



Cincuenta
Aniversario
UAM Universidad Autónoma
de Madrid



25 years of Cryoelectron Microscopy in Spain: A tribute to José L. Carrascosa

June 12th

9:30 – 9:55 h **Opening ceremony**
Chancellor, Universidad Autónoma de Madrid
President, Consejo Superior de Investigaciones Científicas

Session 1 (Chairman: José M. Valpuesta)

09:55 – 10:45 h **Plenary Lecture:**
Joachim Frank (Columbia University. USA)
"Dissection of early and late events in bacterial translation using time-resolved cryo-EM."

10:45 – 11:00h **Nicola Abrescia (CIC-Biogune. Bilbao)**
"An integrative approach to study the structure and cell biology of viruses"

11:00 – 11:15 h **Jon Agirre (University of York. UK)**
"Computational methods for carbohydrate structure determination, validation and analysis"

11:15 – 11:45 h **Coffee Break**

11:45 – 12:00 h **Sara Alvira (University of Bristol. UK)**
"Capturing the bacterial co-translational translocation machinery"

12:00 – 12:15 h **Ernesto Arias-Palomo (CIB-CSIC. Madrid)**
"Mechanistic insights into DNA replication using cryo-EM"

12:15 – 12:30 h **Daniel Castaño-Díez (Biozentrum. Basel. Switzerland)**
"Automated Alignment of tilt Series of Cryo Electron Tomography data"

12:30 – 12:45 h **Pablo Chacón (IQFR-CSIC. Madrid)**
"Integrative Modeling Approaches to Interpret High-Resolution cryo-EM Reconstructions"

12:45 – 13:00 h **Miquel Coll (IBMB-CSIC. Barcelona)**
"Using cryo-EM and X-ray crystallography to solve viral portal proteins"

13:00 – 13:15 h **Javier Conesa (ALBA synchrotron. Barcelona)**
"3D correlative cryo soft X-ray tomography and hard X-ray fluorescence of breast cancer cells treated with an iridium metallodrug"

13:15 – 13:30 h **Sean Connell (CIC-Biogune. Bilbao)**
"Using Cryo-EM to investigate steps in late bacterial ribosome assembly and the potential roles played by the assembly factors"

13:30 – 14:30 **Lunch**

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Session 2 (Chairman: José L. Carrascosa)

- 14:30 – 15:20 h **Plenary Lecture:**
Wolfgang Baumeister (MPI for Biochemistry, Martinsried, Germany)
“The Molecular Machinery of Protein Degradation: Structural Studies *ex situ* and *in situ*”
- 15:20 – 15:35 h **Rubén Fernández-Busnadiego (MPI for Biochemistry, Martinsried, Germany)**
“Deciphering the molecular architecture of membrane contact sites by cryo-electron tomography”
- 15:35 – 15:50 h **Carlos Fernández Tornero (CIB-CSIC, Madrid)**
“Structural studies on RNA polymerase I unveil unique mechanisms in ribosomal DNA transcription”
- 15:50 – 16:05 h **Ignasi Fita (IBMB-CSIC, Barcelona)**
“From X-Rays to Subtomogram Averaging and Back: The Adhesión Complex of Human Pathogen *Mycoplasma Genitalium*”
- 16:05 – 16:20 h **Juan Fontana (University of Leeds, UK)**
“Exploring the role of endosomal K+ as a trigger for bunyavirus entry”
- 16:20 – 16:35 h **Beatriz Herguedas (LMB, Cambridge, UK)**
“Structural insights into AMPA receptor complexes”
- 16:35 – 17:05 h **Coffee Break**
- 17:05 – 17:20 h **Aitor Hierro (CIC-Biogune, Bilbao)**
“Endosomal retrieval of cargo via protein scaffolds”
- 17:20– 17:35 h **Daniel Lietha (CIB-CSIC, Madrid)**
“Structural basis of membrane associated adhesion signalling”
- 17:35 – 17:50 h **Óscar Llorca (CNIO, Madrid)**
“Structure and remodeling of the AAA-ATPase RUVBL1-RUVBL2”
- 17:50 – 18:05 h **Carmen López Iglesias (Maastricht University, Netherlands)**
“*In situ* cryo-EM: our achievements with bacterial secretion systems”
- 18:05 – 18:20 h **Daniel Luque (ISCIII, Madrid)**
“Rotavirus entry machinery structure”
- 18:20 – 18:35 h **Montserrat Samsó (Virginia Commonwealth University, USA)**
“Unveiling the secrets of an ion channel using cryoEM”

