REACH project on pancreatic ductal adenocarcinoma (PDAC), one of the most aggressive and lethal forms of cancer.

The REACH project, "**R**eversing **E**pitranscriptomic **A**lterations for **CH**emosensitization of Pancreatic Cancer", led by Ramón y Cajal Health Research Institute (IRYCIS) with Dr. **Bruno Sainz Anding** as coordinator was selected for funding, awarded with around 1.3 M€.

REACH is funded within the TRANSCAN 3 Joint Transnational Call for Proposals 2023 "Translational research on cancer epigenetics" and it is made up of a consortium of 5 institutions distributed in 4 different countries. Its principal researchers are Dr. **Bozena Smolkova** from the Slovak Academy of Sciences (Slovakia), Dr. **Sylvia Wagner** from Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V (Deutschland), Dr. **Vita Rovite** from the Latvian Biomedical Research and Study Centre (Latvia) and Dr. **Justo Castaño** from Maimonides Biomedical Research Institute of Córdoba (Spain).

The project, which will be active for 36 months, has already held its kick off meeting in Madrid, home to the coordinator institution (see consortium group picture below), gathering researchers from all across Europe and fostering collaboration, knowledge exchange and setting the pillars for the careful strategic planning required to successfully implement the REACH project and maximise its impact on society.

Reach kick off meeting held in Madrid the past April, with researchers representing every institution in the consortium.

Pancreatic ductal adenocarcinoma (PDAC), while not among the most common cancers, remains one of the deadliest and most treatment-resistant tumors, with a five-year survival rate of just 10–11%. Despite the introduction of new treatment options, the standard of care has seen little progress over the past three decades, and overall survival still ranges between 6 and 12 months. This poor prognosis is largely due to the tumor's inherent resistance to chemotherapy and radiotherapy, driven in part by cancer stem cells (CSCs) with unique transcriptional profiles regulated by epigenetic and epitranscriptomic mechanisms. The REACH project aims to address

this challenge by exploring the largely uncharted field of PDAC epitranscriptomics, particularly the role of N6-methyladenosine (m6A) modifications in regulating chemoresistance. By using tumor-targeting nanoparticles to deliver modulators of m6A “writers,” “erasers,” and “readers” directly to PDAC cells and CSCs, REACH seeks to reprogram the tumor’s epitranscriptomic landscape and sensitize it to standard chemotherapy.

This approach will be tested in advanced preclinical models, including patient-derived xenografts and 3D cultures, with the ultimate goal of translating these findings into effective, personalized therapies that could significantly extend survival for patients with this devastating disease.