



57th SIGA ANNUAL CONGRESS

AULA MAGNA - UNIVERSITA' DEGLI STUDI DI FOGGIA
16-19 September 2013

SCIENTIFIC PROGRAMME

MONDAY, SEPTEMBER 16th

- 13:00 – 14:30 **Registration and poster display**
- 14:30 – 14:45 **Opening ceremony**
Welcome address by Institutional and Local Authorities
- 14:45 – 15:00 **Official opening**
Veronesi F., President of SIGA - Italian Society of Agricultural Genetics
- 15:00 – 17:00 **Session 1 – New breeding objectives and strategies**
Chairpersons: Blanco A., Tuberosa R.
- 15:00 – 15:30 **Invited Lecture**
Crossa J., de los Campos G., Perez P.
Genomic prediction and selections: why and how?
- 15:30 – 15:45 *Delledonne M., Acquadro A., Zamperin G.,
Tononi P., Minio A., Dal Molin A., Toppino L.,
Sala T., Fantini E., Scaglione D., Portis E., Barchi L.,
Lanteri S., Giuliano G., Rotino G.L.*
An eggplant (*Solanum melongena* L.) high quality genome draft
- 15:45 – 16:00 *Giorgi D., Farina A., Grosso V., Lucretti S.*
FISHIS: a way to make simpler complex genome genomics
- 16:00 – 16:15 *Frusciante L., Sanseverino W., Andolfo G.,
Ercolano M.R.*
Genome-wide identification and selection of candidate genes for disease resistance in tomato
- 16:15 – 16:30 *Milner S.G., Maccaferri M., Salvi S., Frascaroli E.,
Corneti S., Stefanelli S., Mantovani P., Gasparini G.,
Bovina R., Massi A., Tuberosa R.*
A multiparental cross population for mapping yield QTLs in durum wheat (*Triticum durum* Desf.)
- 16:30 – 16:40 **Special Communication**
Ravaglia S.
The needs of private breeding: how to strengthen relationships with public research centers
- 16:40 – 17:00 General discussion
- 17:00 – 18:00 **Coffee break & Poster presentation**
(Session 1 and Session 2)

18:00 – 20:10 Session 2 – Plant phenotyping

(in collaboration with European Plant Phenotyping Network)

Chairpersons: De Vita P., Fiorani F.

18:00 – 18:25 Invited Lecture

Fiorani F., Jansen M., Wiese-Klinkenberg A., Nagel K.A., Pieruschka R.

The European Plant Phenotyping Network fosters an integrated approach to plant phenotyping, from technologies to best practice

18:25 – 18:45 Invited Lecture

Doonan J.H., Gay A., Alcade-Barrios A., Draper J., Corke F., Camargo A.

Automated and manual plant phenotyping across different scales

18:45 – 19:05 Invited Lecture

Cseri A., Sass L., Törjék O., Pauk J., Vass I., Dudits D.

Monitoring drought responses of barley genotypes with semi-robotic phenotyping platform and association analysis between recorded traits and allelic variants of some stress genes

19:05 – 19:25 Invited Lecture

Cellini F.

Plant phenotyping research and development at Metapontum Agrobios Research Center of ALSIA

19:25 – 19:40

Gioia T., Nagel K.A., Beleggia R., Ficco D.B.M., Mastrangelo A.M., Platani C., De Vita P., Pieruschka R., Fiorani F., Papa R.

Morpho-physiological evaluation of a collection of tetraploid wheats under different nitrogen levels

19:40 – 19:55

Rizza F., Afshari Behbahanizadeh S., Reggiani F., Zaldei A., Miglietta F., Marè C., Mazzucotelli E., Cattivelli L., Badeck F.W.

