

**ANNUAL  
REPORT**  
2016





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## 2016 ANNUAL REPORT

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#### Forward looking statements

This presentation contains "forward-looking" statements that are based on our management's current expectations and assumptions and on information currently available to management.

Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

The risks and uncertainties include, but are not limited to the risk that the preliminary results from our product candidates will not continue or be repeated, the risk of not obtaining regulatory approval to commence clinical trials on the ucart product candidates, the risk that any one or more of our product candidates will not be successfully developed and commercialized. Further information on the risks factors that may affect company business and financial performance, is included in filings collectis makes with the security exchange commission from time to time and its financial reports.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

#### Collectis proprietary information.

Not to be copied, distributed or used without collectis' prior written consent.

# NOTE FROM THE CHAIRMAN & CEO

## BEYOND PROMISE TO PRACTICE: LIFE-SAVING GENE EDITING IS BECOMING REALITY



Programming T-cells so they can attack cancer cells more effectively is one of the most exciting areas of medical research. It has the potential to overcome the limitations of the current approach by providing an allogeneic, frozen, “off-the-shelf” T-cell based medicinal product.

As the pioneering company in the gene editing field, we’ve spent 17 years seeking the best possible answers. We’ve tried a wide range of nuclease technologies, from meganucleases, CRISPR-Cas, TALEN®, Mega-TAL and others. Our goal has always been to work with the technology that provides the greatest balance of efficiency, precision, performance and safety. This has led us to focus on TALEN® technology as the optimum choice for therapeutic and industrial applications.

Today, I’m proud to say that the world is closer than ever to life-saving gene-editing therapies as a reality.

2016 brought several remarkable milestones.

**UCART19.** In June 2016, the first patient was treated in Phase I trial of UCART19 in pediatric B-cell acute lymphoblastic leukemia (B-ALL) at the University College of London (UCL) in the UK. Collectis’ approach with UCART19 is based on the preliminary positive results from clinical trials using autologous products based on the CAR technology, and on the first clinical application of TALEN® engineered universal CAR T-cells in B-ALL under Great Ormond Street Hospital’s (GOSH) “Specials” license and responsibility.

Two infants were rescued from previously incurable leukemia after receiving an infusion of gene-edited immune cells. Layla Richards was the first person in the world to receive the “off-the-shelf” cell therapy developed by Collectis. Great Ormond Street Hospital published details of these cases in the January 2017 issue of the peer-reviewed journal, *Science Translational Medicine*.

### UCART19 HIGHLIGHTS

In Phase I trials for children and adults

First patients treated more than a year ago remain disease-free

Initial Phase I clinical trials using UCART19 cell therapy are now underway in both children and adults. Both are sponsored by Servier in close collaboration with Pfizer.

**UCART123.** Our second product candidate will proceed into clinical development and serve cancer patients in need. UCART123, our wholly owned TALEN® gene-edited candidate, will be tested in patients with acute myeloid leukemia (AML) and blastic plasmacytoid dendritic cell neoplasm (BPDCN).

It is the first allogeneic, “off-the-shelf” gene-edited CAR T-cell product candidate FDA-approved for clinical trials. It also earned the National Institutes of Health’s Recombinant DNA Advisory Committee (RAC)’s unanimous approval for two Phase I study protocols.

### UCART123 HIGHLIGHTS

First IND for an allogeneic, “off-the-shelf” gene-edited CAR T-cell product candidate FDA-approved for clinical trials.

Phase I trials to begin in the first half of 2017.

Phase I trials at Weill Cornell for AML and at MD Anderson Cancer Center for BPDCN are planned for the first half of 2017.

**Additional patent.** In October, we added U.S. patent 9,458,439 to our intellectual property portfolio. We, along with Richard Mulligan, are the inventors, and Collectis has an exclusive right under patent.

The patent is for a unique method of introducing chromosomal modifications at a locus by induction of double-stranded DNA cleavage using a chimeric restriction endonuclease and non-homologous end joining recombination (NHEJ). This is a pivotal invention because it is at the basis of many current nuclease-based precise gene inactivation techniques. This umbrella patent covers most of the gene-editing procedures done with a nuclease, including those



based on CRISPR-Cas9, TALEN®, Zinc Finger, and meganucleases. What's more, this technology is universal: it can be applied to any types of cells, including human, animal, plant cells or microorganisms.

