

Newsletter Nº 2/2020

IWGSC Newsletter - May to August 2020

The IWGSC

• Membership:

The IWGSC has 3,000 members in 70 countries, working at 826 institutions/companies.

- Sponsors:
 - Currently, the IWGSC has <u>8 sponsors</u>.
 - Sponsor support is essential to ensure continuation of activities. Please inform us if you know of any potential sponsors (research institutes, universities, governmental agencies, or companies).

Projects

• <u>IWGSC-Arbor Biosciences Promoter Capture project</u>

Arbor Biosciences is working on the design of a promoter capture under the leadership of IWGSC Coordinating Committee member, Jorge Dubcovsky. Due to lab closures because of Covid-19, delivery has been delayed. We hope it will be available in early 2021.

<u>IWGSC-Arbor Biosciences Expansion Modules</u>

Plans are underway for Arbor Biosciences to develop add-on modules for the exome panel. These will include new manual and functional annotations of IWGSC RefSeq v1.0, the updated and annotated RefSeq v2.1, and genome-wide SNPs. Again, due to lab closures, these activities have been delayed. We will be working to add the new IWGSC RefSeq v2.1 and annotation v2.1 in 2021.

• <u>IWGSC Wheat Diversity project</u>

Under this project, the IWGSC plans to develop high quality sequences of a core set of eight landraces with a low admixture rate (<1%) and to add to these data elite and founder lines sequenced to varying levels of quality as well as sequences that will be publicly available in the near future. We have been able to find several providers who can deliver high quality, PacBio Sequel II sequences and assemblies of the eight landraces at an exceptionally good rate. We are now seeking funding for the landrace sequencing and assembly and will be submitting proposals for funding in the next few months. If you have sequenced or are planning to sequence an elite line or founder line and want to be involved in the development of the haplotype database, please contact <u>Kellye Eversole</u>.

• IWGSC RefSeq Assembly and Annotation

IWGSC RefSeq v2.0, an improved version of the reference wheat genome, is available at the IWGSC data repository hosted by URGI-INRA under the Toronto protocol. Additional improvements and corrections have been made over the past few months and integration of manual and functional annotations is underway. In early 2021, the IWGSC will release IWGSC RefSeq v2.1 as well as annotation v2.1.

IWGSC RefSeg Annotation beyond 2020

Continued manual and functional annotation of the reference is essential. To facilitate high quality functional annotation, we continue to seek experts willing to take the lead in the functional annotation of gene families in wheat, contact <u>Kellye Eversole</u>, <u>Fred Choulet</u>, <u>Rudi Appels</u>, or <u>Hélène Rimbert</u> if you would like to be involved.

Data Repository at URGI

- MNase chromatin accessibility data for CS genome generated in Eduard Akhunov's lab (Kansas State University, USA) are available to download at URGI under open access.
- Reminder: The IWGSC RefSeq v2.0 assembly is available for <u>download</u> and <u>BLAST</u> under the terms of <u>Toronto agreement</u> which affords the data producers the right to publish the first whole genome analyses of the data. Access does require registration. For specific access terms, see the <u>IWGSC General Data Access agreement</u>.

People

• Leader Spotlight on Gabriel Keeble-Gagnère (Agriculture Victoria, Australia).

IWGSC Publications

 Mobilizing Crop Biodiversity. McCouch S. et al. (2020). Mol. Plant. doi: https://doi.org/10.1016/j.molp.2020.08.011.

Upcoming Webinars:

All webinars are free and are scheduled at 11am Eastern US Time. Recordings are subsequently posted on the IWGSC YouTube channel.

- 23 September 2020: <u>Resistance gene cloning in wheat</u> presented by Burkhard Steuernagel (John Innes Centre, UK)
- 7 October 2020: <u>Differential chromatin accessibility map as a new resource for studying wheat genome</u> function & genotype-to-trait relationships presented by Eduard Akhunov (Kansas State University, USA)
- 28 October 2020: <u>Genome-specific primer design with PolyMarker</u> presented by Ricardo Ramirez-Gonzalez (John Innes Centre, UK)
- 19 November 2020: <u>Decoding the polyploid wheat genome using gene networks</u> presented by Philippa Borrill (University of Birmingham, UK)

Upcoming Workshops

• As of now, PAG 2021 is scheduled for March 2021. The IWGSC intends to hold two workshops. Stay tuned for the announcement of calls for speakers and early career award recipient abstracts.

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