19th International Chromosome Conference

Bologna, 2nd – 6th September 2013

Final Program

FINAL PROGRAM

Monday, 2nd September 2013
Dept. Biological, Geological an Environmental Sciences, Aula Ghigi, Via S. Giacomo 3

15.00 Welcome address by local authorities

15.55-16.40 Plenary lecture

The role of structural genomics variants accurately identified from whole genome sequences *Charles Lee (USA)*

16.40-17.00 Coffee break (Dept. Biological, Geological an Environmental Sciences, Museum)

17.00-19.00 Chromosome structure and function

Cell-lineage-specific consequences of condensing II-deficiency on ploidy and haemopoietic development *Andrew J. Wood (UK)*
Genomic composition and turnover of satellite DNA repeats *Miroslav Plohl (HR)*
Neocentromere and centromere evolution *Mariano Rocchi (IT)*
Architecture and functional dynamics of satellite-less centromeres in the equid model system *Elena Giulotto (IT)*

Welcome cocktail (Dept. Biological, Geological an Environmental Sciences, Museum)

FINAL PROGRAM

Tuesday, 3rd September 2013 – Complesso Belmeloro, Via Belmeloro 14

Chromosome structure and function

9.00-10.00
Non-Coding RNA and centromere stability ***Rachel O'Neill (USA)***
Linking chromosome structure to the organization of S phase in human cells ***Dean Jackson (UK)***

10.00-10.30
1) Nucleosome-nucleosome stacking: a basic element of chromosome structure *Nikolay Korolev (SING)*
2) X-ray imaging of chromosomes *Ian Robinson (UK)*

10.30-10.50 Coffee break

10.50-12.05
3) Quantitative and qualitative B chromosomes genotyping in the cichlid fish Astatotilapia latifasciata *Bruno Fantinatti (BR)*
4) B chromosomes are derived from many autosomes in the cichlid fish, Astatotilapia latifasciata *Cesar Martins (BR)*
5*)* Specific centromere structure of equationally dividing chromosomes in the first meiosis of wheat/rye amphihaploids *Dina Loginova (RU)*
6) Conserved DNA motifs, including the CENP-B-Box-like, are involved in satellite DNA array rearrangements *Nevenka Mestrova (HR)*
7) The more the merrier: recently hybridization and polyploidy of Cardamine *Terezie Mandakova (CZ)*
8) Identification of genes with an interest in aquaculture in the species Solea senegalensis (Kaup 1858) and development of a preliminary genetic map *Laureana Rebordinos (ES)*

Sex chromosomes

12.05-12.45
Weird animal genomes, sex and the evolution of new sex determining systems ***Jenny Graves (AU)***

12.45-14.30 Lunch (Dept. Biological, Geological an Environmental Sciences, Museum)

14.30- 15.30
Evolution of sex determination mechanisms and sex chromosomes in fish ***Manfred Schartl (DE)***
Evolution of sex chromosomes in moths and butteflies ***Frantisek Marec (CZ)***

15.30-16.45
1) Toad grasshoppers (Pampfagidae, Orthoptera) as new model for sex chromosomes evolution *Ilyas Jetybayev (RU)*
2) Conserved sex determination across adaptively radiated Anolis li*zards Martina Pokorna (CZ)*
3) Sequencing and de novo assembly of the equine msy *Bhanu Chowdhari (USA)*
4) Plant sex chromosomes: structure, function and evolution *Boris Vyskot (CZ)*
5) Insight into sex chromosome evolutionary relationships in squamate reptiles: the case of Anolis (Reptilia, Iguanidae) *Massimo Giovannotti (IT)*

16.45-17.05 Coffee break

Advances in imaging and molecular technology

17.05-17.35 Nuclear architecture and function studied in space and time with super resolution fluorescence microscopy and electron microscopy ***Thomas Cremer (DE)***

17.35-18.50
1) Optical resolution imaging of chromosomes *Christopher Lynch (UK)*
2) A flow cytogenetic approach to analyze and isolate plant chromosomes: flow sorting of FISH labeled chromosomes in suspension *Debora Giorgi (IT)*
3) Tyramid-FISH is a useful tool for cytogenetic mapping of genes in plant species with small and large chromosomes *Ilya Kirov (BE)*
4) Films as a technique for probing the structure of human metaphase chromosomes *A.K. Estandarte (UK)*
5) 3D electron microscopy for investigating the structure of human mitotic chromosomes *Mohammed Yusuf (UK)*

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Wednesday, 4th September 2013 – Complesso Belmeloro, Via Belmeloro 14

Nuclear organization and dynamics

9-10.30

Long-range, directed movement of Hsp70 transgenes towards nuclear speckles accompanied by chromatin stretching after transcriptional activation *Andrew Belmont (USA)*
Control of chromosome duplication in mammals *Cristina Cardoso (DE)*
Non-coding RNA polymerase II transcripts are required for the structural and functional integrity of the nucleolus *Maywen Caudron-Herger (DE)*

10.30-10.50 *Coffee break*

10.50-12.20
Visualizing gene conversion and meiotic recombination in Arabidopsis *Gregory Copenhaver (USA)*
Cell cycle control of chromosome segregation *Erich Nigg (CH)*
Meiotic chromosome pairing in Sordaria macrospora. Interplay between chromosome structure and recombination *Aurora Storlazzi (IT)*

12.20-13.05

1) Chromatin modifications and replication dynamics of heterochromatin from vole rodents *Ismael Romero-Fernandez (E)*
2) Dynamic and stochastic epigenetic state switching studied in epigenetic engineered mammalian cell systems *Pernette Verschure (NL)*
3) Primary analysis of repeats elements of the Asian Seabass genome and transcriptome *Inna Kuznetcova (SING)*

