

APCC8 SCIENTIFIC PROGRAM

17.09.2023

Registration

Sunday, 17th of September, 2023

15.00 – 18.00 Registration at the rectorate building of TNKU

Monday, 18th of September, 2023

MORNING

08.00 – 10.00 Registration at the rectorate building of TNKU

10.00 – 11.00 Opening Talks

Plenary lectures

Chairpersons:

Yasuhiko Mukai, Osaka Kyoiku University, Japan

Kim Nam Soo, Kangwon National University, Korea

11.00 – 11.40 **Who is the boss DNA or chromosomes? Rules governing evolution of structural and numerical chromosomal diversity during speciation**

Bikram Gill, Kansas State University, USA

11.40 – 12.20 **DNA double-strand breaks fuel genome and karyotype evolution**

Ingo Schubert, IPK, Germany

Group Photo

Poster Session

13.00 **Lunch at Faculty Cafeteria of TNKU**

AFTERNOON

14.30 – 16.15 **Session 1**

Karyotype evolution, taxonomy and comparative genomics

Chairpersons:

Ahmet Latif Tek, Niğde Ömer Halisdemir University, Turkey

Maki Yamamoto, Kansai University, Japan

14.30 – 15.00 **Chromosome evolution played multiple roles in speciation in nematodes**

Kohta Yoshida, National Institute of Genetics, Japan.

15.00 – 15.15 **Evolution of *Musaceae* through chromosome rearrangements: evidence from whole chromosome painting and long reads sequencing**

Eva Hribova, Institute of Experimental Botany, Czech Republic.

15.15 – 15.30 **FISH chromosomal mapping of tandem repeats revealed species – specific distribution pattern among *Zoysia* species**

Umavathi Saraswathi, Sahmyook University, Republic of Korea

15.30 – 15.45 **Pan-centromere reveals widespread centromere repositioning in the genome evolution of soybean**

Yang Liu, Chinese Academy of Sciences, Beijing, China.

15.45 – 16.00 **Cytogenetics of a synthetic F1 hybrid (*Aponogeton decaryi* x *A. satarensis*)**

Shrirang Yadav, Shivaji University, India.

16.00 – 16.15 **Identification of sainfoin (*Onobrychis viciifolia*) heterochromatin regions in terms of repetitive DNA elements**

Sevim Döndü Kara Öztürk, Niğde Ömer Halisdemir University, Türkiye.

Coffee Break / Poster Session

16.45 – 18.15	Session 2
	Karyotype evolution, taxonomy and comparative genomics
	Chairpersons: Nurul Faridi, Texas A&M University, USA Shrirang Yadav, Shivaji University, India
16.45 – 17.15	M-FISH and cytogenetic analysis on the gibbon and siamong iPSCs Hideyuki Tanabe, The Graduate University for Advanced Studies, Japan.
17.15 – 17.30	Chromosome synapsis and recombination in the great tits <i>Parus major</i> carrying a large and complex chromosome rearrangement Lyubov Malinovskaya, Novosibirsk State University, Novosibirsk, Russian Federation.
17.30 – 17.45	Genomic Characterization and evolutionary implications of centromeric satellite DNA in wild populations of macaques Worapong Singchat, Kasetsart University, Thailand.
17.45 – 18.00	Spaghetti connections: synaptonemal complex analysis for unraveling fish chromosomes Artem Lisachov, Kasetsart University, Thailand.
18.00 – 18.15	Comparative FISH analysis of tandem repeats revealed chromosomal dynamics in genus <i>Senna</i> Hong Thi Nguyen, Sahmyook University, Korea
19.00-22.00	Welcome Dinner at Yelken Restaurant

Tuesday, 19th of September, 2023

MORNING

09.00 – 10.45	Session 3
	Chromosome aberrations
	Chairpersons: Fangpu Han, Chinese Academy of Sciences, China Hakan Özkan, Çukurova University, Türkiye
09.00 – 09.30	DNA breaks: from precise repair and chromosome engineering to catastrophic chromosomal rearrangements Avraham Levy, Weizmann Institute of Science, Israel.
09.30 – 09.45	Mosaic runs of homozygosity in first trimester spontaneous abortions trace the karyotype self-correction events in early human development Igor Lebedev, Tomsk National Research Medical Center, Russian Federation
09.45 – 10.00	Pleiotropic effects of DNA copy number variations in human ontogenesis Anna Kashevarova, Tomsk National Research Medical Center, Russian Federation
10.00 – 10.15	Revealing the repertoire of common fragile sites peculiar to induced pluripotent stem cells Diana Zheglo, Research Centre for Medical Genetics, Russian Federation
10.15 – 10.30	Unraveling the role and mechanism of Aurora B/AIR-2 in preventing merotelic attachments Yue Wang, The University of Hong Kong, Hong Kong.
10.30 – 10.45	R-loops facilitate maize de novo centromere formation Qian Liu, Chinese Academy of Sciences, China.
	Coffee Break / Poster Session
11.15 – 13.00	Session 4
	Genome structure and epigenetics
	Chairpersons: Igor Lebedev, Tomsk National Research Medical Center, Russian Federation