Comparison of chlorophyll and flavonoid content in ambient and elevated CO₂ in 12 durum wheat genotypes under field conditions

19:55 – 20:10

General Discussion

20:30 Welcome Cocktail

TUESDAY, SEPTEMBER 17th

- 08:30 – 12:30 **Session 3 – Gene regulation in higher plants**
Chairpersons: Morelli G., Varotto S.
- 08:30 – 09:00 **Invited Lecture**
Østergaard L.
The developmental history of a fruit
- 09:00 – 09:15 *Gregis V., Simonini S., Colombo L., Kater M.M.*
Mining regulatory pathways controlling early stages of flower development in Arabidopsis
- 09:15 – 09:30 *Turchi L., Carabelli M., Ruzza V., Possenti M., Sassi M., Peñalosa A., Sessa G., Salvi S., Forte V., Morelli G., Ruberti I.*
Homeodomain-Leucine Zipper II family of transcription factors control apical embryo development, meristem function and organ polarity
- 09:30 – 09:45 *Gomez-Ariza J., Shrestha R., Brambilla V., Fornara F.*
Molecular adaptation of rice to long-day conditions in Europe
- 09:45 – 10:00 *De Paoli E., Del Fabbro C., Celi M., Pinosio S., Miculan M., Marroni F., Di Gaspero G., Morgante M.*
Single-base resolution of the grapevine methylome reveals the epigenomic landscape of a perennial fruit crop
- 10:00 – 11:30 **Coffee break & Poster presentation**
(Session 5)
- 11:30 – 11:45 *Crosatti C., Quansah L., Marè C., Giusti L., Roncaglia E., Atienza S.G., Cattivelli L., Fait A.*
Cytoplasmic genome substitution in wheat alters the nucleus-cytoplasm crosstalk leading to transcript and metabolite alterations
- 11:45 – 12:00 *Rosellini D., Ferradini N., Zago E., Capomaccio S., Allegrucci S., Veronesi F.*
Polyploidization and the transcriptome of *Medicago sativa*
- 12:00 – 12:30 General discussion
- 12:30 – 13:00 **SIGA Awards**
Chairpersons: Filippone E., Veronesi F.
- 12:30 – 12:45 **"E. Ottaviano" Award for Agricultural Genetics**
Bitocchi E.
Mesoamerican origin of the common bean (*Phaseolus vulgaris* L.) is revealed by sequence data
- 12:45 – 13:00 **"N. Strampelli" Award for Plant Breeding**
Longhi S.
Comprehensive QTL mapping survey dissects the

complex fruit texture physiology in apple
(*Malus x domestica* Borkh.)

- 13:00 – 14:30 **Lunch break**
- 14:30 – 16:45 **Session 4 – Plant metabolomics and crop improvement**
Chairpersons: Grando M.S., Papa R.
- 14:30 – 15:00 **Invited Lecture**
Hall R.D.
Metabolomics - from the breeder to the kitchen table
- 15:00 – 15:30 **Invited Lecture**
Beleggia R., Platani C., Fragasso M., Nigro F., Papa R.
Metabolomics applications in durum wheat improvement
- 15:30 – 15:45 *Zamperin G., Da Silva C., Ferrarini A., Minio A., Dal Molin A., Venturini L., Buson G., Boido E., Dellacassa E., Gaggero C., Pezzotti M., Carrau F., Delledonne M.*
The high polyphenol content of *Vitis vinifera* cv. Tannat berries is conferred mostly by the private and dispensable portion of the genome
- 15:45 – 16:00 *Di Giacomo E., Sobolev A.P., Testone G., Nicolodi C., Arnesi G., Schiappa A., Biancari T., Capitani D., Mannina L., Giannino D.*
A bottom-up approach aimed to traceability and value increase of endive cultivars: from the NMR carbohydrate metabolic profiling to expression analysis and allele diversity of inulin genes
- 16:00 – 16:15 *Costantini L., Malacarne G., Emanuelli F., Battilana J., Coller E., Lorenzi S., Masuero D., Troglio M., Vrhovsek U., Mattivi F., Moser C., Grando M.S.*
The fine genetic regulation of anthocyanin and flavonol content in grapes
- 16:15 – 16:45 **General discussion**
- 16:45 – 17:00 **Special Communication**
Kater M.M.
The Fascination of Plants Day in Italy
- 17:00 – 18:00 **Coffee break & Poster presentation**
(*Session 3 and Session 4*)
- 18:00 – 20:00 **Poster dismount**
(*from Session 1 to Session 5*)
- 18:00 – 20:00 **SIGA General Assembly**

