



European
Cytogeneticists
Association



13th EUROPEAN CYTOGENOMICS CONFERENCE

3 - 5 JULY 2021

www.eca2021.org



ONLINE CONFERENCE

FINAL ANNOUNCEMENT

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WELCOME FROM THE PRESIDENT

Dear Colleagues and Friends,

I hope this letter finds you in good health. What we are going through in these terrible times is no small matter. First of all, please make a note of the 13th European Cytogenomics Conference ECC (online): 3-5 July 2021.

When the pandemic hit last year, our conference was nearly two years away and I thought it might be safe to start organizing. In fact, we had already begun to visit potential convention centres.

Unfortunately, this year the coronavirus has returned with a vengeance, putting the whole world in an incredible situation; the end is not yet in sight. I fear it has also affected some members of our ECA community or their families. The decision to hold an online conference in 2021 was, therefore, not a choice but a necessity, despite the arrival of the vaccine.

The ECA conferences provide an ideal opportunity every two years for members of our community to meet, to renew old contacts and make new ones, and to exchange information and experiences. Unfortunately, this time it will be different. In any case, we will have the opportunity to hear outstanding speakers talk about progress in our fields. I deliberately use the plural, "fields", because of the three different branches of our Association: cytogenomics of humans, non-human animals, and plants. This broad view of life on Earth may also help to understand why SARS-CoV-2 is developing mutations with increasing fitness.

An online conference would mean that we would have to sit in front of a computer for hours. For this reason we have decided on a simplified version of the program, with a reduced number of lectures and without parallel sessions. However, an online conference could provide a greater opportunity to participate, especially for young people, because of no travel and accommodation costs and a reduced registration fee.

The program is complete, as you can see on the dedicated web page.

In the second half of 2021, hoping that the vaccination will have substantially improved the situation, we plan to organize a physical General Assembly with Board elections, as required by the statutes.

I also want to mention that ECA is present on Facebook at <https://www.facebook.com/Cytogenetic>, where new posts covering a wide range of biological news are regularly placed. These posts also appear on a plain web page at <https://www.e-c-a.eu/EN/CYTOGENOMICS-NEWS.html>.

I look forward to "seeing" you at the conference; though we will not really see each other as it is online. However, I hope we will see numerous contributions in the form of posters which will be available for viewing at the conference. In any case, a few faces will be seen because some abstracts will be selected for oral presentation at the end of various sessions or during the Permanent Working Group meetings. And remember the only non-virtual thing in this virtual conference: poster-prizes!

The website of the ECA is ready to accept registrations.

Kind regards,

Mariano Rocchi
President of ECA



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COMMITTEES

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SCIENTIFIC SECRETARIAT

E.C.A General Secretariat
Institute of Human Genetics Hannover
Medical School
30623 Hannover - GERMANY
E-Mail: Miller.Konstantin@mh-hannover.de

ORGANIZING SECRETARIAT

 **DEKON**
CONGRESS & TOURISM

Tel : +90 212 347 63 00
Fax : +90 212 347 63 63
E-Mail: eca2021@eca2021.org





CONFERENCE PROGRAMME

Saturday, 3 July 2021

(Central European Summer Time, UTC +2)

CEST **Permanent Working Groups, Satellite Meetings and Online Poster Area**

09:00-09:05 **Introduction by the President**
Mariano Rocchi

09:05-10:00 **Permanent Working Group Animal & Plant Genomics**
Session Coordinator: Pat Heslop-Harrison

Poster Presentations:

Alla Krasikova: Spatial organization of topologically associated chromatin domains in chicken somatic cell types and meiotic lampbrush chromosomes revealed by FISH

Alsu Saifitdinova: Avian lampbrush chromosomes reflect the complexity of their genome organization at meiotic reprogramming stage

Tatiana Bikchurina: Hybrid sterility in gray voles

Alessandra Iannuzzi: Bovine telomere association between age and breed

Alexandr Sember: Cytogenomics of annual killifish: sex determination and repetitive DNA dynamics in closely related *Nothobranchius furzeri* and *N. kadleci*

