

PRESS RELEASE

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OASIS, A NEW EUROPEAN RESEARCH PROGRAMME TO OPTIMISE ANTIBODY-DRUG CONJUGATES

The OASIS project, for *Optimal methods to characterize ADC resistance in Solid tumours and Identify clinically useful biomarkers*, is a European research programme focusing on advancing antibody-drug conjugates (ADCs), a new class of cancer therapies. These innovative treatments target cancer cells with precision, reducing harm to healthy tissues. Led by Dr Barbara Pistilli at Gustave Roussy, the project aims to develop tools to help clinicians select the most suitable ADC for each patient, taking into account their clinical characteristics and the biology of their tumour.

Over the past five years, ADCs have transformed cancer care, significantly improving survival rates of patients with solid tumours and blood cancers. Despite these encouraging results, many patients develop resistance to these innovative treatments over time, while others experience intolerable adverse events such as lung inflammation, neuropathy or skin toxicity. The OASIS programme seeks to address these issues by understanding the mechanisms of resistance to personalise the choice of ADC for each patient and prevent serious toxicities.

To achieve this, the project relies on multicentric clinical trials integrating different cutting-edge technologies, such as new nuclear medicine techniques, digital pathology, liquid biopsies, and the generation of organoids derived from the tumours of the patients included. All the data collected will be used to develop a new-generation ADC, to overcome resistance mechanisms and improve the delivery of chemotherapy to tumour cells. This new drug will be evaluated as part of the OASIS programme. OASIS thus aims to help physicians prescribe the most appropriate ADC, thereby maximising its efficacy while reducing the risk of toxicity.

"Understanding these mechanisms is essential for several reasons. Firstly, to determine the next treatment to prescribe to patients in whom ADCs lose their efficacy over time", explains Dr Barbara Pistilli, Head of the Breast Pathology Committee at Gustave Roussy and coordinator of the OASIS programme. "Developing robust biomarkers and diagnostic tools will also help to avoid therapeutic failures. Finally, we will develop a new ADC, which will bypass the identified mechanisms of resistance," she continues.

"Ultimately, a score based on an artificial intelligence model called the OASIS score, will combine clinical, biological and radiological data to predict the efficacy of ADCs and the toxicities associated with these treatments, for each patient. The score will enable a more personalised approach to cancer therapy, by directing therapeutic choices towards the ADCs best suited to each individual's characteristics", emphasises Guillaume Montagnac, Director of the UMR 1279 Gustave Roussy/Inserm/Université Paris-Saclay - Tumour Cell Dynamics - a partner in the OASIS programme.

Launched in January 2025, OASIS is an international biomedical research programme coordinated by Gustave Roussy. It gathers a consortium of 12 partners from across Europe, united in their mission to improve cancer treatment, including Institut Jules Bordet, industrial partners such as Olink Proteomics AB and two Gustave Roussy spin-off biomedical start-ups, Elikya Therapeutics and Orakl Oncology, academic partners such as CentraleSupélec, UNICANCER, Inserm, the French Atomic Energy and Alternative Energies Commission (CEA) and the Universities of Athens and Crete, as well as the patient association Cancer Patients Europe.

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List of partners: Gustave Roussy (France), Inserm (France), Unicancer (France), Commissariat à l'énergie atomique et aux énergies alternatives (France), Olink Proteomics AB (Sweden), Elikya Therapeutics (France), Ethniko kai kapodistriako panepistimio athinon (University of Athens, Greece), Centre hospitalier universitaire Jules Bordet (Belgium), Orakl Oncology (France), CentraleSupélec (France), Cancer Patients Europe (Belgium), Panepistimio Kritis (University of Crete, Greece).



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About Gustave Roussy

Ranked first in France, first in Europe and fourth in the world, Gustave Roussy is a centre of global expertise entirely dedicated to patients living with cancer. The Institute is a founding pillar of the Paris-Saclay Cancer Cluster. Source of therapeutic innovations and diagnostic breakthroughs, the Institute welcomes nearly 50,000 patients each year, including 3,500 children and adolescents, and develops an integrated approach combining research, care and teaching. An expert in rare cancers and complex tumours, Gustave Roussy treats all cancers at all stages of life. It offers its patients personalised care that combines innovation and humanity, taking into account both care and the physical, psychological and social quality of life. With 4,100 employees at two sites, Villejuif and Chevilly-Larue, Gustave Roussy brings together the expertise essential for high-level cancer research; 40% of treated patients are included in clinical studies. To find out more about Gustave Roussy and follow the Institute's news: www.gustaveroussy.fr/en, [X](#), [Facebook](#), [LinkedIn](#), [Instagram](#).

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