WEDNESDAY, SEPTEMBER 18th

- 08:30 – 10:30 **Session 5 – Biodiversity and breeding**
Chairpersons: Mazzucato A., Sonnante G.
- 08:30 – 09:00 **Invited Lecture**
Pascual L., Xu J., Sauvage C., Bauchet G., Desplat N., Bouchet J.P., Brunel D., Lepaslier M.C., Causse M.
Valorisation of the natural variation available in tomato accessions to decipher the genetic control of quantitative traits
- 09:00 – 09:15 *Sciacca F., Allegra M., Brambilla M., Licciardello S., Roccuzzo G., Romano E., Torrisi B., Virzi N., Intrigliolo F., Palumbo M.*
Mineral elements concentration in durum wheat Sicilian landraces and in improved varieties
- 09:15 – 09:30 *Kuzmanovic L., Gennaro A., Virili M.E., Dodd I., Benedettelli S., Quarrie S.A., Ceoloni C.*
Chomosomal engineered durum wheat-*Thinopyrum ponticum* recombinant lines: valuable tools for dissection of yield-contributing traits
- 09:30 – 09:45 *Ruggieri V., Sacco A., Francese G., D'Alessandro A., Rigano M.M., Parisi M., Milone M., Cardi T., Mennella G., Barone A.*
An association mapping approach to identify new alleles for tomato fruit quality breeding
- 09:45 – 10:00 *Paffetti D., Buonamici A., Travaglini D., Labriola M., Bottalico F., Fiorentini S., Materassi A., Vettori C.*
Potential hazard due to breeding between poplar cultivations and wild relatives in Mediterranean environment
- 10:00 – 10:30 General discussion
- 10:30 – 11:30 **Coffee break & Poster presentation**
(Session 6 and Session 9)
- 11:30 – 13:30 **Session 6 – Genome evolution and domestication**
Chairpersons: Attene G., Reforgiato Recupero G.
- 11:30 – 12:00 **Invited Lecture**
Schlötterer C.
The power of Pool-Seq for genetic analysis
- 12:00 – 12:15 *Sonnante G.*
Two crops from one progenitor: new insights into the domestication of artichoke and cardoon

- 12:15 – 12:30 Aversano R., Fasano C., Di Matteo A., Diretto G., Frusciante F., Giuliano G., Carputo D.
Changing by doubling: impact of whole genome duplication in potato
- 12:30 – 12:45 Iovene M., Zhang T., Lou Q., Buell C.R., Jiang J.
Copy number variation in potato – An asexually propagated autotetraploid species
- 12:45 – 13:00 Scrocca V., Johnson K., Schwarzacher T., Heslop-Harrison P., Gornall R.J.
Allopolyploidy and evolution in the wetland plant genus *Callitriche*: a molecular cytogenetic approach
- 13:00 – 13:30 General discussion
- 13:30 – 15:00 **Lunch break**
- 15:00 – 17:30 **Session 7 – Towards EXPO 2015: Genetics and physiology of biotic stresses**
(in collaboration with SIBV)
Chairpersons: Bellincampi D., Ercolano M.R.
- 15:00 – 15:30 **Invited Lecture**
L'Haridon F., Binda M., Serrano M., Abou-Mansour E., Lehmann S., Benikhlef L., Métraux J.-P.
Plant defenses to pathogens - more refined than expected
- 15:30 – 15:45 Marone D., Russo M.A., Laidò G., De Vita P., Papa R., Blanco A., Gadaleta A., Cattivelli L., Mastrangelo A.M.
Revealing the genetic architecture of powdery mildew resistance in wheat by the construction of a consensus map and subsequent meta-QTL analysis
- 15:45 – 16:00 Woodrow P., Kafantaris I., Iannuzzi F., Mirto A., Fuggi A., Carillo P.
cDNA-NBS profiling of hortensia RGA-like genes responsive to leaf spot fungal infection
- 16:00 – 16:15 Paparella C., Marti L., Savatin D., De Lorenzo G., Ferrari S.
An *Arabidopsis thaliana* LYSM receptor-like kinase regulates resistance to pathogens and abscisic acid responses
- 16:15 – 16:30 Pavan S., Schiavulli A., Zuluaga D.L., Marcotrigiano A.R., Zonno V., Ricciardi F., Bracuto V., Abdelaziz S., Zaza C., Bardaro N., Lotti C., Bouwmeester H., Ricciardi L.
Characterization of the first pea (*Pisum sativum* L.) natural strigolactone-deficient mutant resistant to crenate broomrape (*Orobanche crenata* Forsk.)

