



I WORKSHOP SEMIO

MUSCLE PATHOLOGY

May 21st 2026, Novotel Madrid Center, Madrid

Programme

Session 1: Welcome

9:00-9:30h – *Welcome and SEMIO presentation*
Amelia Aránega (Vicepresident) and Juanma Fernández (President)

Session 2: Muscular Pathologies: Clinical Perspectives

Chairs: Amelia Aránega | Icia Santos

9.30-10.00h – *Myoblast culture as a basis for functional assays in neuromuscular pathology*
Carmen Paradas-IBIS-Sevilla, CIBERNED

10.00-10.30h – *LAMA2 related Dystrophy: from bed to bench and back*
David Gómez-Hospital Vall Hebron

10.30-11.00h – *Assessing rare muscle diseases in the era of precision medicine: the role of digital biomarkers*
Daniel Natera-Hospital San Joan de Deu, CIBERER

Coffee break: 11.00-11.30 h

Session 3: Models for muscle pathologies

Chairs: Francisco Hernández | Rubén Artero

11.30-12.00h – *Advanced tissue-engineered functional muscle models for neuromuscular disease research*
Juanma Fernández-Costa-Institute for Bioengineering of Catalonia

12.00-12.30h – *Modeling and therapeutic development strategies in LMNA-associated congenital muscular dystrophy*
Ignacio Pérez de Castro-Instituto de Investigación de Enfermedades Raras, ISCIII

12.30-13.00h – *From skeletal muscle regeneration & aging to ALS... and back again*
Sonia Alonso Martín-IIS Biogipuzkoa, CIBERNED

Lunch: 13.00-14.30 h

14:30-15:30h- Flash presentations

Chairs: Ainoa Tejedera Villafranca | Félix Andújar Sánchez

Session 4: Molecular mechanisms underlying muscle biology and pathology

Chairs: Juanma Fernández | Gloria Garrabou

15.30-16.00h – *Molecular insight into the process of muscle degeneration in neuromuscular diseases*
Jordi Díaz-John Walton Muscular Dystrophy Research Center, CIBERER

16.00-16.30h – *Cancer-associated cachexia: cardiac and skeletal muscle, siblings or distant cousins?*
Icia Santos-Instituto de Investigación Sanitaria de Santiago de Compostela

16.30-17.00h – *Translational research in rare myopathies: myotonic dystrophy and LGMD*
Rubén Artero-Universitat de Valencia, CIBERER

Coffee break: 17.00-17.30 h

Session 5: Developing New Therapies: From Academia to Translation

Chairs: Esther Fernández | Virginia Arechavala

17.30-18.30 h – Expert roundtable

Beatriz Llamusí Trosí - Arthex-Biotech (Valencia)
Miriam Corredor - noctuRNA Therapeutics (Barcelona)
Isabel Chacón - PHARMA-INDUSTRIA (Madrid)

Organising committee

- **Amelia Aránega Jiménez**, Universidad de Jaén
- **Juanma Fernández Costa**, Institute for Bioengineering of Catalonia (IBEC)
- **Marisol Montolio del Olmo**, Duchenne Parent Project España, Universitat de Barcelona
- **Esther Fernandez Simon**, John Walton Muscular Dystrophy Research Centre, Newcastle University
- **Virginia Arechavala Gomeza**, Biobizkaia Health Research Institute
- **Icia Santos Zas**, Instituto de Investigación Sanitaria-Santiago de Compostela
- **Francisco Hernández Torres**, Universidad de Granada
- **Rubén Dario Artero Allepuz**, Universitat de València/INCLIVA, CIBERER
- **Glòria Garrabou Tornos**, IDIBAPS, Hospital Clinic de Barcelona, Universitat de Barcelona, CIBERER

Organizers and collaborators





Nucleic Acid-Based Therapies for Collagen VI-Related Muscular Dystrophies Using Patient-Derived Fibroblasts and a Mutation-Specific Mouse Model

Aristides López-Márquez and Cecilia Jiménez-Mallebrera
Institut de Recerca Sant Joan de Deu. Universitat de Barcelona. CIBERER.