In the last year, we added great depth and talent to our team. Dr. Hoang-Sayag, a board-certified physician in hematology and medical oncology with 23 years of experience, joined Collectis as Chief Medical Officer. Her experience in oncology clinical development – specifically in strategy and delivery in all phases in the pharmaceutical, biotechnology and clinical research spaces – enables her to lead Collectis' strategy and build awareness of the breakthrough work we're doing as a leader and innovator in the field.

As the chairman of Calyxt, our wholly owned subsidiary focused on the plant sciences, I'm proud to announce that Calyxt has quickly achieved what few agbiotech companies in the world could: complete field trials for the first gene-edited food product. In the past 12 months, and following the nomination of Federico Tripodi as the CEO of Calyxt, the executive team has been significantly strengthened.

This proves the power and precision of the TALEN® gene-editing platform, which has applications well beyond medicine. Our technology promises to deliver healthier specialty food ingredients and agriculture advantageous crop traits. Calyxt is a consumer-centric, food- and agriculture-focused company that was originally built around Pr. Dan Voytas, its Chief Scientific Officer – one of the key inventors of TALEN technology and a world-leading scientist in plant biotechnology.

The interest in genetics for agriculture dates back to Gregor Mendel, however Calyxt's mission is not bigger yields but healthier food grown more sustainably.

We have developed a robust product pipeline with our proprietary technology. Our first product candidate, which we expect to be commercialized by the end of 2018, is a high oleic soybean designed to produce a healthier oil that has zero trans fats and reduced saturated fats. We are also developing a high fiber wheat to create flour with up to three times more dietary fiber than standard white flour while maintaining the same flavor and convenience of use. Another product candidate we are developing is a herbicide tolerant wheat designed to provide farmers with better weed control options to increase yields and profitability. We believe each of these product candidates addresses a potential multi-billion dollar market opportunity.

Calyxt has expanded its patent portfolio and is building a new headquarters. This facility, on 10-acres in the St. Paul suburb of Roseville, includes a 35,000 square-foot office and lab building, with greenhouses and outdoor research plots. This year we expect Calyxt staff to double.

This powerful growth would be impossible without the dedication of our Collectis and Calyxt teams. In recognition of the company's pioneering work in gene editing, MIT Technology Review named Collectis to its annual list of 50 Smartest Companies for the second consecutive year. Celllectis was named 2016 Technology Pioneer by the World Economic Forum, and also won the 2016 Most Innovative European Biotech SME Award for Healthcare.

As CEO, my job is to ensure that we have a clear mission and the financial resources to pursue world-changing innovation. In 2017, we will continue to work on new immuno-oncology product candidates and food products, and re-double our efforts to save lives and improve the world.

All of us at Collectis thank you for your ongoing support, and for your belief in our company and the promise of a better future for everyone.

**ANDRÉ CHOULIKA**

# CELLECTIS

## IN BRIEF

Collectis is a clinical-stage biopharmaceutical company focused on developing immunotherapies based on gene-edited T-cells. By capitalizing on its 17 years of expertise in gene editing – built on its flagship TALEN® technology and pioneering electroporation system PulseAgile – Collectis uses the power of the immune system to target and eradicate cancer 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 and on the NYSE Alternext market. Calyxt, Inc. is a wholly owned subsidiary based in Minneapolis-St. Paul, Minnesota (USA).

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Collectis securities services:  
Société Générale Securities Services (affiliate 042)  
Citi – Depositary Receipt Services

### INTELLECTUAL PROPERTY

As of December 31, 2016, we own 111 patent families (consisting of approximately 75 issued patents and an additional 443 patent applications) and have in-licensed an additional 30 patent families. Our intellectual property portfolio provides significant protections over our product candidates and proprietary technology platforms.

We also own trademarks such as Collectis®, TALEN® and Calyxt™.

