoming activities from the SorghumBase team.

Publications and Research Highlights

The sorghum research community has been very active! Our curated collection of publications continues to grow month by month.

- **1,531** total [publications](#)
- **6,730** unique authors
- **314** journals represented
- **155** curated [highlights](#) on recent research
- **5** [Special Topics](#) pages summarizing research on themes of interest—most recently: *"Sorghum in Fermentation: New Insights into Genetics, Grain Traits, and Microbial Interactions from Baijiu to African Traditional Beers"*

Explore our **Special Topics** section to stay informed on emerging themes in sorghum science. If you would like to propose a special topic, don't hesitate to reach out through our [contact us](#) page.

Summer Student Projects

Our summer interns participated in **field work**, including **genotyping sorghum plants** and creating new **electronic fluorescent pictograph (eFP) views** for SorghumBase and the BioAnalytic Resource under the guidance of our Gramene Plants mentors.

Expression Tab Enhancements

The **Expression** tab in SorghumBase gene search now supports multiple studies in **paralog mode**, displaying all available **bulk RNA-seq experiments** from the **EBI Gene Expression Atlas**, including both **baseline** and **differential** expression datasets. It allows you to select a study from the dropdown menu to visualize expression profiles across a set of paralogs.

Thanks to collaboration with the **BioAnalytic Resource (BAR)**, additional gene expression studies curated by SorghumBase staff are now integrated into the **eFP browser**, also accessible via the **Expression** tab in gene search.

We would love you to explore updates with your gene of interest. You can also try an example gene ([msd2](#)). Your feedback is very welcome.

rsID Variant Mapping

More than **41 million Reference SNP cluster IDs (rsIDs)** from the **European Variation Archive (EVA) Release 5 (July 2023)** have now been mapped across the following:

- **BTx623 JGIv5** – *Under the Fort Lauderdale Accord*, this represents the reference genome assembly for the BTx623 sorghum line ([Sorghum bicolor v5.1 DOE-JGI](#)).
- **46 ex-Plant Variety Protection (ex-PVP) sorghum accessions** – Previously protected varieties now available for the sorghum community.
- **25 additional sorghum genomes**, including **9 newly added genomes** as part of **SorghumBase Release 9**.

Looking ahead, we are actively working to assign rsIDs to **all naturally occurring variants** in the Sorghum reference genome BTx623.

New Genome Tracks

We have completed tracks of **repetitive elements and functional annotations** for most of the sorghum genomes available on SorghumBase. While these are not yet visible on the browser, they will soon be configured. In the meantime, we are considering hosting them temporarily via FTP. Stay tuned for updates!

Conferences & Outreach

[ASPB Plant Biology 2025](#)

- *Virtual Workshop*: Dr. Sunita Kumari chaired the ASPB virtual **Plant Bioinformatics** session “**AgBioData Consortium Resources and Databases for FAIR Agricultural Data Discovery, Sharing and Reuse**” on 15th July, 2025. This session featured seven speakers who presented on a range of genomics databases, including Gramene, AgBioData, BreedBase, TAIR, MaizeGDB, TreeGenes and BioAnalyticalResources (BAR). Dr. Kumari (CSHL) gave an insightful talk on the latest updates of **Gramene Plants and Pan Genome Resources**.
- Dr. Janeen Braynen presented the **SorghumBase poster** and delivered a talk on **CP-NAM under iron stress during the session titled “How Diversity Shapes the Plant World.”** Her presentation featured an analysis of variation among CP-NAM parental lines, representing diverse sorghum types ranging from sweet to forage varieties. Four of the lines studied in this work exhibited differences in iron concentration under iron-limited conditions in hydroponic systems.

PCA-CNP (Plant Cell Atlas - Core Network Planning) meeting - August 7-10, Maine

Dr. Sunita Kumari and Dr. Doreen Ware will attend this meeting. The focus of the meeting will be on reviewing the progress of PCA and planning for next year and beyond. Dr. Kumari (CSHL) will be joined by Dr. Benjamin Cole (JGI) to co-lead the “**Plant Cell Atlas Cell Type Annotation Jamboree**” that will involve community manual curation efforts to correct **author-referred** cell type annotations from the published single cell RNA-seq dataset.

GRC (Gordon Research Conference), University of Maine - August 11-15, Maine

Dr. Sunita Kumari will attend the Gordon Conference on Single-Cell Approaches in Plant Biology titled, “Unlocking Discoveries in Plant Science With Location-To-Function Knowledge.” She will present the AgBiodata Single Cell Community efforts on “Building FAIR Workflows For Integrating Single Cell Data into Agricultural Genomics”. The conference aims to bring together a diverse community of researchers to discuss and share cutting-edge approaches that explore plant biology from the perspective of individual cells.

Thank you for being part of the SorghumBase community!
As always, we welcome your feedback and collaboration.

— The SorghumBase Team
<https://www.sorghumbase.org>