Sebastian Pita: Satellitome analysis unravels the karyotypic evolution in *Triatoma* kissing bugs (Hemiptera: Reduviidae)

Pablo Mora: Comparative analysis of the satellitome in ladybirds (Coleoptera, Coccinellidae)

10:05-10:35 **Permanent Working Group Cytogenetic Toxicology and Mutagenesis**
Session Coordinator: Emanuela Volpi

Poster Presentations:

Sophia Zachaki: Chromosome instability and gene rearrangements in ectopic endometriotic tissue of women with endometriosis

Moonisah Usman: Predictors of genomic instability in childhood obesity: a study of multiple variables

Roberto Valli: Interstitial deletion of chromosome 20 and isochromosome i(7)(q10) in the bone marrow of patients with Shwachman-Diamond syndrome: novel evidence of karyotype instability related to somatic rescue mechanisms

10:40-11:35 **Industry-sponsored Satellite Symposium**

11:40-12:15 **Permanent Working Group Prenatal Diagnosis**
Session Coordinator: Jean-Michel Dupont

Tommaso Cavazza: Parental genome unification is highly error-prone in mammalian embryos

Poster Presentation:

Laurence Lohmann: Whole genome NIPT: confirmation of the high performance as a screening test

12:20-12:50 **Permanent Working Group Quality Issues, Training and Cytogenomics**
Session Coordinator: Ron Hochstenbach

Rosalind Hastings: ISCN 2020 - What's new?

Poster Presentation:

Thomas Liehr: An international collaboration for human ring chromosomes (ICHRC) towards developing standards and guidelines for best practice in laboratory diagnosis, clinical management and collaborative research



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CONFERENCE PROGRAMME

- 12:55-13:50 **Industry-sponsored Satellite Symposium**
- 13:55-14:25 **Permanent Working Group Cytogenomics of Hematological Malignancy**
Session Coordinator: Harald Rieder
- Poster Presentations:
 Dolors Costa: Balanced and unbalanced translocations in a multicentric series of 2,843 patients with chronic lymphocytic leukemia
- Catherine Menten: The use of optical genome mapping (Bionano) to understand a complex mechanism of KMT2A rearrangement in an AML case
- Emanuela Volpi: Analysis of chromosomal instability in chronic lymphocytic leukaemia
- 14:30-15:25 **Permanent Working Group Cytogenomics**
Session Coordinator: Joris Vermeesch
- Poster Presentations:
 Flavia Maggolini: Single-cell strand sequencing of a macaque genome reveals multiple nested inversions and breakpoint reuse during primate evolution
- Veniamin Fishman: Precise detection of balanced chromosomal rearrangements and single nucleotide variations using chromosome conformation capture
- Tine De Coster: Non-canonical zygotic divisions are characterized by parental genome segregation errors
- Thomas Guignard: AnnotSV and knotAnnotSV: a web server for human structural variations annotations, ranking and analysis
- Jakob Schuy: A case of ring chromosome 21 with hemifacial microsomia, developmental and speech delay analysed with WGS and patient-derived iPS
- 15:30-16:25 **Industry-sponsored Satellite Symposium**
- 16:30-17:00 **Permanent Working Group Cancer Cytogenomics and Solid Tumor Studies**
Session Coordinator: David Gisselsson Nord
- Paola dal Cin: Next-Generation technologies in old generation laboratories
- 17:05-18:00 **Opening Ceremony**
Chair: Mariano Rocchi
 President's Address
 Mariano Rocchi
- Opening Lecture
 Terry Hassold: Aneuploidy: Where do we go from here?



