

Newsletter N° 2/2018

IWGSC Newsletter – April to August 2018

The IWGSC

Membership:

As of July 2018, the IWGSC had 2400 members, working in 734 institutes/companies in 68 countries.

• Sponsors:

Currently, the IWGSC has <u>10 sponsors</u>. Sponsor support is essential to ensure continuation of Phase II activities. Please inform us if you know of any potential sponsors (research institutes, universities, governmental agencies, or companies).

Board members:

In June, the IWGSC Board welcomed <u>new members</u> Ute Baumann (University of Adelaide, Australia), Hikmet Budak (Montana State University, USA), and Etienne Paux (INRA, France). Board members Catherine Feuillet and Beat Keller finished their terms at the end of August; the IWGSC would like to thank them for their leadership and commitment to the Board.

Phase II

In January, the Coordinating Committee (CC) approved these Phase II activities:

- IWGSC Exome Array based on the reference sequence (Task Force: Burkhard Steuernagel, Sreya Ghosh, Sébastien Praud, Hikmet Budak, Etienne Paux, Ute Baumann and Kellye Eversole)
- Wheat pan-genome based on de novo sequencing and assembly of multiple wheat genomes (landraces and elite varieties) that cover the breadth of wheat diversity (Leaders: Sébastien Praud, Etienne Paux, and Kellye Eversole)
- IWGSC Gold Standard: maintenance, updates, and integration of manual and functional annotation to the reference sequence (Leaders: Rudi Appels, Fred Choulet, and Kellye Eversole). A new component of achieving the Gold Standard is the exploration of deep learning approaches for functionally annotation of the reference sequence (Task Force: Fred van Ex, Xi Wang, Ken Heyndrickx, Wesley De Neve, Kellye Eversole, Yvan Saeys, and Fred Choulet)
- User-friendly, integrated databases and tools to benefit public breeders and the full range of industry partners, from SME to large companies (Task Force: Fred van Ex, Magalie Leveugle, Matthieu Conte, Michael Alaux, and Kellye Eversole)

Projects

- On 17 August, the IWGSC published an analysis of the reference wheat genome sequence (IWGSC RefSeq v1.0 and annotation v1.1) in *Science*. The article, entitled "Shifting the limits in wheat research and breeding using a fully annotated reference genome" is accessible at no cost on the *Science* website after registration or via a free access link that can be found on this page. The publication received great media coverage around the world, in the general press and in social media.
- Six companion papers utilizing the IWGSC RefSeq resource were also published on 16 and 17 August, one in Science, one in Science Advances and four in Genome Biology. A number of other papers utilizing the IWGSC resource will be published in the coming weeks.



- On 4 July, all IWGSC reference sequence <u>became publicly available</u> at the IWGSC Data Repository hosted by URGI-INRA, and <u>at EnsemblePlant</u> on 18 July.
- IWGSC Exome Array project: The IWGSC has teamed up with Arbor Biosciences to develop an IWGSC exome array based on the IWGSC RefSEq annotation v1.1. The exome kit design is now complete and currently being tested. A follow-up survey designed to evaluate the community need for bioinformatic support for analysis of wheat exome data is currently open. Please go to this page to complete the survey.

People

Leader Spotlight: <u>Jane Rogers</u>

Leadership Award: <u>David Swarbreck</u>

Meetings/Workshops

- 12-16 January 2018: The IWGSC will organize two workshops and a business meeting at PAG San Diego, USA
 - Saturday 12 January: the main IWGSC workshop is organized by Hikmet Budak and Kellye Eversole and will focus on the development and utilization of wheat genomic resources, in particular the IWGSC RefSeq v1.0
 - o Saturday 12 January: Business meeting
 - Tuesday 15 January: the IWGSC Functional Annotation workshop (previous called Standards and Protocols workshop) is organized by Rudi Appels and Ute Baumann and will focus on manual and functional annotation.
- 30 May 2018: The IWGSC held a workshop entitled "Wheat Genomics in Agriculture: Building on IWGSC RefSeg v1.0" at PAG Asia in Seoul, South Korea

Publications/resources

- 2017 Annual report
- Presentation:
 - 14 June: Hélène Bergès, Wheats & Women Conference, Rome (Italy): The Reference Sequence of Wheat and IWGSC Phase II: Ensuring a Full Genomic Toolbox for Wheat
- Press releases
 - 14 June: Wheat Sequencing Consortium Announces New Appointments to Board of Directors
 - o 16 August: The Wheat Code is Finally Cracked
- Infographics
 - Wheat A key crop for food security
- Videos
 - An explainer video: <u>The Bread Wheat Genome Sequence A Tool for Breeders to</u> Improve Wheat and Contribute to Food Security
 - o <u>Interviews about the reference sequence publication</u>
- Information package about the Ref Seg publication in Science
 - o Press releases from IWGSC members and translations of IWGSC release
 - o Media kit
 - Questions and Answers
 - o **Quotes**
 - o Coverage around the world

And don't forget to follow us on <u>Twitter</u> and <u>Facebook</u>.