

# U.S. RosEXEC and RosIGI AGENDA

HAMPTON ROOM, TOWN AND COUNTRY HOTEL,

JANUARY 14, 2018 10AM – 12PM PDT

Remote access via Skype dorrie.s.main

Attendees: David Chagne, Lise Mahoney, Ellen Thompson, Michael Wisniewski, Sue Gardiner, Herb Aldwinckle, Margaret Worthington, Janet Slovin, Sook Jung, Luca Blanco, Tyson Noephe, Kim Cotton, Daniel Mead, Jim Luby, Cameron Peace, Igor Pacheco, JD Swanson, Jason Zurn, Jonathan Fresnedo, Pere Arus, Nahla Bassil, Ksenija Gasic, Dorrie Main, Riccardo Velasco, Mick Considine, Craig Hardner, Kenong Xu, Loren Honaas, Ryutaro Tao, Julia Piaskowski, Lee Meisel, Jim McFerson, Jose Quero Garcia, Mathieu Fouche, Renate Horn.

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## WELCOME

- Standing Officers:
  - Mercy Olmstead (Chair), Chris Saski (Vice Chair), ? (Secretary), Ksenija Gasic (Past Chair)
    - Voting required from majority – voting on Secretary is being done by email – organized by Ksenija Gasic
    - Vote due by next week
- Attendance; Self-introduction and sign-up sheet
- Approval of Minutes from 31 October 2017 Meeting. Call for motion to approve – Michael approved and second approval by Li
- 3 teleconference meetings scheduled: April, July, October

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## ROSEXEC MEMBERSHIP

New members and election of secretary. 2 candidates. Lise Mahoney and Jonathan Fresnedo Ramirez

- Note: Next year start meeting after coffee break due to meeting noise —10:30A

New members:

U.S. Members:

Nahla Bassil, Chris Dardick, Jonathan Fresnedo Ramirez, Phil Stewart, Lise Mahoney

International Liaisons: Craig Hardner, Felicidad Fernandez

- Anyone new to committee: Mercy presented mission of group – website....Focal point for US Rosaceae community. Group used as locus for technical expertise for technical/white papers, define research priorities – input from group and industry. Work as a community to coalesce specialties. Coordinate educational efforts. Serve as steering committee for GDR.

The PAG in person meeting is combined with RosIGI. Next one in Nanjing China – in June.

Ksenija Gasic – normally organizer of RGC will become chair of RosIGI.

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#### GDR ADVISORY BOARD

- Report from GDR – See report form Dorrie (email Jan 13).
  - New data, new tools, new development
  - This Dec – need to submit renewal SRS of 2018. Focused effort requested next 2-3 mths
  - NRSP10 grant – also needed to fill content
  - Want to assemble a focus group to really go into database and GET INPUT. This group would really focus on content and how to advance. Students can be welcome for this. Dorrie will contact folks to do this. Survey is coming also. Been funded 10 years for GDR.
  - Big focus this year, aside from data, is going to be breeding information 75% of finished product. Tested by KG as management tools. Get this done b/f Aug 01 renewal.
  - Don't do a lot of PR – pubs due out b/f Aug01. Get sentence from users on how GDR is being used.
  - New members – need to Join GDR list....Riccardo did not get email.. Should get monthly email test. Go to GDR and sign in. Some folks were dropped off.
  - NOTE: GDR report will be sent via email and comments should be returned in detail over email.

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#### COORDINATION AND UPDATES

- Non-research update (industry, info and tech transfer)
  - Bob Curtis: Almond: CA stormy Jan – behind on rainfall. Overall chilling for various tree crops has been adequate and potential for decent bloom is there.
  - Planning grant put in for Armillaria Root Rot by Ksenija Gasic
  - Mercy - Dry start to winter, water in reservoir. Fire and mudslides north of 101 – for Strawberry planting acreage is stable. Southern districts – competition from Mexico. Central growing area in Santa Maria keeps expanding -- shifts in locations.
  - Jim McFerson – everything looks great for apples. First year in 20 years where production has increased. New material is being produced. Cherry still slowly expanding. Pears are static. Awaiting a DECENT rootstock before investing in orchard planting.
  - Ksenija Gasic: SouthEast Region: Good cold winter. Very good. About 200 chill hours at present vs. last year. Staying low and look forward to good year.
  - Ksenija Gasic Armillaria – becoming more and more prominent issue 4% of trees/yr die by ARR. Big movement regarding this. In 10yrs, SE could not exist if no solution becomes available
    - They do fumigate for strawberry in CA.
    - Some tools available for anaerobic soil disinfestation.
      - Mercy uses these types of approaches
      - Cannot fumigate within a mile of a school.
  - Contraction in raspberry production – blackberry increasing and still decent prices are available. After a wet winter a year ago, see *Phytophthora* – shift into containerized production. Soilless environment.
  - International:

