



Institut  
d'Estudis  
Catalans



Societat Catalana  
de **BIOLOGIA**

**XIII Jornada de Cromatina i Epigenètica**

*Organitzada per la Secció de Cromatina i Epigenètica de la  
Societat Catalana de Biologia (SCB)*

**BGI**

ACTIVE  MOTIF®

Enabling Epigenetics Research

**XIII Annual Chromatin and Epigenetics symposium**

*Organized by the Chromatin and Epigenetics section of the  
Catalan Society of Biology (SCB)  
—Albert Jordan—*

**May 19, 2023**

## PROGRAM

**9:00 Registration**

**9:20 Opening**

**Session I. Chair: Aurora Ruíz-Herrera (UAB)**

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**9:30-9:50** **15min +5**  
**Alfred Cortés** (ISGlobal)  
Role of heterochromatin in determining the sexual or asexual fate of malaria parasites

**9:50-10:10** **15min +5**  
**Maribel Parra** (IJC)  
Role of the HDAC7-TET2 epigenetic axis during early B lymphocyte development

**10:10-10:30** **15min +5**  
**Alejandro Vaquero** (IJC)  
SIRT7 at the crossroad between metabolic homeostasis and epigenetics in aging

**10:30-10:50** **15min +5**  
**Alexandra Avgustinova** (IRSJD)  
Altered chromatin accessibility as a driver of tumourigenesis during development

**10:50-11:00** Short talk 1 **8min +2**  
**Beatriz Pérez** (UPF)  
 $\beta$ -cells regulatory functions in Type 1 Diabetes

**11:00-11:30 Coffee break and poster session**

**Session II. Chair: Alicia Roque (UAB)**

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**11:30-11:50** **15min +5**  
**Thomas Graf** (CRG)  
Carm1-mediated arginine methylation of C/EBP $\alpha$  regulates the speed of an immune cell fate decision

**11:50-12:10** **15min +5**  
**Roni Wright** (UIC)  
Nuclear ATP synthesis via PARP1-NUDT5 pathway is important for DNA repair

**12:10-12:30** **15min +5**  
**Mariona Nadal** (IRB)  
Unraveling the principles underlying transcriptional heterogeneity one gene and one cell at a time

- 12:30-12:40** Short talk 2 **8min +2**  
**Mónica Salinas** (IBMB-CSIC)  
Differential genomic distribution of human histone H1 variants
- 12:40-12:50** Short talk 3 **8min +2**  
**Marcos Francisco Pérez Browne** (IBMB-CSIC)  
Histone methylation has a direct metabolic role in human cells
- 12:50-13:00** Short talk 4 **8min +2**  
**Oliver Meers** (IJC)  
The unstructured linker of macroH2A is a functional domain involved in nuclear organization, chromatin dynamics and gene expression
- 13:00-13:10** Short talk 5 **8min +2**  
**Alba Sala** (IRB)  
The Interplay Between Periodicity, DNA Physical Properties and Effector Binding Define Nucleosome Architecture in Yeast
- 13:10-13:20** Short talk 6 **8min +2**  
**Joan Pau Cebrià** (CRG)  
Unveiling the role of histone post-translational modifications during cell differentiation beyond transcription
- 13:20-13:30** **8min +2**  
**Chamseddine Kifagi** (Active Motif)  
Investigating Epigenetics and Chromatin Organization: Recent Advances in human disease research

**13:30-14:30 *Lunch break and poster session***

**Session III. Chair: *Sílvia Pérez Lluch* (CRG)**

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- 14:30-14:50** **15min +5**  
**Marcus Buschbeck** (IJC)  
Mining the chromatin regulatory space for combinatorial drug targets
- 14:50-15:10** **15min +5**  
**Arnau Sebé Padrós** (CRG)  
Early evolution of animal regulatory chromatin architecture
- 15:10-15:30** **15min +5**  
**Marc Martí-Renom** (CNAG-CRG)  
Spatio-temporal regulatory landscape of sex-determination
- 15:30-15:40** Short talk 7 **8min +2**  
**Judit Castillo** (UB)

