



PRESS RELEASE

Collectis Announces Publication of an Article in *Cancer Research* on Allogeneic CAR T-cell Immunotherapies

New York, July 16, 2015 – Collectis (Alternext: ALCLS – Nasdaq Global Market: CLLS), the gene-editing company employing proprietary technologies to develop best-in-class CAR T-cell products in adoptive immunotherapy for cancer, today announced the publication of a study in *Cancer Research* describing the applicability of TALEN®-mediated genome editing to a scalable process, which enables the manufacturing of third-party CAR T-cell immunotherapies.

Adoptive immunotherapy using autologous T-cells endowed with chimeric antigen receptors or CARs has emerged as a powerful means of treating cancer. However, a limitation of this approach is that autologous CAR T-cells must be generated on a custom-made basis. To overcome the limitations of patient-derived CAR T-cell therapies, TALEN® mediated gene inactivation can be used to generate non-alloreactive T-cells from third-party donors in a robust, scalable manufacturing process, thus allowing "off-the-shelf" CAR T-cell immunotherapies.

Laurent Poirot Ph.D. and his collaborators use this TALEN®-mediated editing approach to develop a process for the large-scale manufacturing of T-cells deficient in expression of both their T-cell receptor (TCR) and CD52, a protein targeted by alemtuzumab, a chemotherapeutic agent. Functionally, T-cells manufactured with this process do not mediate graft-versus-host reactions, and are rendered resistant to destruction by alemtuzumab. These characteristics enable the administration of alemtuzumab concurrently or prior to engineered T-cells, supporting their engraftment. Furthermore, endowing the TALEN®-engineered cells with a CD19 CAR led to efficient destruction of CD19+ tumor targets even in the presence of the chemotherapeutic agent. CAR T-cell immunotherapies can therefore be used in an "off-the-shelf" manner akin to other biological immunopharmaceuticals.

Laurent Poirot, Ph.D., Head of Early Discovery

Dr. Laurent Poirot studied physics and biology at the Ecole Polytechnique in France, before earning his Ph.D. at the Strasbourg University (France) and the Harvard Medical School in Boston. He then joined the Genomics Institute of the Novartis research foundation in San Diego as a postdoctoral fellow, where he studied the development of high throughput *in vivo* and *in vitro* approaches for the study of gene functions in immune cells. He joined Collectis in 2009 as a Project Leader, and has been working as Head of Early Discovery since 2013.

Multiplex genome edited T-cell manufacturing platform for "off-the-shelf" adoptive T-cell immunotherapies

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<http://cancerres.aacrjournals.org/content/early/2015/07/16/0008-5472.CAN-14-3321.abstract>

About Collectis

Collectis is a preclinical stage biopharmaceutical company focused on developing immunotherapies based on gene edited engineered CAR-T cells (UCART). The company's mission is to develop a new generation of cancer therapies based on engineered T-cells. Collectis capitalizes on its 15 years of expertise in genome engineering - based on its flagship TALEN® products and meganucleases and pioneering electroporation PulseAgile technology - to create a new generation of immunotherapies. CAR technologies are designed to target surface antigens expressed on cells. Using its life-science-focused, pioneering genome-engineering technologies, Collectis' goal is to create innovative products in multiple fields and with various target markets. Collectis S.A. is listed on the Nasdaq Global Market (ticker: CLLS) and on the NYSE Alternext market (ticker: ALCLS). To find out more about us, visit our website: www.collectis.com
TALEN® is a registered trademark owned by Collectis Group.

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