### LISTING MARKETS

**Nasdaq Global Market, New York** – Ticker: CLLS  
**Alternext, Paris** – Ticker: ALCLS.PA

### MILESTONES

**1999:** Collectis is founded

**2005:** Breakthrough: Collectis enables the industrial production of nucleases

**2007:** Listing on the Alternext market of Euronext in Paris

**2008 – 2010:** Acquisition of technologies and establishment of subsidiaries

**2010:** Acquisition of all assets of CytoPulse Inc., Inc. based in Maryland

The acquisition included Hybrimmune electrofusion technology and PulseAgile technology for RNA transfection by electroporation. PulseAgile is now the standard technology for RNA transfection of T-cells.

**2010:** Founding of Calyxt, Inc. (formerly Collectis Plant Sciences, Inc.)

**2011:** Collectis acquires exclusive licence to TAL Effector patents from University of Minnesota

**2014:**

- › Strategic collaboration agreement in allogeneic cell therapy with Servier to develop and commercialize novel product candidates targeting leukemia and other potential tumors
- › Global strategic cancer immunotherapy collaboration with Pfizer to develop immunotherapies against selected targets in the field of oncology

**2015:**

- › Listing on the Nasdaq Global Market in New York: Collectis makes the second largest IPO in the CAR T space with a total of 228.250 million USD.
- › Research alliance advancing drug discovery and the translation of novel immunotherapies in leukemia with Weill Cornell Medical College
- › Broad preclinical and clinical strategic alliance in cancer immunotherapy with MD Anderson Cancer Center
- › First-in-man clinical use of UCART19 for acute lymphoblastic leukemia (ALL)
- › Collectis files first Clinical Trial Application for UCART19, an allogeneic gene-edited CAR T-cell product for hematological malignancies, now exclusively licensed to Servier

**2016:**

- › Ongoing clinical trials of UCART19, sponsored by Servier
- › Submission of an IND Application for UCART123 in acute myeloid leukemia (AML) and blastic plasmacytoid dendritic cell neoplasm (BPDCN)

### LEGAL FORM

French *Société anonyme* with board of directors

Number of shares outstanding as of December 31, 2016: 35,333,572

Share capital as of December 31, 2016: €1,767 M

Market capitalization as of december 31, 2016: 572,9 M

## APPOINTMENT

### JANUARY 7

Collectis announces Chief Medical Officer appointment to senior leadership team

### MAY 23

Collectis Appoints Federico A. Tripodi to New Role of Calyxt CEO

## THERAPEUTIC ADVANCES

### MAY 5 & 6

Three poster presentations at the American Society of Gene & Cell Therapy (ASGCT) 19<sup>th</sup> Annual Meeting:

- › Allogeneic CAR T-Cells Targeting CD123 Effectively Eliminate Myeloid Leukemia Cells
- › An Engineered CAR T-Cell Platform for Allogeneic Combination Immunotherapy
- › Integration of Dual Signal Input Strategies in Novel Chimeric Antigen Receptors to Control the CAR T-Cell Functions

### JUNE 6

Poster presentation at the American Society of Clinical Oncology Annual Meeting

- › A Universal Suicide Switch for Chimeric Antigen Receptor T cell Adoptive Therapies

### JUNE 11

Poster presentation at the European Hematology Association Annual Meeting

- › Allogeneic TCR $\alpha$ /CD38 Double Knockout T-cells Bearing an anti-CD38 Chimeric Antigen Receptor (CAR): an Improved Immunotherapy for the Treatment of T-cell Acute Lymphoblastic Leukemia (T-ALL) and Multiple Myeloma (MM)

### JUNE 20

First patient treated in Phase I trial of UCART19 in pediatric Acute B Lymphoblastic Leukemia (B-ALL)

### NOVEMBER 15

Collectis announces successful cGMP manufacturing for second product candidate: UCART123

### DECEMBER 4 & 5

Two oral presentations and one poster presentation at the 58<sup>th</sup> American Society of Hematology (ASH) Annual Meeting and Exposition

- › Allogeneic Tcr $\alpha$ / $\beta$  Deficient CAR T-Cells Targeting CD123 Prolong Overall Survival of AML Patient-Derived Xenografts
- › Preclinical Evaluation of Allogeneic Anti-BCMA Chimeric Antigen Receptor T Cells with Safety Switch Domains and Lymphodepletion Resistance for the Treatment of Multiple Myeloma
- › Preclinical Studies of Anti-CD123 CAR-T Cells for the Treatment of Blastic Plasmacytoid Dendritic Cell Neoplasm (BPDCN)