- Chile – had boom cherry production
- Competitive federal grant project reports
  - Recently funded projects within the Rosaceae: None discussed
  - Updates on large-scale projects (RosBREED, RosRosette, NSF for Apple and Peach tree architecture, others?)
  - Cameron: Rosbreed: just 1.5 years left of the 5 year project – had couple of key annual meetings on Th and F in San Diego. Advisory panel meeting Th and international Part. Fri.
      - Highlights: Lots of DNA tests in use now – supporting in RosBREED. Discoveries all the way thru used in breeding programs. For fruit quality, disease, productivity type traits. Various loci discovered and various lesser positions along spectrum, report/summary on what is available. Tend to have these updated on RosBREED website. If not, talk to Nahla.
      - Using genome scans (SNP Arrays) major deliverable and app of the tools. Encourage breeders to use on elite material. Parents and cvs., selections. We do enablement help to make happen. Can use this to connect with GDR. Continue to curate phenotypic datasets for error correction. Crop post-docsworking on this.
      - Advances in development of framework for cost efficiencies. Use of DNA test, general for use in other tech. advances. Pre-breeding advances in pyramiding and combing disease resistance. Alleles from different sources for same disease – moving thru generations. Rapid cycling.
      - Candidate locus approaches: RosMAP for looking at syntenic regions across species – that seem to line up. Blackberry is the case study advancing there to ID sweetness trait loci – rather than development of major tools
      - Advanced in GxExM – Craig is advancing this with focus to help breeders predict in locations under conditions that have not yet been trialed before. Works if we have large datasets with historical data from all over the world...Apple, peach, cherry. Get material organized.
      - Genomic selection – advances in strawberry at UFL and Apple with Luby to demonstrate where genome selection is most appropriate.
      - International update: DNA tests, genome scans and practical tools to reveal genetic potential and coordinate internationally.
      - RosBREED3 – New project – brought up several times. RosBREED is centered on breeding and practical breeding, direct advances in genomics and genetics to breeding – collaboration is really key – continue and make new strategic partnerships. 4 nuclei: still taking shape) of real problems
        - Revelation of genetic potential of breeding programs (testing) making sure we keep up with these advances
        - Phenomics – high resolution phenotyping for sets of traits, productivity, subset mechanization aspects are future.

- Data management for breeding programs – may be in or be connected with GDR
  - Socioeconomic – extension: network of people
- RosRosette – no update
- International project collaborations
- Any other important research funding coordination opportunities
  - Steve Knapp received SCRI \$4.5M to bring strawberries up to speed
  - Lise Mahoney: USDA project development of seed propagated hybrid strawberries for organic agriculture.
  - NSF tree architecture: requested extension and move toward renewal. Methodology developed for trait mapping. J. Exp. Botany publication coming. WGS – chip based snp based – Chris Dardick – submitted something on weeping trait in peach. Under review.
    - AFRI project – second gene for acidity on LG8 have marker for this, currently under review.

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## RESEARCH FIELDS AND TECHNOLOGY UPDATES

- Germplasm (genetic resources)
  - Crop Germplasm Committees and USDA-ARS germplasm status, current and recent evaluation funding, other germplasm resources?
    - Ksenija Gasic – went to DC. On Dec 19 to discuss funding on repository system in us. Main point is we need to get stories across...what would happen if it was not there? – NEED success stories. Need to push so legislature understands that it should not be put into FARM BILL – that money was stable and not increased, many retire and will impart problems – curators in repositories will not have anyone to replace them. Push from USDA to write proposal to get funding to educate new generation to replace retirees – Gayle Volk and Pat Byrne leads.
      - McFerson – national genetic resources advisory council – Paul Gepps from Davis – provide science based info to sec. of AG. Meeting on monthly basis. NEED UPDATED CROP VUNERABILITY STATEMENTS – Apple is exemplary – problems and opportunities. Very important to update statements. Some not updated for over 20 years.
      - PBCC – plant breeding coordinating committee – 2008 raise awareness of plant breeding programs. Kate Evans is Chair, KG is vice chair. Align with NAPB. USDA changed system and gave more money and is now on 2-year cycle. \$24k total.
        - Problems, bottlenecks, technology, what is the issues? NRSP10 project going online – do the survey of the public plant breeding programs to see how programs are moving, tied to interactive U.S. map. Need to do survey. For comparative purpose.
        - Next step – get similar thing done for private sector and understand educational competencies for workforce development. Public suggests educational system is not outputting the right skillsets to be translational. They need more comprehensive understanding. LIST of core competencies

