

RosEXEC Minutes

AUGUST 31, 2016

TELECONFERENCE, 8:00-10:00 AM PDT

Meeting called to order by C. Peace, 8:00 AM PDT

AGENDA

ATTENDEES:

First Name	Last Name	E-mail	Affiliation
Cameron	Peace	cpeace@wsu.edu	Washington State University
Mercy	Olmstead	mercy1@ufl.edu	University of Florida
Ksenija	Gasic	kgasic@clermson.edu	Clemson University
Dorrie	Main	dorrie@wsu.edu	Washington State University
Steve	Knapp	sjknapp@ucdavis.edu	UC Davis
Gayle	Volk	gayle.volk@ars.usda.gov	USDA-ARS
Vance	Whitaker	vwhitaker@ufl.edu	University of Florida
Chunxian	Chen	Chunxian.Chen@ars.usda.gov	USDA-ARS
Gina	Fernandez	Gina_Fernandez@ncsu.edu	North Carolina State University
Jill	Bushakra	Jill.Bushakra@ars.usda.gov	USDA-ARS, NCGR, Corvallis
Sook	Jung	sook_jung@wsu.edu	Washington State University
Amy	Iezsoni	iezzoni@msu.edu	Michigan State University
Michael	Dossett	Michael.Dossett@AGR.GC.CA	BC Blueberry Growers

WELCOME

- Cameron Peace (Chair), Ksenija Gasic (Vice Chair), Mercy Olmstead (Secretary)
- Steve Knapp, Vance Whitaker, Ksenija, Dorrie, Cameron, Gayle Volk, Bob Curtis, Jill Bushakra, Gina Fernandez, Chunxian Chen, Amy Iezsoni, Sushan Ru, Sook, Michael Dossett, Eric van de Weg
- Adoption of minutes from April 2016 teleconference meeting in San Diego, CA
 - i. Minutes adopted and can be posted online with addition of NAPB and ASHS meeting.

GDR ADVISORY BOARD

- Next meeting will be in October for GDR
- Reporting on March, April and May activities (Q7) → in progress (June, July and August; Q8)
- New genomic data added to GDR
 - Black raspberry genome released, annotation completed and published

- Nothing goes on GDR unless it is published, but if researchers get it to GDR ahead of time, then it can be annotated by the GDR group and then posted when published.
- *Fragaria vesca* v2.0 added + *F. x ananassa* and 4 wild species also available
 - What is the origin of the sequences of the strawberry sequences?
 - Japanese group
- 480K SNP for *Malus x domestica* available for download
- Updated and released PeachCyc, FragariaCyc, and AppleCyc databases
- Large part of the data inclusion was a push to present at RGC 8 and update the website/database, now available
- Constantly working on curating genetic data with other groups/communities
- New pages for the NCBI Short Read Archive RNASeq and GBS data for all Rosaceae species on GDR now available. (Don't store the data on GDR – data is deleted after the analysis is completed)
 - Continuing to convert from Drupal 6 to Drupal 7 including custom modules
- Continued development of Breeding Information Management System – release by PAG 2017
- Outreach
 - Michael Coe distributed and analyzed GDR survey
 - Desired orthology between families and mark QTLs to the genome
 - Various meetings attended to present GDR
- GDR continues to be used quite heavily – 360,000 pages viewed for the grant (9/1/14)
- Work in progress:
 - Complete synteny analysis between *Malus*, *Prunus*, *Fragaria*, and *Pyrus* reference genomes (GBrowse-Syn)
 - Released the *Rubus* Reference Transcriptome
 - A lot of data, but there is a better process for getting data and analysis that has made it faster
 - Hoping to have more species available by PAG (2017)
 - Aligned Rosaceae NCBI genes to the associated genome sequences and making those available on the GBrowse instances
 - Uploading map marker, marker, and QTL data
 - No new data for integration of breeding data
 - Released newly re-designed GDR website, better functionality
 - The GDR team can now easily update the reports with the improved functionality in regards to how much data has been added
 - Added germplasm image search functionality
 - Added maps search functionality
 - Make search pages easier to use!
 - All search pages now have a tutorial (A/V and text)
 - A lot of project communication and outreach this quarter
 - Users have also begun to present about the functionality of GDR