### DECEMBER 15

Collectis announces Recombinant DNA Advisory Committee's (RAC) unanimous approval of UCART123 Phase I study protocols in AML and BPDCN

# 2016 HIGHLIGHTS

## PATENT AND PUBLICATION

### JANUARY 11

Collectis announced a new CAR architecture controlling CAR T-Cell functions

### OCTOBER 4

Collectis announces the issuance of U.S. patent 9,458,439 following U.S. patent 8,921,332 issued in December 2014

## PARTNERSHIPS

### JANUARY 19

Collectis enters into new agreement with CELLforCURE for the cGMP manufacturing of UCART123 for hematological malignancies

### MARCH 16

Collectis and MabQuest announce immunotherapy partnership on new class of PD-1 antagonist monoclonal antibodies

### MARCH 21

Collectis announces RetroNectin<sup>®</sup> supply and license agreement with Takara Bio Inc.

## RECOGNITIONS

### JUNE 27

MIT Technology Review names Collectis on annual list of 50 Smartest Companies for second consecutive year

### JUNE 27

Collectis named 2016 Technology Pioneer by the World Economic Forum

### SEPTEMBER 27

Collectis wins 2016 Most Innovative European Biotech SME Award for Healthcare World first

## WORLD PREMIERE

### OCTOBER 31

Collectis hosts world's first gene-edited dinner in NYC



# THERAPEUTIC ACTIVITIES



# WORKING TOWARDS A CURE

## PRODUCT CANDIDATES

Our lead immuno-oncology product candidates, which we refer to as UCARTs, are all allogeneic CAR T-cells engineered to be used for treating the largest number of patients with a particular cancer type. Each UCART product candidate targets a selected tumor antigen and bears specific engineered attributes, such as compatibility with specific medical regimens that cancer patients may undergo. UCART is our first therapeutic product line that we are developing with our gene-editing platform to address unmet medical needs in oncology.



## PIPELINE

### UCART19

UCART19 is an allogeneic CAR T-cell product candidate developed for treatment of CD19-expressing hematological malignancies, gene-edited with TALEN®. UCART19 is initially being developed in acute

lymphoblastic leukemia (ALL). Cellectis' approach with UCART19 is based on the preliminary positive results from clinical trials using autologous products based on the CAR technology, and has the potential to overcome the limitation of the current autologous approach by providing an allogeneic, frozen, "off-the-shelf" T-cell based medicinal product.

In a medical first, two young patients were treated with gene-edited "off-the-shelf" T-cells. According to a description of their cases published in *Science Translational Medicine* in January 2017, each child had been diagnosed with leukemia and had undergone previous treatments that failed. This first-in-human application of our TALEN® engineered T-cell product candidate represents a landmark in the use of new gene engineering technology and provides encouraging data for a ready-made T-cell strategy that is currently tested in clinical investigations. Great Ormond Street Hospital (GOSH) treated these young patients in 2015 with Cellectis' TALEN® gene-edited allogeneic UCART19 product candidate under a special license from the Medicines & Healthcare products Regulatory Agency (MHRA). No other therapies were available for refractory relapsed acute lymphoblastic leukemia (ALL) following mismatched allogeneic stem cell transplantation. In response to an unsolicited request from Professor Waseem Qasim, Consultant Immunologist at GOSH and Professor of Cell and Gene Therapy at University College London (UCL) Institute of Child Health, Cellectis gave its approval for the use of its UCART19 product candidate and technologies under GOSH's "Specials" license and responsibility, for the particular clinical needs of these patients.

Today, the two children are at home and remain disease-free 24 and 18 months after treatment respectively.

Initial Phase I clinical trials using UCART19 cell therapy are now underway in both children and adults. Both are sponsored by Servier in close collaboration with Pfizer.

On November 18, 2015, we signed with Servier an amendment to our collaboration agreement. Notably,

Program	Indication	Product development	Preclinical	Manufacturing	IND filling*	Phase I	Phase II
UCART19**	ALL (Pediatrics)						
	ALL (Adult)						
UCART123	AML						
	BPDCN						
	Others (HCL, MDS...)						
UCARTCS1	MULTIPLE MYELOMA						
UCART22	B-ALL						
	B-NHL						
	B-CLL						
UCART38	MULTIPLE MYELOMA						
	T-CELL ALL						
	Other lymphoid malignancies						

\*Or European equivalent. / \*\*Joint clinical development program between Servier and Pfizer.