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Session 3 (Chairman: José R. Castón)

- 09:30 – 10:20 h **Plenary Lecture:**
Richard Henderson (LMB. Cambridge. UK)
"Trends and challenges in cryoEM"
- 10:20 - 10:35 h **Antonio Martínez (MPI for Biochemistry. Martinsried. Germany)**
"Template-free detection and classification of heterogeneous membrane-bound complexes in cryo-electron tomograms"
- 10:35 – 10:50 h **Joaquín Ortega (McGill University. Toronto. Canada)**
"From clueless to Canada. Story of an unlikely journey"
- 10:50 – 11:05 h **Paula Pérez Navarro (Biozentrum. Basel. Switzerland)**
"Characterising Parkinson's disease human brain tissue by 3D electron microscopy"
- 11:05 – 11:35 h **Coffee Break**
- 11:35 – 11:50 h **Vicente Rubio (IBV-CSIC. Valencia)**
"Using cryoEM to shed light on a monogenic disorder that has two presentations and two modes of inheritance"
- 11:50 – 12:05 h **Iban Ubarretxena (Biofisika. UPV/CSIC. Bilbao)**
"Cryo-EM structure of a DNA polymerase involved in eukaryotic genome stability"
- 12:05 – 12:20 h **Isabel Usón (IBMB-CSIC. Barcelona)**
"Phasing microED data with cryoEM maps in ARCIMBOLDO"
- 12:20 – 12:35 h **Mikel Valle (CIC-Biogune. Bilbao)**
"Exploring plant filamentous viruses by cryoEM"
- 12:35 – 12:50 h **Javier Vargas (McGill University. Toronto. Canada)**
"Computational strategies to process highly heterogeneous cryoEM samples"
- 12:50 – 13:05 h **José J. Fernández (CNB-CSIC. Madrid)**
"Consideration of the sample motion in cryoET"
- 13:05 – 13:20 h **Jaime Martín-Benito (CNB-CSIC. Madrid)**
"Influenza A transcription and replication mechanisms revealed by cryoEM"
- 13:20 – 14:30 h **Lunch**

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Session 4 (Chairman: José M. Carazo)

14:30 – 15:20 h **Plenary Lecture:**
Alasdair Steven (NIH. Bethesda. USA)
“Phase Transitions in Cryo-EM and Virus Assembly”

15:20 – 15:35 h **Carmen San Martín (CNB-CSIC. Madrid)**
“A cryoEM look at complex virus assembly: the case of human and non-human adenoviruses”

15:35 – 15:50 h **José R Castón (CNB-CSIC. Madrid)**
“CryoEM at near atomic resolution of viruses: a historical perspective”

The tribute to Pepe will include some words by:

Rebeca Bocanegra (IMDEA Nanociencia), Ana Cuervo (CNB-CSIC), Luis Enrique Donate (Wood Green Research Support Services. London), Borja Ibarra (IMDEA Nanociencia), María Ibarra (CNIO), Mariano Esteban (CNB-CSIC), Sergio Marco (Sanofi. France), Eva Nogales (UC Berkeley. USA), Juan Ortín (CNB-CSIC), Cristina Risco (CNB-CSIC), Margarita Salas (CBM-CSIC)

José M. Valpuesta (CNB-CSIC. Madrid)
“25 years of studies on molecular chaperones”

José M. Carazo (CNB-CSIC. Madrid)
“Might I talk to Dr. Jose Luis Carrascosa. It is about advising a PhD Thesis”

José L. Carrascosa (CNB-CSIC. Madrid)
“A day in the life”