

Schedule

47th Tomato Breeders Roundtable

April 4th

Opening reception 5:30-8:00

Hilton Garden Inn

Light Hors d' Oeuvres and Bar

April 5th

47th Tomato Breeders Roundtable

Fisher Auditorium South Exhibit Area

8:00 Registration

8:30-9:30 Roundtable check in/Area reports

10:00-12:00 Tomato Rootstocks

Moderator – Matt Kleinhenz, OSU

Chieri Kubota, OSU "grafting technologies and their trends" (Keynote Speaker)

Cary Rivard, KSU "assessing scion compatibility in tomato as a function of yield improvement"

Sean Fenstemaker, OSU "vigour, resistance, and rootstocks"

Jonathan Kressin, NCSU "colonization dynamics of the tomato-bacterial wilt pathosystem and its implications for resistance selection"

Rafael Lacaz-Ruiz, Monsanto "rootstock for the computer controlled environment, an industry perspective"

Bryan Zingel, Sakata "industry perspective"

12:00-1:30 Lunch

2:00-5:00 Breeding Technology

Arron Carter "phenotyping and genomic prediction in wheat breeding" (Keynote Speaker)

Erin Steer and Leah Benedict, LGC "KASP service technology for SNP genotyping"

Scott Weigel, AgriPlex Genomics "amplicon based genotyping by sequencing"

Paul Chomet and David Neuman, NRGene “Pan-Genome: Moving beyond a single reference genome: GenoMagic™, a novel solution to describe and manage genomic variation”

Barbara E. Liedl, WVSU, “understanding segregation distortion and reproductive barriers to improve transfer of traits from *S. pennellii* to cultivated tomato”

Eduardo Bernal, OSU, “background genome selection for rapid introgression and evaluation of quantitative trait loci (QTL) for resistance in tomato to multiple *xanthomonas* spp.”

Andika Gunadi, “rapid progress of CRISPR for targeted crop modification”

David Francis, OSU “experience with genomic selection in processing tomato”

Dinner on own

Evening activities:

5:00-6:30 discussion of Pan Genome Project (Hilton Garden Inn, Buckeye Board Room)

7:00-9:00 Tomato CGC (123 Williams Hall, ZOOM link for computer video or telephone connection)

April 6th

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8:00-8:50 Pest Resistance

John Snyder, UKY, “progress report: introgression of iingiberene and type IV trichome density from *Solanum. Habrochaites* LA2329 into *S. lycopersicum*” (Keynote Speaker)

Mohammad H Dawood, UKY “a new sesquiterpene alcohol from wild tomato repelled the two-spotted spider mite, *Tetranychus urticae*”

Ammar AL-Bayati, UKY “the role of trichome secretions and densities in spider mite behavior for an interspecific population of tomato”

Martha Mutschler, Cornell, “prebreeding tomato for optimized acylsugar-mediated resistance to insects”

9:00-11:00 Disease Resistance

Sam Hutton, UFL “virus resistance” (Keynote Speaker)

Jasmine Lopez, UFL., “identification of a major graywall resistance locus on chromosome 9 of tomato”

Jessica L. Chitwood, UFL., “discovery and improvement of novel and known resistance to fusarium wilt race three of tomato.”

Robyn Roberts, Boyce Thompson Institute, “a screen of genetically diverse tomato accessions reveals a range of unusual responses to *Pseudomonas syringae* pv. Tomato’

Rebecca L. Wentz, UFL, “fine mapping and candidate gene characterization of the pepper bacterial spot resistance gene *bs6*”

Pragya Adhikari, NCSU, “bacterial spot of tomato: pathogen story and our efforts of tomato improvement in NC”

Taylor Anderson, Cornell Univ., “Pyramiding resistances to bacterial spot and bacterial speck in elite fresh market tomato”

11:00-12:00 Quality in Whole-Peel and Diced Tomato Products

11:00-11:10 Valente Alvarez, OSU “tomato cutting”

11:10-11:25 Ken Martin, Furman’s “quality evaluation for whole peel and diced (discussion)”

11:30-12:00 Tomato Cutting and Discussion

12:00-1:00 Lunch

1:00-2:30 Tomato Quality

Jessica Cooperstone, OSU “tomatoes, health, and the metabolome” (Keynote Speaker)

Steven Loewen, U of Guelph “breeding for processing tomato quality”

Dilip R. Panthee, NCSU, “tomato improvement for fruit quality and disease resistance at NC State University”

Edgar Sierra Orozco, UFL., “fine mapping of a locus in chromosome 12 controlling flat and globe fruit shape in fresh-market tomato”

Reza Shekasteband, UFL., “fruit weight variation caused by the known FW2.2, FW3.2, FAS, and FW11.3 allele in fresh market tomato”

2:30-3:30 Discussion

Next Place, Next Time

3:30-5:00 Facilities Tours

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Closed-Toe Shoes are recommended

We will divide into groups, each with a tour leader. Please stay with your group.

Station 1 Molecular and Cellular Imaging Center (Building 4, Campus Map, Selby Hall Basement)

Sequencing and Genotyping Equipment (Dr. Tea Meulia)

MCIC Computational Biology Laboratory (MCBL) (Michael Dzakovich (expression analysis), Saranga Wijeratne (SNP pipeline))

Station 2 Williams Greenhouse (Building 7, Campus Map, South Wing)

Tomato Bacterial Spot Screen (Eduardo Bernal)

Assessment of beneficial bacteria in petunia disease screen (Kaylee South)

Station 3 Williams GH (Head House, North Wing, and Gourley Greenhouse)

Wheat Breeding (Nelly Arguello-Blanco)

Digital Phenotyping (Nathan Nordstedt)

Barley Breeding and Genetics (Dr. Eric Stockinger, Gourley Greenhouse)

5:00-7:00 Networking Event, Miller Pavilion, Secrest Arboretum (33 on Campus Map)

Dinner on own

April 7, OSU Plant Science Symposium