	Manoj Lekhak, Shivaji University, India.
11.15 – 11.45	Flow cytogenetics facilitates plant genome analysis Jaroslav Doležel, Institute of Experimental Botany, Czech Republic
11.45 – 12.15	Genomics-assisted molecular cytogenetics in the Araliaceae family Hyun Hee Kim, Sahmyook University, Seoul, Korea
12.15 – 12.30	FISH characterization of ribosomal DNA and NOR-associated satellite's chromatin composition in chestnut (<i>Castanea spp.</i>) Nurul Faridi, USDA, Southern Institute of Forest Genetics, Texas A&M University, USA
12.30 – 12.45	The homology of <i>Solanum verrucosum</i> and <i>S. commersonii</i> chromosomes revealed by meiosis Jaber Panahandeh, University of Tabriz, Islamic Republic of Iran
12.45 – 13.00	Variation in nuclear DNA content and rDNA patterns of the <i>Bromus catharticus</i> Vahl. accessions Metin Tuna, Tekirdağ Namık Kemal University, Türkiye
13.00	Lunch at Faculty Cafeteria of TNKU
	Poster Session
13.45	International Steering Committee Meeting (NKU senate room, in the second floor of rectorate building)
AFTERNOON	
14.30 – 16.15	Session 5
	Genome structure and epigenetics
	Chairpersons: Robert Hasterok, University of Silesia, Poland Anna Kashevarova, Tomsk National Research Medical Center, Russian Federation
14.30 – 15.00	Plasticity in centromere organization Andreas Houben, IPK, Gatersleben, Germany.
15.00 – 15.30	Aspects of genetics and epigenetics in plant centromeres Fangpu Han, Chinese Academy of Science, China.
15.30 – 15.45	Characterization of centromere-specific histone H3 (CENH3) and centromeric repeat in wild diploid <i>Glycine clandestina</i> Hümeyra Yıldız Akkamış, Niğde Ömer Halisdemir University, Türkiye.
15.45 – 16.00	Non-B-form DNA is associated with centromere stability in newly-formed polyploid wheat Congyang Yi, University of Chinese Academy of Sciences, China.
16.00 – 16.15	Unveiling the hidden legacy: rediscovering the GGATAT gene pool of wheat and its historical significance Hakan Özkan, Çukurova University, Türkiye
	Coffee Break / Poster Session
16.45 – 18.30	Session 6
	Sex chromosomes
	Chairpersons: Kim Hyun Hee, Sahmyook University, Korea. Shinji Kikuchi, Chiba University, Japan.
16.45 – 17.15	Sex chromosome turnover in the SRY-deficient mammal Asato Kuroiwa, Hokkaido University, Japan
17.15 – 17.45	The diversity drivers: repeats and sex chromosome evolution in fish and snakes Kornsorn Srikulnath, Kasetsart University, Thailand.

- 17.45 – 18.00 **Eccentric SRY of the Okinawa spiny rat and its sex-determining ability revealed by *in silico* and *in vitro* analysis**
Puntakarn Urunanont, Hokkaido University, Japan.
- 18.00 – 18.15 **Loss of the Y chromosome changes the configuration of the X inactivation center in the genus *Tokudaia***
Luisa Matiz, Hokkaido University, Japan.
- 18.15 – 18.30 **Unveiling the Y sex chromosome in siamese fighting fish: insights from male-linked loci and repetitive sequences on chromosome 9**
Thitipong Panthum, Kasetsart University, Thailand.
- 19.30 **Dinner (Tekirdağ Meat Ball Evening) at Etoha Restaurant**

Wednesday, 20th of September, 2023

MORNING

09.00 – 10.30

Session 7

Chromosome engineering

Chair persons

Andreas Houben, IPK, Germany

Alla Krasikova, Saint-Petersburg State University, Russian Federation.

09.00 – 09.30

Nano-level insights into chromosome biology: high-resolution imaging with advanced microscopy

Nobuko Ohmido, Kobe University, Japan.

