

**Programme**

**KEYNOTE SESSION**

**13th July 2021**

* US West coast 4am
* US East coast 7am
* Sao Paulo 9am
* **UK (Canterbury) Time 12noon**
* France, Spain, Italy, Germany, etc. 1pm
* Dubai, Moscow – 3pm
* Karachi – 4pm
* Bangkok – 8pm
* **Canberra – 9pm**
* New Zealand 10pm

**Opening ceremony, welcome by the Chairs. 15-minute introduction**

Darren Griffin, Tariq Ezaz and Janine Deakin

**KEYNOTE SPEAKER: Professor Jennifer Marshall-Graves**

*Chromosomal and epigenetic sex determination*

Social Event approximately 1 hour later

**Conference Sponsor and Special Issue**

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**24th International Colloquium on Animal Cytogenetics and Genomics (ICACG)**

**14th July 2021 Canterbury time Canberra Time**

**Session 1: Emerging technologies (Mohammed Yusuf chair) 10.30am – 12.35pm 7.30pm – 9.35pm**

* Mohammed Yusuf. *Ultra-structural imaging provides a 3D organization of*

*46 chromosomes of a human prophase nucleus* 10.30am – 10.55am

* Tony Gordon. *Technologies for single cell cytogenetic analyses* 10.55am – 11.20am
* Misa Hayashida. *Higher-Order Structure of Chromosomes Observed by*

*Electron Diffraction and Electron Tomography* 11.20am – 11.45am

* Stanley Botchway. *The use of fluorescence lifetime imaging for investigating*

*chromatin structure and condensation in chromosomes* 11.45am – 12.10pm

* Ben Skinner. *Image warping for assessing chromatin organisation*

*in asymmetric nuclei* 12.10pm – 12.35pm

**Session 2: Animal cytogenetics (Peter Ellis chair) 1.30pm – 3.10pm 10.30pm – 12.10am**

* Claudia Rathje. “*Clinical” cytogenetics in domestic and endangered species* 1.30pm – 1.55pm
* Rafael Kreschmer. *Chromosomes in birds and other dinosaurs* 1.55pm – 2.20pm
* Kornsorn Srikulnath. *Sex, repeats and chromosomes in birds and reptiles* 2.20pm – 2.45pm
* Marta Farre-Belmonte. *Gross genomic changes within and between species*  2.45pm – 3.10pm

**Session 3: Accessory Chromosomes (Cesar Martins chair) 3.30pm – 5.10pm 12.30am – 2.10am**

* Cesar Martins. B chromosomes in cichlid fish 3.30pm – 3.55pm
* Michael Habig. Christian-Albrechts. *Functional characterization of accessory*

*chromosomes in Fungi* 3.55pm – 4.20pm

* Stacey L. Hanlon. *B chromosomes in Drosophila* 4.20pm – 4.45pm
* Alevtina Ruban. *Supernumerary B chromosomes of Aegilops speltoides* 4.45pm – 5.10pm
* Patrick Ferree *Parasitic B chromosomes* 5.10pm – 5.35pm

**15th July 2021 Canterbury time Canberra Time**

**Session 4: Genome evolution (Denis Larkin chair) 10.30am – 1.00pm 7.30pm – 10.00pm**

* Denis Larkin. *Chromosome evolution in mammals* 10.30am – 10.55am
* Anna Torgasheva. *A story of the 'spare' chromosome in songbird germ line* 10.55am – 11.20am
* Vladimir Trifonov. *Patterns of segmental rediploidization in sterlet genome* 11.20am – 11.45am
* Helder Maiato. *A deer's perspective on mitosis* 11.45am – 12.10pm
* Agda Bernegossi. *Chromosomal evolution in neotropical deer:*

*Implications for speciation, taxonomy and conservation* 12.10pm – 12.35pm

* Claire Merot. *Polymorphic inversions in seaweed fly* 12.35pm – 1.00pm

**Session 5: Chromosome dynamics in germ cells: 1.30pm – 3.35pm 10.30pm – 12.35am**

 **structure, regulation and evolution (Aurora Ruiz-Herrera chair)**

* Paul Waters. *Executioner genes and meiosis* 1.30pm – 1.55pm
* Takashi Akera. *Cell biology of non-Mendelian chromosome segregation*

*in oocytes* 1.55pm – 2.20pm

* Aurora Ruiz-Herrera. *Dynamics of 3D genome structure*

*during spermatogenesis* 2.20pm – 2.45pm

* Jesus Page. *Meiotic behaviour of sex chromosomes* 2.45pm – 3.10pm
* Monica Colaiacovo. *Chromosome dynamics in C. elegans meiosis* 3.10pm – 3.35pm

**Session 6: Complex, Elusive, and Functionally Important 4.00pm – 6.05pm 1.00am – 3.05am**

**Elements of the Genome (Beth Sullivan chair)**

* Lilian Kabeche. *RNA:DNA hybrids at pericentromeres (Mammals)* 4.00pm – 4.25pm
* Cecile Courret. *Satellites and TEs within insect centromeres (Drosophila)* 4.25pm – 4.50pm
* Maiko Kitaoka. *Centromere driven retention of chromosomes in hybrids* 4.50pm – 5.15pm
* Kaustuv Sanyal. *Inter-chromosomal interactions give birth to neocentromeres* 5.15pm – 5.40pm
* Fangpu Han. *Backspliced TE RNAs regulate centromeric chromatin loops* 5.40pm – 6.05pm

