Società Botanica Italiana

Gruppi di lavoro
Biologia Cellulare e Molecolare
Biotecnologie e Differenziamento

Università degli Studi di Napoli Federico II – BIOGEM

Organize the

Summer School

"Challenges, methods and techniques in plant genomic and transcriptomic. From theory to practice"

The aim of this School is to bring together researchers and PhD students having different backgrounds in plant biology (including molecular plant biology, bioinformatics, biosystematics) to discuss topics of high current interest in the field of plant genomic and transcriptomic. We have planned an integrated program, which is focused on topical research seminars during the morning sessions and high-level training in the afternoon sessions. The schedule will leave enough time for discussion and interaction among students and lecturers. The summer school will be held at Research Institute BIOGEM, in Ariano Irpino (Av) (http://www.biogem.it/) for a maximum number of 25 students.

Accomodation: Hotel Incontro

(http://www.benessereviaggi.it/hotel.asp/id_577/hotel_hotel%20centro%20benessere%20incontro.html)

Shuttle service will be available for commuting from/to hotel and BIOGEM center and from/to hotel and train station.

ES train connection Line: Roma – Caserta – Bari -/Station: Ariano Irpino

The Morning program.

The main aim of the school is to encourage PhD students and young researchers to discuss with speakers, basing on this the lecture schedules might undergo to variations

July 26th

9.00- 10.30
Title: Evolutionary genomics of plant adaptation and speciation
Prof. Christian Lexer,
Department of Biology, University of Fribourg, Switzerland.

10.30-11.0 break

11.00-12.30
Title: to be defined
Prof. Riccardo Velasco
IASMA - Istituto Agrario San Michele all'Adige

12.30am- 3.00pm lunch and free time

July 27th

9.00-10.30
Title: Gene complexity and alternative splicing
Prof. Graziano Pesole
Istituto di Biomembrane e Bioenergetica del CNR e Dipartimento di Biochimica e Biologia Molecolare "E. Quagliariello" - Università of Bari

10.30-11.00 break

11.00-12.30
Title: Transcriptome-based genome analyses
Dr. Maria Luisa Chiusano
Dipartimento di Scienze del Suolo, della Pianta, dell'Ambiente e delle Produzioni Animali
Università di Napoli Federico II

12.30am- 3.00pm lunch and free time

July 28th

9.00-10.30
Title: Identification and characterization of genetic determinants of peach ripening by means of "omics" approaches.
Prof. Livio Trainotti
Dipartimento di Biologia
Università di Padova

10.30-11.00 break

11.00-12.30
Title: From organ to cell type specific gene expression profiles.
Prof. Luisa Lanfranco
Dipartimento di Biologia vegetale
Università di Torino

12.30am- 3.00pm lunch and free time

July 29th

9.00-10.30am "Goodbye breakfast "

10.30am -2.00 pm Shuttles to the train station

The Afternoon program

Each afternoon will be planned as follows:
i) Short seminars (20 min each)

ii) Practical activities on genotyping, gene expression, microarrays, etc.

iii) "Hand on" protocols will be presented on

- Microarray expression profile, RNA extraction, Gene expression REALTIME, plant genotyping, gene sequencing, pyrosequencing, etc.

All instruments will be available at BIOGEM platform

Automatic DNA sequencer, Microarray platform, Robotic workstation, real time PCR, Pyrosequencing apparatus, etc.

Further details on the organization of the practical activities will be given day by day

July 26th

3.00-3.20 pm Mini-seminar: Plant genotyping: the pyrosequencing approach

Dr. Davide De Luca, QUIAGEN/EXPLERA ITALIA

3.30-7.00 pm Lab activity 1. SNPs detection in plant genotyping by pyrosequencing

8.30 pm Dinner and free time

July 27th

3.00-3.20 pm Mini-seminar: Gene expression by Real Time PCR

Dr. Danilo Piacenti, APPLERA ITALIA

3.30-7.00 pm Lab activity 2. RNA extraction, Real Time PCR application, gene expression validation

8.30 pm Dinner and free time

July 28th

3.00-3.20 pm Mini-seminar: Microarray-based gene expression profiling

Dr. Pasquale de Luca, BIOGEM

3.30-7.00 pm Lab activity 3. Spotting a microarray, introduction to the different platforms probe design, hybridization, Data analyses of gene expression profiles.

8.30 pm Dinner and free time

Days

Morning	26	27	28	29
9.00-10.30	Evolutionary genomics of plant adaptation and speciation Prof. Christian Lexer	Gene complexity and alternative splicing Prof. Graziano Pesole	Identification and characterization of genetic determinants of peach ripening by means of "omics" approaches Prof. Livio Trainotti	"Goodbye breakfast"
10.30-11.00	break	Break	break	
11.00-12.30	to be defined Prof. Riccardo Velasco	Transcriptome-based genome analyses Dr. Maria Luisa Chiusano	From organ to cell type specific gene expression profiles Prof. Luisa Lanfranco	
12.30-3.00pm	lunch and free time	lunch and free time	lunch and free time	
Afternoon				
3.00-3.20	Mini-seminar Dr. Davide De Luca, QUIAGEN/EXPLERA ITALIA	Mini-seminar Dr. Danilo Piacenti APPLERA ITALIA	Mini-seminar Dr. Pasquale de Luca BIOGEM	
3.30-7.00	Lab activity 1	Lab activity 2	Lab activity 3	
8.30	Dinner and free time	Dinner and free time	Dinner and free time	