09.30 – 10.00

Application of molecular cytogenetic techniques on an emerging salt-tolerant cereal, *Triticopyrum*, from England to Turkey over the last three decades

Hossein Shahsavand Hassani, Field Crops Central Research Enstitute, Türkiye

10.00 – 10.15

Improved CRISPR imaging techniques for target-specific DNA sequences

Bhanu Prakash Potlapalli, IPK, Gatersleben, Germany.

10.15 – 10.30

Aneusomy in glyphosate resistant *Amaranthus palmeri* and its hybrids with *A. tuberculatus*

Yoonha Ju, Kansas State University, USA

Coffee Break / Poster Session

11.00 – 12.30

Session 8

B chromosome, genome structure, epigenetic and interphase cytogenetics

Chairpersons:

Asoto Kuroiwa, Hokkaido University, Japan

Eva Hřibová, Institute of Experimental Botany Czech Republic.

11.00 – 11.30

Cytotype differentiation, geographic distribution and transcriptome analyses of *Lilium amabile* Palibin

Nam-Soo Kim, Kangwon National University, Republic of Korea

11.30 – 11.45

To be or not to be expressed – looking for the nucleolar dominance mechanisms in the allotetraploid model grass, *Brachypodium hybridum*

Natalia Borowska-Zuchowska, University of Silesia, Poland

11.45 – 12.00

The plant nucleolus – ubiquitous but mysterious

Ewa Robaszkiewicz, University of Silesia, Poland

12.00 – 12.15

Variability in mutual chromosome positioning in 3D space of rice nuclei

Alžběta Doležalová, Institute of Experimental Botany of the Czech Academy of Sciences, Czech Republic

12.15 – 12.30

CSR-1 RNA interference pathway restricts holocentromere protein CENP-A/HCP-3 localization in *Caenorhabditis elegans*

Yan Yu Charmaine Wong, University of Hong Kong, Hong Kong

12.45 Lunch at Faculty Cafeteria of TNKU

Poster session

AFTERNOON

14.00 – 15.45

Session 9

Other topics

Session chairs:

Nobuko Ohmido, Kobe University, Japan

Natalia Borowska-Zuchowska, University of Silesia, Poland

14.00 – 14.30

+20 years of using *Brachypodium* as a model in plant molecular cytogenetics – current status and future prospects

Robert Hasterok, University Of Silesia, Poland

14.30 – 14.45

Chromosome mimetics - pedagogy for chromosomes in class-room practice

Yasuhiko Mukai, Osaka Kyoiku University, Japan

14.45 – 15.00

Chicken oocyte nucleus whole transcriptomic profile defines the pattern of maternal RNA genes transcribed by the lampbrush chromosomes

Alla Krasikova, Saint-Petersburg State University, Russian Federation

15.00 – 15.15

Cytogenetics and interspecific hybridization in *Crinum* (Amaryllidaceae)

Manoj Lekhak, Shivaji University, India.

15.15 – 15.30

An investigation ploidy levels in mixed-ploid *Polygala vulgaris* using high throughput DNA data

İlayda Gülmez, Hacettepe University, Türkiye

15.30 – 15.45

Tetraploid *Crinum* species: an importance source of Amaryllidaceae alkaloids

Utkarsha Lekhak, Dr. Homi Bhabha State University, India

Coffee Break / Poster Session

16.15 – 17.30

Session 10

Other topics

Session chairs:

Hwang Yoon-Jung, Sahmyook University, Korea,

Prof. Dr. Kornorn Srikulnath, Kasetsart University, Bangkok, Thailand.

16.15 – 16.30

Nuclear DNA content of Turkish *Aethionema* (Brassicaceae) taxa by flow cytometry

Kuddisi Ertuğrul, Selçuk University Türkiye

16.30 – 16.45

Karyotype diversity in Indian *Aponogetonaceae*

Rupali Chougule, Shivaji University, India

16.45 – 17.00

Variation of bimodal karyotype in Indian *Dipcadi Medik.* (Asparagaceae)

Priya Eknath Shelke, Shivaji University, India

17.00 – 17.15

The end of a mythical chromosome story: karyomorphology of *Crocus mathewii* Kerndorff & Pasche

Almila Çiftçi, Istanbul University, Türkiye

17.15 – 17.30

Understanding the genetic control of adaptation and yield for Kazakh bread wheat through height controlling genes on 5A and 6A chromosomes

Kanat Yermekbayev, Zhetysu University, Kazakhstan

-Awards and closing

19.00

-Gala Dinner at Barbare

Thursday, 21th of September, 2023

8.30- 21.00

Post Conference Tour To Istanbul