**Social event**

**Conference sponsored by:**

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**23rd International Chromosome Conference (ICC)**

**16th July 2021** **Canterbury time Canberra Time**

**Session 7: PLENARY Session (Marta Farre chair) 8.30am - 10am 5.30pm - 7pm**

* Jaroslav Doležel. *Uncovering 3D topology of plant mitotic chromosomes using*
* *3 Different approaches* 8.30am – 9.00am 5.30pm – 6.00pm
* Ana Pombo. *Specialization of brain cell types encoded in chromatin topologies* 9.00am – 9.30am 6.00pm – 6.30pm
* Ting Wu. *Doubling down on pairing: from ultra-conservation*

*to super-resolution imaging* 9.30am – 10.00am 6.30pm – 7.00pm

* Robert Neely. *Expansion microscopy and its use in chromosome analysis* 10.00am - 10.30am 7.00pm – 7.30pm

**Session 8: Mammalian Reproduction and Preimplantation Testing 11.00am – 12.40pm 8.00pm – 9.40pm (Darren Griffin, chair)**

* Darren Griffin. *The human embryonic genome is karyotypically fluid and*

*dynamic, actively expelling aneuploid cells from the developing foetus* 11.00am – 11.25am

* Giuseppe Silvestri. *Preimplantation genetics in pigs and cattle* 11.25am – 11.50am
* Peter Ellis. E*volutionary conservation of sperm chromosome territories* 11.50am – 12.15pm
* Shadi Khalil. *Demonstration of teaching PGT with virtual reality* 12.15pm – 12.40pm

**Session 9: Selected Abstracts and Posters 1.15pm – 2.30pm 10.15pm – 11.30pm**

* Talk 1
* Talk 2
* Talk 3
* Poster 1
* Poster 2
* Poster 3

**NOTE 7½ HOUR GAP**

**Session 10: Genome Instability (Helen Tempest, chair) 9.30pm – 11.10pm 6.30am – 8.10am**

* Tim Fenton. *Genome instability and APOBEC*  9.30pm – 9.55pm
* Urszula McClurg. *Expression of meiotic proteins in cancer & genome stability* 9.55pm – 10.20pm
* Marcus Cooke. *Targeted and untargeted analyses of damage to nucleic acids*

*– contributors to exposomics* 10.20pm – 10.45pm

* Helen Tempest. *Mechanisms generating aneuploidy in gametes* 10.45pm – 11.10pm

**Session 11: TBA (Rachel O’Neill chair) 11.30pm – 1.10am 7.30am – 9.10am**

* Rachel O’Neill, From telomere to telomere: the transcriptional and

epigenetic landscape of human repeat elements 11.30pm – 11.55pm

* Kim Hyun Hee, *Chromosome dynamics inferred from repeatomics*

*studies in Brassica and Senna species*11.55pm – 12.20am

* Ikuo Miura. *Evolutionary history of sex chromosomes in the frog*

*Glandirana rugosa: Two times turnover and four times recycling* 12.20am – 12.45am

* Hardip Patel, TBA 12.45am – 1.10am

**17th July 2021 Canterbury time Canberra Time**

**Session 12: Genome function in the nucleus (Dean Jackson chair) 6.30am – 8.35am 3.30pm - 5.35pm**

* Antony Adamson. *Recent advances in genome editing* 6.30am – 6.55am
* Sankari Najarajan. *Applying CRISPR to cancer screening* 6.55am – 7.20am
* Pedro Olivares. *Techniques to analyse genome structure and function* 7.20am – 7.45am
* Angela Pisco. *Single cell analysis identifies ageing signatures* 7.45am - 8.10am

**Session 13: Evolution, structure holo- and mono-centric chromosomes 8.30am – 10.35 am 5.30pm – 7.35pm**

 **(Andreas Houben chair)**

* Ines Drinnenberg. *Insights into the molecular architecture of CenH3-deficient*

*holocentromeres in Lepidoptera* 8.30am – 8.55am

* Andre Marques. *Genome function and evolution in plants*

*with repeat-based holocentromeres* 8.55am – 9.20am

* Miroslav Plohl. *The genomic landscape of satellite DNAs and centromeres*

*in some invertebrate model organisms* 9.20am – 9.45am

* Yi-Tzu Kuo. *Chionographis - A missing link in the mono- to*

*holocentromere evolution*  9.45am – 10.10am

* Amanda Souza Camara / Veit Schubert. *'Metaphase chromosome*

*coiling - a conserved feature?* 10.10am – 10.35am

**Session 14: ERVs (Pat Heslop-Harrison chair) 11.00am – 12.40pm 8.00pm – 9.40pm**

* Pierre-Olivier Duroy. *Characterization and mutagenesis of Chinese hamster* 11.00am – 11.25am

*ovary cells endogenous retroviruses to inactivate viral particle release*

* Sarbast Mustafa. *Identifying ERVs in raw-reads and using these for FISH* 11.25am – 11.50am
* Darren J. Wighta. *Unbiased optical mapping of telomere-integrated* 11.50am – 12.15pm

*endogenous human herpesvirus 6*"

**Social event Venue and date of next meetings Close of meetings**