

Coupling Genome editing tools with Delivery systems

Institut d'Investigació Biomèdica de Bellvitge

Barcelona, Spain

3rd and 4th Octubre 2024

Organized by the European COST action "Genome Editing to Treat Human Diseases" (GenE-Humdi; action CA21113), an EU-funded network that connects researchers and innovators across Europe and beyond



GenE-HumDi

IDIBELL
Institut d'Investigació Biomèdica de Bellvitge



**UNIVERSIDAD
DE GRANADA**

Junta de Andalucía
Consejería de Salud y Familias
Fundación Progreso y Salud

PROGRAM AGENDA

Thursday, 3.10 (9-18)

Friday, 4.10. (9-18)

Overview:

 **cost**
EUROPEAN COOPERATION
IN SCIENCE & TECHNOLOGY



**Funded by
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Genome editing tools and their delivery systems are advancing quickly, but they rely on each other to improve genome editing methods. This meeting will showcase the latest developments in both areas and foster connections and collaborations among scientists to boost the effectiveness of their research projects.

Main Objectives:

1. Identify and evaluate the existing endonuclease-independent platforms (EIP) and their potential uses in various applications.
2. Identify and evaluate the existing endonuclease-dependent platforms and their potential uses in various applications.
3. Create a comprehensive overview of the current delivery methods used for genome editing (GE) in various cell types for clinical applications.
4. Create a comprehensive overview of the current delivery methods used for in vivo genome editing (GE) in different animal models and clinical environments.

Confirmed Speakers:

1. **Dr. Marc Güell** (Pompeu Fabra University, Barcelona Spain)
2. **Dr. Vittoria. Raffa** (Associate Professor in Molecular Biology, Ph.D. in Nanotechnology, M.Sc. in Chemical Engineering, Pisa, Italy)
3. **Dr. Giedrius Gasiunas** (Caszyme, Lithuan))
4. **Dr. Peng Ling** (Aix-Marseille Université, CNRS, Centre Interdisciplinaire de Nanoscience de Marseille)
5. **Dr. Julian Cerón Madrigal** (Institut d'Investigació Biomèdica de Bellvitge, Barcelona Spain)
6. **Karen O'Hanlon Cohrt** (CRISPR Medicine News, Copenhagen, DK)
7. **Alessia Cavazza** (UCL UK)
8. **Dr. Francisco Javier, Molina Estevez** (Genyo, Spain)
9. **Dr. Laura Batlle Morera** (CRG, Barcelona)
10. **Dr. Benabdellah Karim** (Pfizer-University of Granada-Andalusian Regional Government Centre for Genomics and Oncological Research (GENYO), Granada, Spain)
11. **Gloria Gonzalez Aseguinolaza** (DNA & RNA Medicine Division, Gene Therapy for Rare Diseases Department, Center for Applied Medical Research (CIMA), University of Navarra, IdisNA, Pamplona, Spain).
12. **Cecilia Jiménez-Mallebrera** (Neuromuscular Unit. Institut de Recerca Sant Joan de Déu. Hospital Sant Joan de Déu Barcelona, Spain).
13. **Mariana Köber** *Biomedical Research Network on Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN), Madrid, Spain*

Organizer

1. Dr. Julian Ceron Madrigal
2. Dr. Karim Benabdellah
3. Dr. Francisco Martin Molina
4. Dr. Francisco Javier, Molina Estevez

GenEHumDi COST Support:

1. Raquel Soriano (Fundación Andaluza Progreso y Salud)

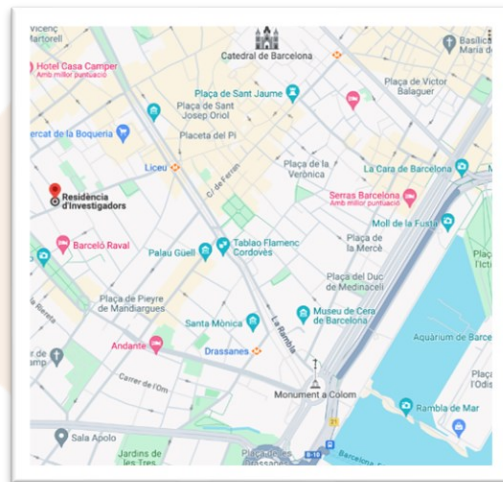
Location: Venue:

Residencia de Investigadores del CSIC



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Carrer de l'Hospital, 64, Ciutat Vella, 08001 Barcelona



Thursday October 3rd

14.00-14.30 Registration Workshop

14.30-14.45 Welcome form the GeneHumdi COST action (Karim Benabdel Lah, Francisco Martin)

14.45-15.00 Objectives of the workshop (Julian Cerón Madrigal)

Session 1: Mapping and Advancing Gene Editing Technologies (17:00 to 17:00)

15.00-15.30 **Talk 1** MARC GUELL, UPF, Barcelona, Spain

15.30-15.50 **Talk 2** GIEDRIUS GASIUNAS, Caszyme, Vilnius, Lithuania

15.50-16.15 **Talk 3** Julián Cerón (*Bellvitge Biomedical Research Institute – IDIBELL*)

16.20-16.40 **Talk 4** Endonuclease-independent platforms (EIP) (TBD)

16:40-17:00 Coffee break, poster session and networking

Session 2: Short Talks

18:00-19:00 TBD

Friday October 4rd

Session 3: Exploring viruses for the CRISPR/Cas system delivery

09.30-10.00 **Talk 5** VLP (Alessia Cavazza)

10.00-10.30 **Talk 6** AAV Gloria Gonzalez Aseguinolaza

Coffee break (11:00 to 11:30)

Session 4: Synthetic biology for the CRISPR/Cas system delivery

11.30-12.00 **Talk 8** Extracellular Vesicles ȳȳSamir Andaloussi (karolinska)??

12.00-12.30 **Talk 9** LNP Duřko Lainřek

12.30-13.00 **Talk 10** Synthetic Nanoparticles Ling Peng Aix-Marseille Universite, CNRS, Centre Interdisciplinaire de Nanoscience de Marseille

13.00-13.30 *10 minutes talks (X3)*

Lunch (13:30 to 15:00) Not provided, but covered by COST Daily Allowance. (Places around the meeting will be recommended)

Session 5: Advances in Gene Editing: Ex vivo application (HSCs, T cells and Ips)

15.30-15.45 **Talk 12** fulling cancer immunotherapy trough gene editing (T cells) Karim Benabdellah Karim.

15.45-16.00 **Talk 13** KI-Ep, a new genome editing platform for transcriptional control of gene expression through naturally occurring epigenetic modifications Francisco Javier Molina Estevez

16.00-16.15 **Talk 14** Ips-Gene editing platform for disease modeling Laura Batlle Morera

Session 6: Advances in Gene Editing: In Vivo Applications

16.15-16.40 **Talk 15** *Targeting muscle cells to treat Neuromuscular Disorders* Cecilia Jiménez-Mallebrera and Mariana Köber

16.40-17.20 **Talk 16** Targeting hepatocytes for the treatment of liver diseases Lourdes R Desviat Centro de Biología Molecular Severo Ochoa UAM-CSIC

17.20-17.40 **Talk 17** Targeting the brain to tackle neurological disorders Lorea Blázquez (Department of Neurosciences, Biogipuzkoa Health Research Institute)

Session 7: Crucial Role of Dissemination and Public Engagement in Gene Editing Projects

17.40-18.00 **Talk 18** Karen O'Hanlon Cohrt (CRISPR Medicine News)

Session 8: Closing Ceremony, and Group Photo