13.05-14.30 Lunch (Dept. Biological, Geological an Environmental Sciences, Museum)

14.30-16.00
4) Transcriptional activity of transposable elements in coelacanth *Mariko Forconi(IT)*
5) Dinoflagellate ribosomal genes organization and chromosomal structure *Rosa Figueroa (ES)*
6) New data from D.rerio confirmed V-sines as potential miRNA targets *Maria Alessandra Morescalchi (IT)*
7) A more relaxed nuclear organization in PHA human lymphocytes: a 2D and 3D evaluation *Helen Tempest (USA)*
8) Altered chromatin packaging in male factor infertility *Kara Turner (UK)*
9) Organization of telomeres within the human sperm nucleus: an essential requirement for normal fertilization and embryogenesis ? *Helen Tempest (USA)*

16-16.20 Coffee break

Chromosome and genome evolution

16.20-18.20
Isochores and chromosomes *Giorgio Bernardi (IT)*
The avian genome and evolutionary dynamics. The role of HSBs And EBRs *Darren Griffin (UK)*
The evolution of mammalian chromosomes: hypotheses from syntenic associations *Roscoe Stanyon (IT)*
Polyploid genome evolution in crop plants *Trude Schwarzacher (UK)*

SOCIAL DINNER AT "NONNO ROSSI"
Shuttle will leave at 20.00 in front of the congress Venue - Complesso Belmeloro- Via Belmeloro 14

FINAL PROGRAM

Thursday, 5th September 2013 – Complesso Belmeloro, Via Belmeloro 14

Chromosome and genome evolution

9.00-10.00
Chromosomal abnormalities in IVP pre-implantation bovine embryos: an up-date *Dino Di Berardino (IT)*
Clinical cytogenetics in horses: cases in Spanish pure breed (PRE) *Miguel Moreno-Millàn (ES)*

10.00-10.30
1) The B chromosomes of rye is a by-product whole genome evolution and is rich in transcriptional active pseudogene-like fragments *Andrea Houben (DE)*
2) Intensive recombination have led to tandem repeat expansion and enlargement of rye subtelomeric heterochromatin *Alexander Vershinin (RU)*

10.30-10.50 Coffee break

10.50-12.50
3) Two Genlisea species with an eighteen fold genome size differences- a cytogenetic characterization *Joerg Fuchs (DE)*
4) Trends of chromosome evolution in crucifers (Brassicaceae) *Martin Lysak (CZ)*
5) Centromeric insertion and translocations are involved in the diploidy of Phaseolus leptostachyus Benth (Fabaceae) *Andrea Pedrosa-Harand (BR)*
6) Dynamic of karyotypic evolution in Squamate reptiles inferred from comparative gene mapping *Kornson Srikulnath (THAY)*
7) Comparative analysis of gerbils: insight into genome conservation and rate of chromosome evolution among Southern- African taxa *Victor Rambau (SAF)*
8) Chromosome evolution in Cricetinae (Myomorpha, Rodentia) *Svetlana Romanenko (RU)*
9) Recombination plasticity in a wild mice Robertsonian population *Laia Capilla (ES)*
10) On how the study of genetic recombination is providing new insights into mammalian chromosome evolution *Aurora Ruiz-Herrera (ES)*

12.50-14.30 Lunch (Dept. Biological, Geological an Environmental Sciences, Museum)

14.30-15 .00
11) Amplification of genes in mammalian B chromosomes *Vladimir Trifonov (RU)*
12) One, two, many: amplification of HSFY in suid species *Ben Skinner (UK)*

Chromosomal aberrations and disease

15.00-16.00

The new cytogenetics after the tsunami of molecular karyotype *Orsetta Zuffardi (IT)*
The chromosomal basis of male infertility *Helen Tempest (USA)*

16-16.20 Coffee break

16.20 -19.00 Poster session

17.30-19.00 ICGS Open Meeting

FINAL PROGRAM

Friday, 6th September 2013 – Complesso Belmeloro, Via Belmeloro 14

Chromosomal aberrations and disease

9.00-10.30
Universal approaches for detecting genetic disease in IVF embryos: towards understanding the cytogenetics of early human development ***Darren Griffin (UK)***
Chromosomal microarray analysis as a first-line test in high- and low-risk pregnancies ***Francesco Fiorentino (IT)***
The use of microarray for aneuploidy screening and translocations in oocytes and embryos ***Luca Gianaroli (IT)***

10.30-10.50 Coffee break

10.50- 12.35
1) Molecular characterization of two calyculin a induced hotspots of breakage at the human chromosome fragile site FRA11D *Eliane El Achkar (LEB)*
2) Mitotic and chromosomal deficiencies in primary microcephaly syndrome (MCPH) Juan Alberto *Marchal (ES)*
3) Does exposure of human lymphocytes to genotoxic agents alter gene positioning ? *Helen Tempest (USA)*
4) A new way to use whole chromosome painting probes (WCPs) in a clinical case *Alessandra Iannuzzi (IT)*
5) Integrative genomic analysis of human cancer cell types by MFISH, ACGH and gene expression analysis *M. Prakash Hande (SING)*
6) Mouse octochrome: for cytogenetic characterization of mouse LYR tumor cell line *Gothami Fonseka (UK)*
7) Genome wide analysis reveals single nucleotide polymorphisms associated with fatness and putative novel copy number variants in three pig breeds *Katy Fowler (UK)*

CONCLUSION