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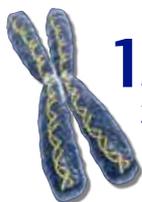
 ONLINE CONFERENCE

CONFERENCE PROGRAMME

Sunday, 4 July 2021

(Central European Summer Time, UTC +2)

| | |
|--------------------|---|
| CEST | ONLINE POSTER AREA |
| 10:00-12:30 | Session 1 : Prenatal and Preimplantation Diagnosis <i>Chair: Jean-Michel Dupont</i> |
| 10:00-10:35 | Lyn Chitty: The impact of sequencing on prenatal diagnosis |
| 10:35-11:10 | Erik Sistermans: Non-invasive fetal aneuploidy screening |
| 11:10-11:45 | Carmen Rubio: Embryo aneuploidy testing, past, present and future |
| 11:45-12:30 | Selected Abstracts Stanislav Vasilyev: Aneuploidy is associated with increased methylation of different LINE 1 retrotransposon families in placenta of first trimester miscarriages Kris Van Den Bogaert: Outcome of publicly funded nationwide first tier noninvasive prenatal screening Radhia M'Kacher: Direct inheritance of telomere shortening and aberrations detected during prenatal period |
| 12:30-14:00 | ONLINE EXHIBITION & BREAK |
| 14:00-16:15 | Session 2 : Cancer Cytogenomics <i>Chair: Roberta Vanni</i> |
| 14:00-14:35 | Roland Schwarz: Pervasive chromosomal instability and karyotype order in tumour evolution |
| 14:35-15:10 | Florent Moulriere: Early detection of cancer by liquid biopsy |
| 15:10-15:45 | Lindsey Montefiori: Enhancer hijacking of BCL11B defines a subtype of lineage ambiguous acute leukemia |
| 15:45-16:15 | Selected Abstracts Ming Chen: primary tumor and circulating tumor cells captured by microfluidics in epithelial ovarian cancer tumor heterogeneity or allele dropout? Barbara Dewaele: Opportunities of Optical Genome Mapping for Genetic Diagnosis in Acute Lymphoblastic Leukemia |
| 16:15-16:30 | ONLINE EXHIBITION & BREAK |
| 16:30-18:45 | Session 3 : Clinical Cytogenomics <i>Chair: Elisabeth Syk-Lundberg</i> |
| 16:30-17:05 | Chelsea Lowther: Computational and molecular dissection of long-range positional effects in human developmental disorders |
| 17:05-17:40 | Gulio Genovese: Mosaic variants and clonal selection in health and disease |
| 17:40-18:15 | Sébastien Jaquemont: Predicting CNV effects on brain structure, function and risk for psychiatric conditions |
| 18:15-18:45 | Selected Abstracts Heleen Masset: Chimerism and mixoploidy in human preimplantation embryos disclosed by comprehensive PGT Romain Nicolle: 16p13.11p11.2 triplication syndrome a new recognizable genomic disorder characterized by optical mapping |



CONFERENCE PROGRAMME

Monday, 5 July 2021

(Central European Summer Time, UTC +2)

| | |
|----------------------|--|
| CEST | ONLINE POSTER AREA |
| 10:00-12:15 | Session 4 : Animal and Plant Cytogenomics <i>Chair: Pat Heslop-Harrison</i> |
| 10:00-10:35 | Tony Heitkam: Repetitive DNA, epigenetic variability, and genomic innovation in higher plants |
| 10:35-11:10 | Marta Farré-Belmonte: Genome evolution and genetic changes associated with individual and species differences |
| 11:10-11:45 | Aurora Ruiz-Herrera: Genome integrity and mechanisms driving karyotype evolution |
| 11:45-12:15 | Selected Abstracts Lyubov P. Malinovskaya: The meiotic behavior and transmission of germline restricted chromosome (GRC) in songbirds Cibele Sotero-Caio: Trends of chromosome rearrangements and evolution in bats highlights from comparative chromosome painting analyses |
| 12:15 - 13:45 | ONLINE EXHIBITION & BREAK |
| 13:45-15:30 | Session 5 : Widening Perspectives on Genome Variation <i>Chair: Joris Vermeesch</i> |
| 13:45-14:20 | Tom Mistelli: Genome Organization: from basics to disease |
| 14:20-14:55 | Thierry Voet: Single-cell multi-omics to study genetic heterogeneity in health and disease |
| 14:55-15:30 | Segun Fatumo: The global genome/genomes sans frontiers |
| 15:30-16:00 | ONLINE EXHIBITION & BREAK |
| 16:00-17:45 | Session 6 : Disease Prevalence and Sex Differences <i>Chair: Kamlesh Madan</i> |
| 16:00-16:35 | Joris Veltman: (Cyto)genetics of male infertility |
| 16:35-17:10 | Darío Lupiáñez: Non-coding regulation of sexual features |
| 17.10-17:45 | Christine M Disteché: X-chromosome regulation and sex differences in brain anatomy |
| 17:50-18:25 | Farewell Session <i>Chair: Mariano Rocchi</i> Closing Keynote Evan E. Eichler: Long-read sequencing, disease variants and genome evolution |
| 18:25-19:00 | Closing Ceremony <i>Chair: Mariano Rocchi</i> |