Human sperm chromatin structure in solution under normal and impaired conditions through synchrotron light small-angle X-ray scattering (SAXS)

**15:40-15:50** Short talk 8

**8min +2**

**Marc Subirana** (UPF)

Noncoding regulatory functions in  $\beta$ -cell derived neuroendocrine tumors

**15:50-16:20** *Coffee break and poster session*

**Session IV. Chair: Josep Jiménez (UB)**

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**16:20-16:40**

**15min +5**

**Marian Martínez Balbas** (IBMB-CSIC)

JMJD3 intrinsically disordered region links the 3D-genome structure to TGF $\beta$ -dependent transcription activation

**16:40-17:00**

**15min +5**

**Modesto Orozco** (IRB)

Coarse grained and mesoscopic modeling of DNA and chromatin

**17:00-17:20**

**15min +5**

**Renee Beekman** (CRG)

scTAM-seq enables targeted high-confidence analysis of DNA methylation in single cells

**17:20-17:40**

**15min +5**

**José LuíS Sardina** (IJC)

The interplay between RNA sequestration in P-bodies and chromatin architecture sustains myeloid leukemia

**17:40-18:00**

**15min +5**

**Sílvia Pérez** (CRG)

The epigenetic logic of gene activation

**18:10** *Closing and beers*

## POSTERS

**1-Marta Ribalta** (UB)

Physical exercise impact on ageing-related pathways across generations in *C. elegans*

**2-Clara Penas** (UAB)

LSD1 inhibition improves functional outcome after spinal cord injury

**3-Paula Bujosa** (IRB, IBMB-CSIC)

Linker histone H1 regulates homeostasis of heterochromatin associated RNAs

**4-Marta Valverde** (IBMB-CSIC)

Antitumor activity of the sarm rad140 in estrogen receptor-positive breast cancer models: a mechanistic approach

**5-Carlos A. Martín-Blanco** (UB)

Catch up fast: The tracheal gills of the mayfly nymph of *Cloeon dipterum* as a model for local organ regeneration

**6-Alba Ayats** (IBMB-CSIC)

Condensin pinches a short negatively supercoiled DNA loop during each round of ATP usage

**7-Gemma Valcarcel** (IJC)

CRISPR-mediated epigenome editing fine-tunes macrophage inflammatory responses

**8-Nikolai Bykov** (CNAG-CRG)

Unravelling patterns of chromatin architecture changes in fruit fly development

**9-Martí Quevedo** (CRAG)

Plant chromatin regulation in response to chloroplast signals

**10-Alba Irisarri** (UB)

In vitro and in vivo characterization of m6A RNA methylation and METTL3 in age-related cognitive decline and AD: novel targets for developing potential therapies

**11-Sílvia González** (CRG)

Epigenetics of human B-cell precursors transdifferentiation into macrophages

**12-Laia Marín** (UAB)

Meiotic 3d chromatin dynamics in the marsupial germ line

**13-Maria Cadefau** (IJC)

Differential control of inflammatory transcriptional programs by CEBPA isoforms

**14-Carini Picardi** (IJC)

Understanding the role of GATA1, cohesin and CTCF mutations in myeloid leukemia of Down syndrome

**15-Georgina Fuentes** (UPF)

Deciphering transcription factor dynamics in early stages of type 1 diabetes

**16-Mireia Ramos** (UPF)

Deciphering the role of derepressed enhancer clusters in insulinoma development

**17-Jordi Moreno** (UAB)

H3K27me3 dynamics in Arabidopsis plants exposed to shade

**18-Myrthe Krabbe** (ICM-CSIC)

Alterations in miRNA expression profiles in zebrafish ovaries caused by an immune response

**19-Aina Bellver** (UB)

Neuroprotective effects of G9a inhibition by miR-128 upon modulation of PPAR $\gamma$ -dependent pathways

**20-Jordi López** (UAB)

Proteasome-dependent degradation of histone H1 is mediated by its C-terminal domain

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**Secretaries of SCB:**

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