Servier exercised its option to acquire exclusive worldwide rights to further develop and commercialize UCART19. Following further agreements, Servier and Pfizer began collaborating on a joint clinical development program for this cancer immunotherapy. Pfizer has been granted exclusive rights by Servier to develop and commercialize UCART19 in the United States, while Servier retains exclusive rights for all other countries.

## UCART123

Our first wholly-controlled product candidate, UCART123, is a gene-edited T-cell investigational drug that targets CD123, an antigen expressed at the surface of leukemic cells in AML, as well as on leukemic and other tumoral cells in BPDCN. Cellectis received in February 2017 an Investigational New Drug (IND) approval from the U.S. Food and Drug Administration (FDA) to conduct Phase I clinical trials with UCART123 in patients with acute myeloid leukemia (AML) and blastic plasmacytoid dendritic cell neoplasm (BPDCN). This marks the first allogeneic, “off-the-shelf” gene-edited CAR T-cell product candidate that the FDA has approved for clinical trials. Cellectis intends to initiate Phase I trials in the first half of 2017. The UCART123 program was subject to a public hearing by the National Institutes of Health’s Recombinant DNA Advisory Committee (RAC) in December 2016, where it received the unanimous approval of the RAC committee members.

AML is a devastating clonal hematopoietic stem cell neoplasm that is characterized by uncontrolled proliferation and accumulation of leukemic blasts in bone marrow, peripheral blood and, occasionally, in other tissues. These cells disrupt normal hematopoiesis and rapidly cause bone marrow failure and death. In the U.S. alone, there are an estimated 19,950 new AML cases per year, with 10,430 estimated deaths per year. The clinical research at Weill Cornell is led by principal investigator Dr. Gail J. Roboz, Director of the Clinical and Translational Leukemia Programs and Professor of Medicine.

BPDCN is a very rare and aggressive hematological malignancy that is derived from plasmacytoid dendritic cell precursors. BPDCN is a disease of bone marrow and blood cells but also often affects skin and lymph nodes. The UCART123 clinical program at MD Anderson is led by Dr Naveen Pemmaraju, MD, Assistant Professor, and Professor Hagop Kantarjian, MD, Department Chair, Department of Leukemia, Division of Cancer Medicine.

## UCARTCS1 & UCART38

UCARTCS1 and UCART38 are allogeneic gene-edited T-cell product candidates designed for the treatment of CS1-expressing or CD38-expressing hematologic malignancies: UCARTCS1 is being developed in multiple myeloma (MM); UCART38 is being developed in MM and other malignancies. UCARTCS1 is at a preclinical stage of development. We intend to initiate manufacturing of UCARTCS1 according to GMP

in 2017, for purposes of conducting clinical trials. Preclinical and translational activities for UCARTCS1 will be performed in collaboration with the MD Anderson Cancer Center. UCART38 is at an early preclinical stage. Preclinical and translational activities on UCART38 in T-cell ALL are to be performed in collaboration with the MD Anderson Cancer Center.

## UCART22

Like CD19, CD22 is a cell surface antigen expressed from the pre B-cell stage of development through mature B-cells. UCART22 is an allogeneic gene-edited T-cell product candidate designed for the treatment of acute lymphoblastic leukemia. UCART22 is at an early preclinical stage of development. Preclinical and translational activities on UCART22 in ALL will be performed in collaboration with the MD Anderson Cancer Center in view of a potential clinical trial.

### The different steps of product development:

#### Discovery

Identification of a new potential target which could lead to a future product candidate.

#### Product development

Engineering of “Chimeric Antigen Receptor” (CAR) T-cells is one of the technologies developed by Cellectis to construct new potential products. This approach allows us to design allogeneic product candidates through a gene-editing mechanism of T-cells derived from healthy donors. Gene editing is performed using TALEN®, which allow very precise and targeted gene modification and provide new attributes to the product such as additional levels of safety or compatibility with the standard of care.