- 16:30 – 16:45 *Mazzamurro V., Laviano L., Marcel C.T., Milc J., Francia E., Niks R.N., Vozabova T., Garvin D.F., Roncaglia E., Tagliazucchi Malagoli G., Biciato S., Tagliafico E., Pecchioni N.*
Transcriptome analysis in the interaction
Brachypodium – Puccinia brachypodii
- 16:45 – 17:00 *Bassolino L., Zhang Y., Schoonbeek H.-J., Kiferle C., Perata P., Martin C.*
Skin-specific accumulation of anthocyanins in
tomato extends shelf life
- 17:00 – 17:30 General discussion
- 17:30 – 18:30 **Coffee break & Poster presentation**
(*Session 7, Session 8 and related SIBV posters*)
- 19:00 **Bus departure for Orsara**
- 20:00 **Social Dinner - Ristorante Villa Jamele di Peppe Zullo, Orsara**

THURSDAY, SEPTEMBER 19th

- 09:00 – 12:30 **Session 8 - Towards EXPO 2015: Climate change, abiotic stresses and crop yield**
(*in collaboration with SIBV*)
Chairpersons: *Carillo P., Pecchioni N.*
- 09:00 – 09:30 **Invited Lecture**
Sulpice R., Pyl E.-T., Piques M., Ivakov A., Schulze W.X., Ishihara H., Stitt M.
Cold stress does not necessarily inhibit plant
growth: it depends on when it occurs during the
day
- 09:30 – 09:45 *Longo C., Lupini A., Mercati F., Princi M.P., Miller A.J., Abenavoli M.R., Sunseri F.*
Nitrogen use efficiency in tomato involves a high
affinity long-distance nitrate transporter
- 09:45 – 10:00 *Trono D., Laus M.N., Soccio M., Pastore D.*
How plant mitochondria may contribute to cell
resistance to abiotic stresses. The case study of
durum wheat
- 10:00 – 10:15 *Verrillo F., Rocco M., Occhipinti A., Maffei M.E., Marra M.*
Plasmodesmata are involved in abiotic stress
signalling

- 10:15 – 10:30 *Faà M., Biggiogera M., Sabatini M.E., Donà M., Balestrazzi A., Carbonera D.*
Understanding the dynamics of stress sensing within the plant nucleolus: investigation of the role played by the MtTdp gene family encoding Tyrosyl DNA phosphodiesterase enzymes
- 10:30 – 11:00 **Coffee break & Poster dismount**
(from Session 6 to Session 9)
- 11:00 – 11:15 *Lunardon A., Del Fabbro C., De Paoli E., Hardcastle T., Forestan C., Farinati S., Varotto S.*
Analysis of small RNA populations of maize leaves following abiotic stress treatments
- 11:15 – 11:30 *Marconi G., Pace R., Raggi L., Traini A., Lutts S., Guiducci M., Falcinelli M., Benincasa P., Chiusano M.L., Albertini E.*
DNA methylation influence rapeseed (*Brassica napus* var. *oleifera* Del.) gene expression in response to salt stress conditions
- 11:30 – 12:00 **Invited Lecture**
Sreenivasulu N.
Systems biology perspectives to unravel global abiotic stress response
- 12:00 – 12:30 General Discussion
- 12:30 – 12:50 **Special Communication**
Gennaro A.
Risk assessment of genetically modified plants – An EFSA perspective
- 12:50 – 13:00 **Closing ceremony**
Veronesi F., President of SIGA - Italian Society of Agricultural Genetics