- Nahla Bassil -Fragaria resources at the International Strawberry Symposium in Quebec
- For the species, if there is data for a specific category, then it is listed on the left hand column
 - Description is in its own section, rather than automatically showing up on the first page – more standardized information now on the species frontpage.
- Bob Curtis going to the national stakeholder meeting for breeding – what role does National Programs and USDA-ARS provide for funding GDR or other databases like it?
 - No funding through USDA-ARS, but there is NRSP-10 funding
 - \$2,000,000 for 5 years
 - Derived from Hatch funds
 - Also received another grant for GDR, Citrus Database, and forestry database
 - \$3,000,000 for 3 years
- Jim McFerson has now taken over the extension work and more of a focus to growers to present what GDR is doing for scientists and the industry.
 - Annual Almond Conference is December 6-8, 2016
 - S. Knapp – how do you want scientists who use GDR to talk about it to growers?
 - Dorrie and Jim will get some standard slides put together for explanations of what GDR does so scientists can help get support for continued funding
 - Hope to have that completed by the next meeting.
- Sook – ontology
 - Developing Rosaceae trait ontology (plant trait ontology)
 - All the QTL data and Mendelian trait loci are associated with the Rosaceae trait ontology
 - Came up with a new symbol to standardize published research

ROSACEAE CROPS WEBPAGES FOR GDR – S. JUNG

- Informational pages (text, tables and pictures) about Rosaceae species (link to Google Document at: <http://bit.ly/1naGz7o>)
 - Current status- COMPLETED!
 - Will continue to review and replace as people have comments.

AVAILABLE POSITIONS/GRADUATES

- Add to the agenda for the future

COORDINATION AND UPDATES

- Non-research update (Industry)
 - Bob Curtis: Focusing on funding of *Prunus* rootstock development and evaluation

- Soil borne diseases, salinity, and drought-tolerance
 - Assessing *Armillaria*
 - MSU just received SCRI funding, also with Clemson University (G. Reighard)
 - A. lezzoni - A meeting between the cherry, almond and east coast peach industry would be great to coordinate efforts
- New project with UC-Riverside
 - Delving into the genome for possible candidates
- T. Gradziel becoming more engaged with Dan Kluepfel for rootstock breeding.
- Focus on hardwood rotting organisms (e.g., that lead to crown gall or other organisms)
- To support this research, in the process of increasing the assessment from growers
- Very interested in self-compatibility – 1st one developed by Zaiger Genetics, distributed by Dave Wilson Nursery
 - Cooperative efforts between university and private companies
 - Reduce reliance on bees for pollination (can reduce to 0.5-1 hive/acre as opposed to 2 hives/acre)

COMPETITIVE FEDERAL GRANT PROJECT REPORTS

- Clemson University *Armillaria* SCRI project
 - G. Schnabel
- NSF funding for GDR, Citrus Genome, and TreeGenes and Hardwood Genetics
 - Connecting up Tripal databases
 - Bringing in environmental data as much as possible
- RosBREED 2 – *A. lezzoni*
 - About to enter Year 3, moving into the genotyping phase and crop groups are getting together for that.
 - Newsletter in September
- Rose Rosette Project
 - No report
- NSF for apple and peach architecture
 - No report

INTERNATIONAL PROJECT COLLABORATIONS

- Primocane raspberry projects – Gina Fernandez
- E. van de Weg: New genome sequence for apple will be submitted soon, high quality
 - Built upon a double haploid apple
 - Longer reads
 - Good correlation with genetic and physical maps
 - Will include a chromosomal sequence
 - Get to GDR so it can be put into Dev and get it annotated?