#### In Vitro Studies

Studies performed on specific cell lines to have some preliminary results on the activity of a potential product candidate.

#### In Vivo Studies

Preclinical studies performed on animal models in order to have preliminary results on the dose-dependent toxicity and on the activity of a potential product candidate before further clinical investigation.

#### IND filing (or foreign equivalent)

The Investigational New Drug (IND) filing in the USA consists of the submission of the required study documentation package to the health authority (FDA) to obtain the authorization to perform clinical investigation.

#### Clinical studies

Testing of the product candidate in humans.



# GENE-EDITED CAR T-CELLS

## THE POTENTIAL OF GENE EDITING

The principle of gene editing is very simple: in the same way that spell check identifies and corrects single letter errors in a word or grammar errors in a sentence, gene editing can be used to precisely edit or change the DNA within a cell.

Gene editing is a type of genetic engineering in which DNA is inserted, deleted, repaired or replaced from a precise location in the genome. The most fundamental challenge of gene editing is the need to specifically and efficiently target a precise DNA sequence within a gene. Our proprietary nuclease-based gene-editing technologies, combined with 17 years of experience in gene editing, allow us to edit any gene with highly precise insertion, deletion, repair and replacement of DNA sequences. Our nucleases, including a particular class of proteins derived from transcription activator-like effectors, act like DNA scissors to edit genes at precise target sites.

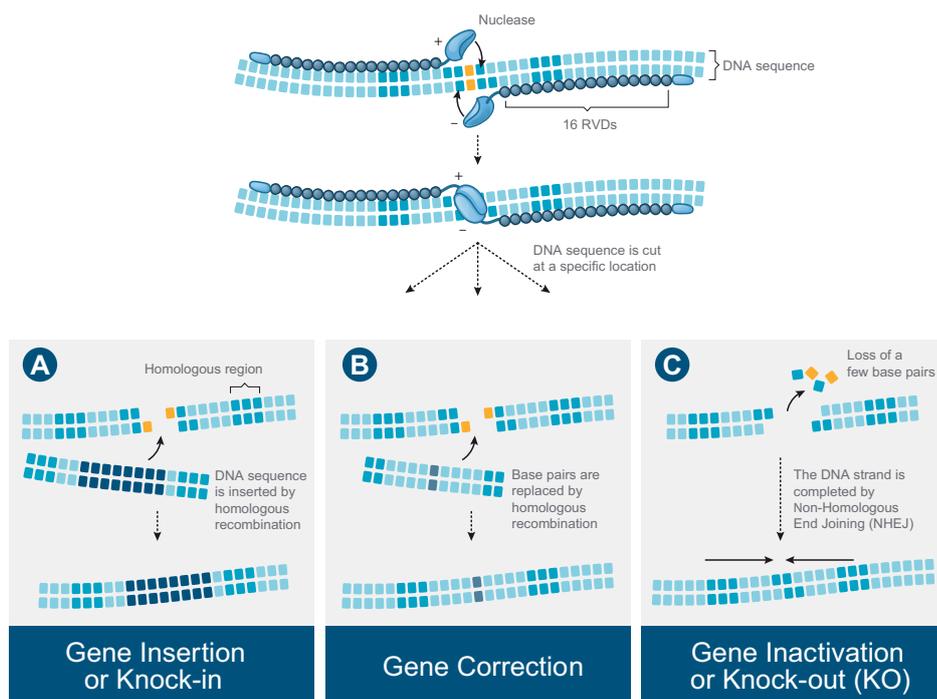
Gene editing has many potential therapeutic applications. For example, it can be used to correct diseases and disorders that have a genetic basis. Just

as editing text involves adding, removing, or replacing words, genome editing is an approach in which the genome sequence is directly changed by adding, replacing, or removing DNA bases. Gene editing is going to change the way people are treated by curing the roots of diseases instead of merely treating the symptoms. It provides us with the ability to rethink how we treat diseases altogether. It is the next transformative step in medicine. As a leader in therapeutic genome editing, Cellectis stands at the forefront of these efforts. Cellectis employs core proprietary technologies to develop best-in-class products in the rapidly growing field of immuno-oncology. Our approach takes advantage of gene-edited immune cells that recognize specific targeted antigens on cancer cells to target and eradicate these cells. One key component of this approach is the T-cell, a type of white blood cell that plays an important role in identifying and killing foreign and malignant cells.