Dissecting Fibrosis and Functional Decline in DMD Using Engineered Muscle

Chiara Ninfali, Xiomara Fernández-Garibay, Ainoa Tejedera-Villafranca, Elia López Serrano, Esther Fernández-Simón, Jordi Díaz-Manera, Petra Bauzon, Javier Ramón-Azcón, Juan M. Fernández Costa
Institute for Bioengineering of Catalonia (IBEC)

Medir, entender, tratar: hacia terapias de precisión en enfermedades neuromusculares

Andrea López-Martínez, Nadia Oseguí-Barcenilla, Elena Covato, Abdullah Al-Ani, Solange Kapetanovic-García, Virginia Arechavala-Gomez
Ikerbasque/ Biobizkaia Health Research Institute

Urine kynurenine-related metabolites as potential biomarkers of Inclusion Body Myositis

Andújar-Sánchez, E., Gonzalez-Rodriguez, A, Deng, H, Vilaseca-Capel, A, Valls-Roca, L, Guitart-Mampel, M, Tobias, E, Barrau-Martinez, B, Farré-Tarrats, L, Tort, F, Selva-O'Callaghan, A, Moreno-Lozano, P.J, Matas, A, Llorach, R, García-Villoria, J, Urpí-Sarda, M, Milisenda, J.C, Garrabou, G
Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS)

Myonuclear RNA retention and cytoskeletal disorganization in SMA: linking nuclear dysfunction to muscle fiber architecture

Alexis Rufino, Linnete Volckaert, Cristina Ramírez, Sofía Cardona, Olga Tapia
Instituto de Tecnologías Biomédicas, Universidad de La Laguna

Effects of isolecanoric acid on human peripheral blood-derived monocytes in Duchenne Muscular Dystrophy

Virginia Alzás-Gómez, Darío Castro, Paula Serrano-Callejas, Beatriz Román-Payán, Francisco Hernández-Torres, Amelia Aránega
Universidad de Jaén

Transient titin cleavage induces muscle rejuvenation

Manuel Gavilán-Herrera, Consolación Marín-Vicente, Natalia Vicente, Jesús Vázquez, Jorge Alegre-Cebollada, Roberto Silva-Rojas
Centro Nacional de Investigaciones Cardiovasculares (CNIC)

Senescencia muscular: modelado y mecanismos patogénicos

Beatriz Ranera, Jhydell Josué Ruiz Araica, Raquel Manzano
University of Zaragoza

Design and Evaluation of Therapeutic Antisense Oligonucleotides (ASOs) for Rare Diseases Affecting Skeletal Muscle

Elena Covato, Virginia Arechavala-Gomez
Ikerbasque/ Biobizkaia Health Reseach Institute

Identifying intracellular protein partners of Antisense Oligonucleotides to increase their Therapeutic Index

Pilar Maestre, Aris Gaci, Aurelie Goyenvalle
Université de Versailles

Magnetic torque-based stretching platform for 3D human functional engineered skeletal muscle tissues

Carolina Rodríguez-Gallo, Timothée Caboche, Chiara Ninfali, Juan M. Fernández Costa, Javier Ramon
Institute for Bioengineering of Catalonia (IBEC)

Quiescence Imbalance in Muscle Stem Cells Limits Early Muscle Growth in Duchenne Muscular Dystrophy

Darío Castro, Virginia Alzas, Beatriz Román, Francisco Hernández-Torres, Amelia Aránega
Universidad de Jaén

Muscle transcriptome of Idiopathic Inflammatory Myopathy myositis exhibits strong immune activation and broad mitochondrial-metabolic remodeling

Deng H, Andújar-Sánchez F, Vilaseca-Capel A, Valls-Roca L, Farré-Tarrats L, Tobías E, Tort F, Guitart-Mampel M, Selva O'Callaghan A, Moreno-Lozano PJ, Matas A, Milisenda JC, Garrabou G
Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS)

Aging skeletal muscle: Role of the stem cell niche composition in muscle dysfunction

Francisco García-Carrizo
German Institute of Human Nutrition

El reto de fidelidad fenotípica en modelos murinos de distrofias musculares: lecciones del primer knock-in de LGMDD2 y nuevo diseño

Javier Poyatos-García, Alicia Novella, Jazmín Yáñez, Marta Casado, Carme Cucarella, Águeda Blázquez-Bernal, Ariadna Bargiela, Rubén Artero.
Instituto de Investigación Sanitaria INCLIVA, CIBERER

HDAC11-mediated metabolic reprogramming: a novel therapeutic avenue for muscular dystrophies

Alexandra Mercado-Amarilla, Renato Odria, Víctor Gómez-Vico, Alba García-Moreno, Joan Carles Domingo, Gisela Nogales-Gadea, Mònica Suelves
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