RESEARCH FIELDS AND TECHNOLOGY UPDATES

- Crop Germplasm Committees

- Apple CGC – meeting coming up next month (September 21st, 2016 – 1-4 pm EST)
- Prunus CGC – June 2016
 - Agreed to have a yearly meeting in Davis, CA
 - Perhaps will combine with NAPB meeting (which will be in Davis, June 7-10, 2017) so members can combine travel
- Small Fruits CGC – meeting in Virginia Beach (October) in conjunction with the NCCC-212 Meeting
- Other Rosaceae CGCs? (e.g., Pyrus)
 - CGCs have a website through GRIN
- Plant Breeding Coordinating Committee
 - Issues for the germplasm collections – increased workload, but reduced funding and staff for all the national germplasm collections
 - Prunus Germplasm Collection Repository will no longer provide to private citizens and won't ship material any longer
 - No way to evaluate how they use it
 - But still available to private breeders, just not homeowners
 - Writing a white paper to address concerns
 - Ann-Marie Thro was present to hear concerns
- Phenotyping
 - Standardized or high-throughput phenotyping
 - Fieldbook app improvements with mapping software to pull up data
 - To have this work, will you need cellular service or wi-fi?
 - Would be really useful for the USDA Germplasm Collections
 - J. Preece has tablet + app, E. Stover also has one.
- Whole Genome Sequences and Physical Maps
 - Updated apple genome (v.4)
 - Strawberry – Tom Davis (UNH) should have a new sequence available in the next few months
 - Higher quality octoploid assemblies will be available this year (UK with Richard Harrison)
- Enabling technologies in genomics and genetics
 - Peach and cherry arrays are adding 9K
 - New rose array in development
 - Peach reference linkage maps – Laima A. from Clemson, apple linkage map (N. Howard, U Minn)
 - Cherry reference linkage map in progress – need a haploid genome for physical mapping and sequencing
 - GDR lists have collated many QTLs and are available online
 - QTL numbers on the individual crop pages do not match what is actually available in GDR [now fixed]
 - Haploblocking ongoing in RosBREED2
 - Simpler way of visualizing the genome of any individual, in a breeding-relevant way

WHITE PAPER UPDATE

- Had one 10 years ago that set the foundation for RosEXEC and other collaborative projects
 - Showed the coordination between the different groups

- Should it be updated to reflect new technologies and future directions?
 - Peer-reviewed article
 - Can bring in what the first white paper resulted in – and how the projects, technologies, and infrastructure have led to new future needs to advance Rosaceae research and breeding.
- Cameron will consider a structure (outline) for the manuscript
- U.S. vs. worldwide perspective?

ROSEXEC MEMBERSHIP

- K. Gasic – Sending for distribution to ask for nominations to
 - Close by September 20th, 2016
 - Voting October 1-10th, 2016
 - New members and results in the October meeting
 - Five U.S. members are rotating off (three-year terms, except for Past Chair):
 - Gayle Volk
 - Gina Fernandez
 - Brianna Gross
 - Duke Lane
 - Greg Reighard
 - Increase pome, decrease stone fruit
 - Need another industry rep nominated, perhaps more
 - 2 international liaisons (2 year terms) rotating off:
 - Michael Dossett
 - Riccardo Velasco
- Proposition to include more regions of the world for international liaisons
 - Should better represent Asia, Africa
 - Will we need to change the bylaws?
- Send an email out to the members about the different options via the RosEXEC list

UPCOMING MEETINGS

- 1st ISHS International Apple Symposium, 10-16 October, 2016, Yang Ling, Shaanxi Province, China
- Apple Crop Germplasm Committee Meeting – Teleconference – September 21, 2016, 1-4 pm EST
- Small Fruits Crop Germplasm Committee Meeting, October 2016, Virginia Beach, VA
- NCCC-212 Meeting, Small Fruit and Viticulture Research Meeting, Virginia Beach, VA – late October?
- 4th Symposium on Molecular Markers in Horticulture: 7-10 Mar 2017, Napier, NZ
- 8th International Cherry Symposium: 5-9 June 2017, at Yamagata City, Japan
- NAPB, Davis, CA

OTHER ANNOUNCEMENTS

Scheduling for RosEXEC – next meeting in October.

Meeting adjourned at: 10:05 AM PDT