PRESS RELEASE

Transgene Participates in New Cancer Research Consortium

International Research Consortium Aims to Build a Reproducible Single-cell Sequencing Workflow to Capture Tumor Drug Persistence

Strasbourg (France) and Utrecht (The Netherlands), September 1st, 2021, 05:45 pm CET – **Transgene (Euronext Paris: TNG), a biotech company that designs and develops virus-based immunotherapeutics against cancer, announces its participation in the launch of PERSIST-SEQ, a new international consortium of academic and industrial leaders in the field of cancer research.**

This collaborative research program aims to provide the cancer research community with a new gold standard workflow for single-cell sequencing by developing and validating best practices as well as generating and analysing high-quality data. The project aims to empower the scientific community to unravel drug resistance and develop smarter therapeutic strategies to better treat cancer and prevent resistance. PERSIST-SEQ is a five-year public-private partnership, funded by the Innovative Medicines Initiative (IMI), and led by the Oncode Institute and AstraZeneca.

Cancer takes 9.6 million lives each year, 90% of which result from untreatable cancer relapse occurring after initially effective treatment. Therapeutic resistance is one of the primary causes of cancer death and is clinically difficult to predict, prevent or treat. Although resistance has been studied extensively in the last decades, there is no comprehensive understanding of its underlying mechanisms, nor how they differ between cancer types or therapies. A better understanding of these mechanisms can contribute to better patient stratification, the development of effective drug strategies targeting the resistance mechanisms as well as improved cancer treatment strategies. Moreover, resistance is a major industrial challenge since it causes failure in the drug discovery and development process. Therapeutic resistance is largely unpredictable and difficult to model. Therefore, better tools are needed to identify or predict resistance mechanisms. These tools would, in turn, decrease the costs and risks associated with cancer drug development significantly.

"*Drug resistance in cancer is one of the greatest causes of mortality and despite increasing success with targeted therapies in the clinic, how cancer cells survive drug treatment is still not well understood. We are excited to co-lead this European industry-academic partnership, using state-of-the-art single-cell sequencing to characterise 5 million single cells over 5 years to understand and overcome drug resistance*" **said Ultan McDermott (AstraZeneca), industrial co-lead of PERSIST-SEQ.**

Current experimental approaches fail to study residual disease, the major cause of cancer relapse, and therapeutic resistance in clinically meaningful ways. In the last years novel methods in single-cell sequencing have seen significant advancements. Such techniques combined with advanced cancer modelling approaches can shed light on the intricate processes underlying therapeutic resistance and residual disease. Understanding the mechanisms of cancer resistance is crucial to enable its mitigation and requires a coordinated effort. To address these challenges, PERSIST-SEQ has formed a coalition of field-leading researchers and medical oncologists on cancer resistance who will leverage their ingenious cancer modelling approaches and cutting-edge techniques to perform the sequencing of single tumour cells. PERSIST-SEQ will refine and standardize a broadly applicable workflow for single-cell sequencing in order to improve the understanding of therapeutic resistance in cancer and develop targeted prevention and mitigation techniques.

"*I am very excited to be part of this consortium. Not only because of the importance of understanding tumour drug resistance, but also because we will perform this project in close collaboration with industrial partners. I am sure we will learn a lot from each other*" **commented Prof. Alexander van Oudenaarden (Hubrecht Institute), Principal Investigator of PERSIST-SEQ.**

Jean-Marc Balloul, Director Innovation & Partnership at Transgene, added: "*We are proud to participate in the PERSIST-SEQ consortium and contribute to the deciphering of immunotherapeutic resistance in cancer cells. Certain tumor cells display pathways that allow them to resist therapeutic approaches based on oncolysis, such as oncolytic viruses. Single-cell sequencing will allow us to better understand these resistance mechanisms and ultimately design immunotherapies that can overcome this hurdle.*"

About the PERSIST-SEQ consortium

The ultimate goal of the PERSIST-SEQ consortium is to improve the understanding of therapeutic resistance in cancer and create effective strategies to improve cancer treatment and prevent drug resistance. As a result of this effort, the project anticipates a significant step forward for the cancer community and its understanding of tumour plasticity. This can change the way scientists and clinicians view cancer and its related drug developments. In order to achieve this goal, PERSIST-SEQ will develop a standardized approach to single-cell sequencing workflows for the investigation of cells pre-treatment. Uniquely, all experiments and pre-processing of data will be done at Single Cell Discoveries. This will ensure standardization and continuity of both experimental and bioinformatics workflows throughout the project. Importantly, PERSIST-SEQ will employ an open access model to build and sustain its benchmarking procedures and centralized European data infrastructure. This model reduces duplication of effort, thereby promoting collaboration across disciplines and ensuring efficient adoption of state-of-the-art single cell technologies. By presenting an approach which is replicable, the PERSIST-SEQ consortium will facilitate a further investigation of unaddressed tumours and therapies. Therefore, the real impact of the project will stem from the growth of innovation capacity associated with the use of this approach across academic and industrial centres around the world.

PERSIST-SEQ is a public-private partnership funded by the IMI, with representation from academic institutions, small- and medium-sized enterprises, public organizations and pharmaceutical companies. The partners involved in the project are Oncode Institute, Hubrecht Institute, Netherlands Cancer Institute, Single Cell Discoveries, Lygature, Wellcome Sanger Institute, Fondazione del Piemonte per l'Oncologia, Hubrecht Organoid Technology, Institute for Research in Biomedicine (IRB Barcelona), Vall d'Hebron Institute of Oncology, Xenopat, AstraZeneca, Merck KGaA, Darmstadt, Germany, Bayer, Transgene, Charles River.

For more information, visit the PERSIST-SEQ website: www.persist-seq.org

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About Transgene

Transgene (Euronext: TNG) is a biotechnology company focused on designing and developing targeted immunotherapies for the treatment of cancer. Transgene's programs utilize viral vector technology with the goal of indirectly or directly killing cancer cells.

The Company's clinical-stage programs consist of two therapeutic vaccines (TG4001 for the treatment of HPV-positive cancers, and TG4050, the first individualized therapeutic vaccine based on the *myvac*® platform) as well as two oncolytic viruses (TG6002 for the treatment of solid tumors, and BT-001, the first oncolytic virus based on the Invir.IO™ platform).

With Transgene's *myvac*® platform, therapeutic vaccination enters the field of precision medicine with a novel immunotherapy that is fully tailored to each individual. The *myvac*® approach allows the generation of a virus-based immunotherapy that encodes patient-specific mutations identified and selected by Artificial Intelligence capabilities provided by its partner NEC.

With its proprietary platform Invir.IO™, Transgene is building on its viral vector engineering expertise to design a new generation of multifunctional oncolytic viruses. Transgene has an ongoing Invir.IO™ collaboration with AstraZeneca.

Additional information about Transgene is available at: www.transgene.fr

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