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CME ACCREDITATION

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The 13th European Cytogenomics Conference, Virtual Conference, 03/07/2021-05/07/2021 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 17 European CME credits (ECMEC®s). Each medical specialist should claim only those hours of credit that he/she actually spent in the educational activity.

Through an agreement between the Union Européenne des Médecins Spécialistes and the American Medical Association, physicians may convert EACCME® credits to an equivalent number of AMA PRA Category 1 Credits™. Information on the process to convert EACCME® credit to AMA credit can be found at www.ama-assn.org/education/earn-credit-participation-international-activities.

Live educational activities, occurring outside of Canada, recognised by the UEMS-EACCME® for ECMEC®s are deemed to be Accredited Group Learning Activities (Section 1) as defined by the Maintenance of Certification Program of the Royal College of Physicians and Surgeons of Canada.

POSTER PRIZES

Five poster prizes to the value of 250 Euro each will be awarded at the Conference to participants who present the best posters on work derived from a thesis (still to be completed) or from a degree awarded between 2019 and 2021.

CONFERENCE DATES AND LANGUAGE

The conference will take place virtually on 3 - 5 July 2021. The official language will be English.

CONFERENCE TIME ZONE

All conference sessions will be held in **Central European Summer Time, UTC +2.**



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REGISTRATION REGISTRATION

Please proceed to the online registration system via the official conference web page www.eca2021.org

| Registration Fees | Regular Registration On and after 16 May 2021 |
|-------------------|--|
| E.C.A Member Fee | 100 € |
| Non-E.C.A. Member | 150 € |

- Registration will be confirmed only after full payment has been received. If you have not received a confirmation notice before the conference, please contact the registration secretariat at registration@eca2021.org. Only those participants who complete their registration will have their abstract published.
- Each registered participant is allowed to present only one paper.
- The date of receipt of the registration fee will be considered to be the date of registration, even if the registration form has been received before the deadline for early bird or late registration.
- Taking pictures of the presentation slides is not allowed for copyright reasons as the speakers present previously unpublished scientific data and photographs of patients who have given their consent to present but not to distribute the images.

Congress Participant Fee includes:

- Participation in all virtual scientific sessions
- Entry to the virtual exhibition hall

Cancellation Policy - Registration:

- Requests for cancellation of registration must be received in writing by the E.C. A. 2021 Registration Secretariat (DEKON) by fax at +90 212 347 63 63, or via e-mail to registration@eca2021.org.

- Requests received **before or on 21 May 2021**: a handling fee of 40 € will be deducted from the refund

- Requests received **on or after 22 May 2021**: no refund

Please note that registration refunds will be processed within 30 days after the end of ECA 2021, bank charges will be deducted from the refund.

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Workshop and virtual booth on the ECA 2021!

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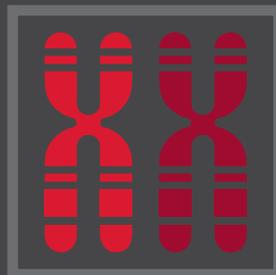
... Metaphase Finding and Image Acquisition



