

II Workshop of CIBERONC Experimental Models Work Module:

“Emerging experimental models and technologies in cancer research”.

22-23 September 2022 - UNAV - Pamplona

Thursday 22th September

09.15h: Welcome by Patricia Pérez-Galán, Work Module coordinator.

09:30 – 11:05 – New techniques and technologies I: *This session will be focused on state-of-the-art techniques. We aim to integrate research developments and resources within CIBERONC related to advanced technologies useful for experimental model characterization (single cell RNAseq, CyTOF, radiomics, advanced imaging techniques)*

Moderators: Cristina Peña, Laura Valle

09:30 - 10:10 - Invited Speaker: **Julien Colombelli:** “*Lightsheet Cancer Imaging: label-free at mesoscale and high-throughput in multiwell plates*”

10:10 - 10:25 - Short Talk: **Blanca García:** “*Patient-derived organoids as a useful platform for searching new biomarkers and drug screening in left- and right- sided colon cancer.*”

10:25 - 11:05 - Invited Speaker: **Carolina de la Pinta:** “*Radiomics in oncology: present and future*”

11:05 – 11:45 – Coffee Break and Poster Viewing

11:45 – 13:20 – New techniques and technologies II: *This is a bioengineering session dedicated to cutting-edge technologies for the next-generation organoids and ex vivo systems. We aim to integrate research developments and resources within CIBERONC related to novel or improved approaches for a better tumor modeling (novel matrixes, organ-on-chip, models recapitulating tumor microenvironment, 3D Bioprinting)*

Moderators: Patricia Perez-Galán, Elena Sancho

11:45 - 12:25 - Invited Speaker: **Matthias Lütolf** (online): *TBD*

12:25 - 12:40 - Short talk: **Ezequiel Monferrer:** “*Neuroblastoma 3D models: advantages of different hydrogel-based strategies*”

12:40 - 13:20 - Invited Speaker: **Kristina Haase:** “*Mimicking the tumor microenvironment in vitro – a vascularized approach*”

13:20 – 14:30 – Lunch

14:30 – 16:05 – Immuno-oncology models I - *This session is focused on key issues in optimizing in vivo and in vitro models for cancer immunotherapy research. We aim to integrate research developments and resources within CIBERONC related to immunocompetent and humanized models used in cancer immunology and immunotherapy research. (Humanized PDX, tumor-T cell co-cultures, experimental models for immunotherapy testing, CART cells).*

Moderators: Maria del Carmen Ochoa, Javier Robles

14:30 - 15:10 - Invited Speaker: **Anthony Rongvaux** (online): *“Humanized mouse models for immuno-oncology studies”*

15:10 - 15:25 - Short talk: **Enrique Javier Arenas**: *“Uncovering immunotherapy resistance: intrinsic deficient IFN γ response is essential for the response to T cell redirected lymphocytes”*

15:25 - 16:05 - Invited Speaker: **Luis Alvarez Vallina** (online): *“Immunotherapy of epithelial cancers with reprogramed tumor infiltrating T lymphocytes secreting bispecific T cell-engagers”*

16:05 – 16:30 – Coffee Break

16:30–17:40 – Immuno-oncology models II - *This session is focused on key issues in optimizing in vivo and in vitro models for cancer immunotherapy research. We aim to integrate research developments and resources within CIBERONC related to immunocompetent and humanized models used in cancer immunology and immunotherapy research. (Humanized PDX, tumor-T cell co-cultures, experimental models for immunotherapies testing, CART cells).*

Moderadores: Enrique Arenas, Sergio Roa

16:30-17:10 - Invited Speaker: **Pablo Umaña** (online): TBD

17:10-17:25 - Short talk: **Marcos García**: *“Conditional deletion of tumoral IL-10 in a mouse model of diffuse large B-cell lymphoma reveal intricate autocrine and paracrine pathogenic mechanisms”*

17:25-17:40 - Short talk: **Cèlia Dobaño**: *“Immunocompetent 3D Follicular Lymphoma model: A preclinical tool to design tailored immunotherapies.”*

17:45-19:00 – Poster & beers

20:30h – Networking and Dinner

Friday 23rd September

9.00h – 11:30 – Targeted therapies: *This session is focused on key issues to optimize models for cancer targeted-therapies research, approaches to improve the predictive value of genetically modified mouse models (GEMMs) and patient-derived mouse models (PDX), and advances in in vitro 3D cancer modeling (patient-derived organoids; PDO). We aim to integrate research developments and resources within CIBERONC related to GEMMs, PDX and PDO models used in targeted therapy research for precision oncology.*

Moderadores: Irene Ferrer, Silve Vicent

9:00 - 9:40 - Invited Speaker: **Cristina Mayor Ruiz** (PROTACS): *“Rational strategies to discover molecular glue degraders at scale”*

9:40 - 9:55 - Short talk: **Irene Ferrer**: *“Non-small cell lung cancer patient-derived xenograft models as a preclinical tool for precision medicine”*

9:55 - 10:35 - Invited Speaker: **Marcos Malumbres**: *“Patient-derived models for metastatic breast cancer”*

10:35 - 10:50 - Short talk: **Silve Vicent**: *“Signature-driven repurposing of midostaurin for combination with MEK1/2 and KRASG12C inhibitors in lung cancer.”*

10:50 - 11:30 - Invited Speaker: **Dieter Saur**: *TBC*

11:30 – 12:00 – Coffee Break

12:00 – 14:00 – Non-murine animal models of cancer - *Our current knowledge of cancer biology is widely based on the information obtained from animal research. Animal species commonly used in biomedicine range from the tiny Drosophila up to mammals and primates. However, it is estimated that 95% of all laboratory animals are mice and rats, which have important advantages but also some limitations. In this section we will focus on other animal models that could replace or complement murine models.*

Moderadores: David Sarrió, Laura Valle

12:00 - 12:40 - Invited Speaker: **Laura Elena Sanchez** (Zebrafish, USC): *TBD*

12:40 - 12:55 - Short talk: **Ana Guijarro**: *“A calreticulin mutant C. elegans model naturally lacking JAK2 and MPL orthologs mimics some of the molecular features of Ph-negative myeloproliferative neoplasms and reveals unknown non-canonical effects of the mutant protein”*

12:55 - 13:35 - Invited speaker: **Cayetano González** (Drosophila): *“Ewing Sarcoma on the fly”*

13:35 - 14:15 - Invited speaker: **Julián Cerón** (C elegans): *“Modeling cancer mutations in C. elegans: from diagnosis to drug screens”*



14:15 - 14:30 - Short talk: **María Cascallar**: *"Zebrafish as a model to evaluate the potential of nanomedicines for cancer gene therapy"*

14:30 – Closing