is being compiled. **GET A SUMMARY/link for RosEXEC website of papers.**

- Phenotyping
  - Standardized phenotyping, High-throughput/high-resolution phenotyping/phenomics, USDA collection evaluation data (GRIN-Global) – status, utility
- Whole genome sequences and physical maps
  - Updates on status of Rosaceae genomes
- Enabling technologies in genomics and genetics
  - Sequencing, annotation, transcriptional profiling, genome-scanning SNP arrays, reference linkage maps, QTL & MTL methods/software and discoveries, MAB: evaluation (trait predictions) – available DNA tests and platforms, MAB: characterization (identity/parentage/ancestry/relatedness) – approaches and progress
    - **INTERNATIONAL RosIGI**
      - Sanger institute: UK – Sequence 25 novel ref genomes – one is blackberry. Done by end of year. Open for collaborations. Go to Sanger.AC.UK – 25 genomes.
      - Craig Sequencing in apple – WSU phone calls moving genomic selection in apple forward. Look for gaps in diversity and fill gaps to unify genotyping platforms. Material from FruitBreedomics, RosBREED, Queensland, Jim Luby, and others. Other update – large proposal to develop innovation in horticultural crops. Only rosaceous crop to include is almond...May include apple. Last – develop ideas to predict GxE and use apple in this area – extend GxE work.
        - Pere asked to share information as much as possible.
      - GOOD BERRY: Berry fruits – straw, rasp. Physiological aspect, genetics/genomics created seg. population. Adapted to south Spain. Pop. are in 5 locations. 6 varieties in many locations. Dormancy, vegetative development, fruit quality. Project ends 2020 – data will release.
      - Nahla Bassil – entire strawberry collection (~500) being phenotyped by Steve Knapp and genotyped by some array.

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#### WHITE PAPER UPDATE

- Strategies to target & write it.
  - Link to the google page for white paper.
    - Folks need to write a paragraph or 2. Bullet points are fine.
    - Cameron paper – Breeding rosaceous crops. White paper is more comprehensive...he focused on DNA informed breeding.
    - White paper should encompass the community at large. 3 points of challenges of technology, diseases, and so on....these are examples.
    - Timeline: BY RGC9 in June – draft form.
    - Separate papers in HortResearch – listed this way on the google paper site. Roadmaps for various components.
    - Series of papers and an editorial that summarizes – USDA and university scientists instead of white papers.
      - What are the papers?
      - Mercy will retitle and post on GDR.

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## PERSONNEL CHANGES

- Retirements and other departures, new positions available, recent positions filled, graduating students, candidates looking for positions (e.g., promising grad students, postdocs)
  - Phytelligence is currently hiring lead breeder for apple, pear, cherry – link on website.
  - Sweet Cherry at WA State – Person should be in w/in a few months.
  - Dorrie is looking for Post-Doc for GDR – link on GDR website.

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## ANNOUNCEMENTS FOR UPCOMING MEETINGS

- RGC9 Nanjing China June 26-30 2018 – GET TIMES FROM KG? Group going should get together. Should have a RosEXEC and RosIGI meeting during the meeting.
- ASHS, Washington DC July 31 August 3<sup>rd</sup>, 2018
- NAPB/PBCC Annual Meetings: 7-9 August 2018, at Quelp, Canada
- IHC August 12-16 Istanbul, Turkey

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## OTHER ITEMS

- New Business
  - Times for this year meetings:
    - April – mid April
    - July – Maybe at RGC9
    - October – last week of October.
    - Dorrie will prepare Doodle poll for time setting
    - NSF Funding opportunity EPSCORE states – RII research infrastructure improvement infrastructure. TRACK 4. Up to \$300k to fund internship or sabbatical anywhere in country. DUE MID MARCH
    - KSENIJA -- Early concept grants for Exploratory research – See link (<https://nifa.usda.gov/funding-opportunity/develop-breakthrough-ideas-and-enabling-technologies-advance-crop-breeding>) – high risk and high reward (between US and UK). \$300k from U.S. Side. DUE in MARCH – 2 pager concept paper.
    - John Clark was honored with the 2017 NAPB impact award

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## NEXT ROSEXEC MEETING

- Setting of times for 2018 quarterly teleconferences

Meeting concluded at 12:00pm

Minutes compiled by Chris Saski