... Separation of Chromosomes



... Karyogram Class Assignment

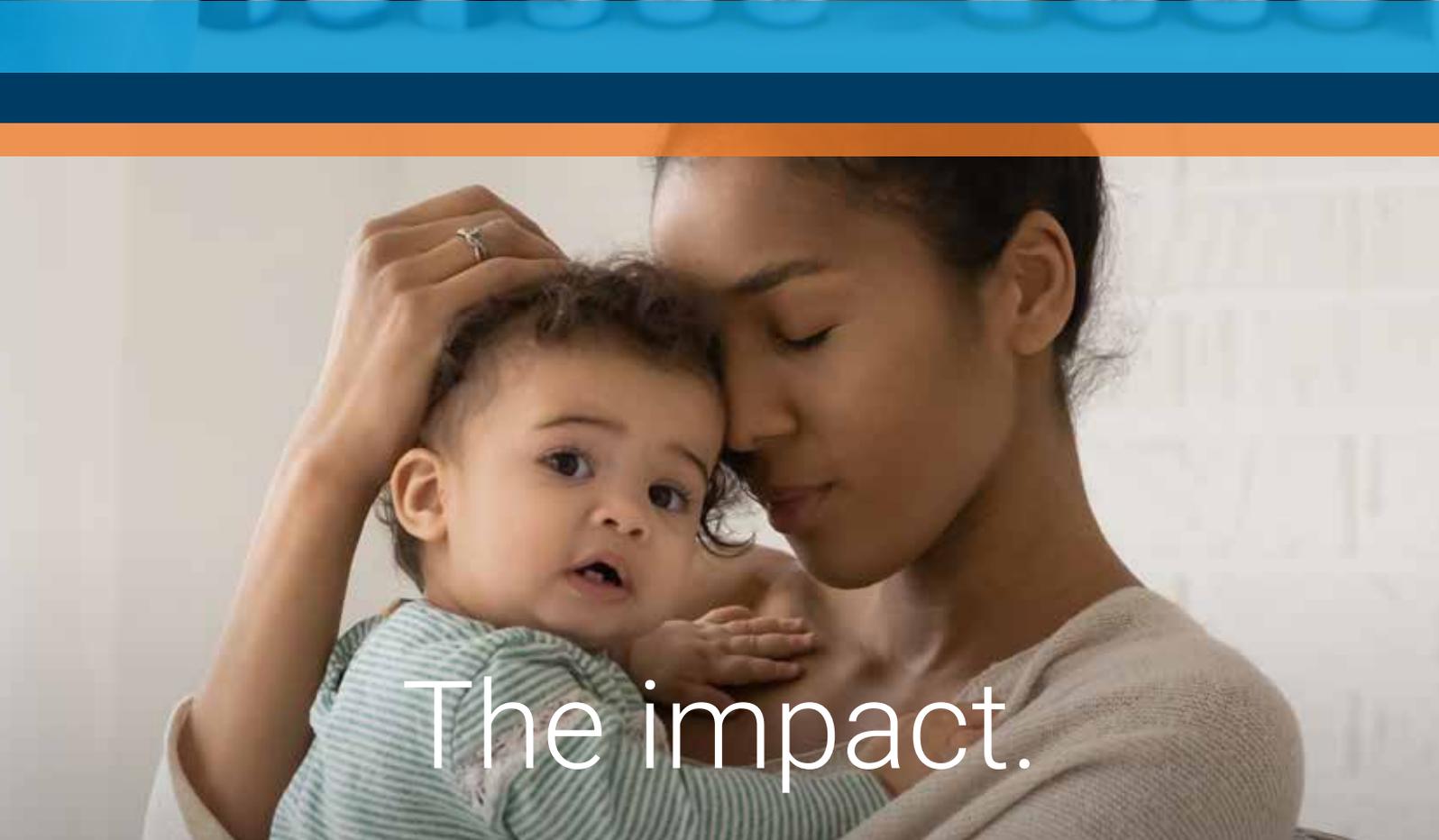



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The impact.

Every genetic result sparks an impact. When you confidently solve development hurdles you advance critical knowledge, influence decisions, and give hope to future generations.

Spark your impact by visiting our **Virtual Booth** at ECA 2021 and joining our **Satellite Symposium** on July 3rd.

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Organizing Secretariat

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Tel : +90 212 347 63 00 • Fax : +90 212 347 63 63
E-Mail: eca2021@eca2021.org

Scientific Secretariat

E.C.A General Secretariat
Institute of Human Genetics Hannover
Medical School
30623 Hannover - GERMANY
E-Mail: Miller.Konstantin@mh-hannover.de