## GENOME EDITING APPROACHES

There are three possible strategies to edit the genome:

- A. Gene insertion** is used to add a new function to the genome. For example in drug discovery, or in order to overcome a genetic defect like hemophilia.
- B. Gene correction** is used to replace an existing defective sequence (which generally impacts the gene's functions) by a functional sequence. For example, to treat a serious genetic disease such as cystic fibrosis.
- C. Gene inactivation** is used to prevent the expression of a gene. This approach can be used to treat persistent viral infections such as AIDS.





## FROM T-CELLS TO UCART PRODUCTS

### T-CELLS: THE SOLDIERS OF THE IMMUNE SYSTEM

The immune system protects the body from any foreign matters that might cause it any harm. The success of the immune system depends on its ability to discriminate between foreign (non-self) and host (self) cells. Cancer cells thrive, in part, because they trick the immune system into treating them as self, even though they express abnormal antigens, and thus immune tolerance occurs when the immune system fails to recognize and attack tumors. Breaking immune tolerance is an important aspect of most immuno-oncology based therapeutics because it enables the immune system to recognize and treat tumors as non-self and lead to tumor destruction.

Our therapeutics programs are focused on developing products using our gene-editing platform to develop gene-edited T-cells that express a Chimeric Antigen Receptor (CAR) and are designed to target and destroy cancer cells. CARs are artificial molecules that, when present at the surface of immune effector cells, enable the T-cells to recognize a desired protein, or antigen, and trigger the killing of cells harboring this antigen at their surface (target cells). Immune cells —most often T lymphocytes— can be engineered to express a CAR able to recognize proteins present at the surface of cancer cells. Upon cell-to-cell contact between effector and targeted cells, antigen recognition will activate the effectors, giving them the signal to attack their targets, and leading ultimately to the killing of cancer cells.

### CHIMERIC ANTIGEN RECEPTORS (CARs)

CARs are engineered molecules that, when present at the surface of T-cells, enable them to recognize specific proteins or antigens that are present on the surface of other cells. These receptors are typically used to graft the specificity of an antibody derived from a single cell, or a monoclonal antibody, onto a T-cell and provide it with a specific targeting mechanism to seek, identify, interact with and destroy the tumor cells bearing a selected antigen associated with that tumor, also known as the tumor-associated antigen, or TAA.

These receptors are today one of the most promising approaches to fight cancer through the development of immunotherapies. Indeed, immune cells (most often T-lymphocytes) can be engineered to express a CAR able to recognize proteins present at the surface of cancer cells. Upon cell-to-cell contact between effector and targeted cells, antigen recognition will activate the effectors, giving them the signal to attack their targets, and leading ultimately to the killing of cancer cells.

CARs are constructed by assembling domains from different proteins, each of which enables the chimeric molecule to carry out specific functions. The most

common CAR architecture comprises an extracellular domain containing a region that recognizes the targeted antigen and a spacer region that links it to the transmembrane domain (the part of the protein that spans the cellular membrane). This is followed by an intracellular domain, responsible for transmitting an activation signal to the cell upon antigen recognition, causing the CAR-engineered cell to attack the tumor cell. The target-binding moiety is usually derived from an antibody, while the intracellular portion can include, besides the domain leading to cell activation and cytotoxic response, one or more domains from co-stimulatory receptor proteins that could enhance the proliferative capacity and survival of the “therapeutic” cells. Cellectis is currently developing a collection of CARs targeting antigens present on cells from various types of cancer, as well as a proprietary multi-chain architecture of these artificial receptors, aiming to further increase the efficacy of adoptive cell therapies in the future.

### UNIVERSAL CHIMERIC ANTIGEN RECEPTOR T-CELLS (UCARTs)

**A paradigm shift in terms of ease of use, availability and the drug pricing challenge**

Our leading immuno-oncology product candidates, which we refer to as UCARTs, are all allogeneic CAR T-cells engineered to be used for treating the largest number of patients with a particular cancer type. UCARTs are “off-the-shelf” therapeutic products, which means they are derived from pre-existing donor cells and not from the patient. As a result of this advantage, the production of UCARTs can be industrialized and thereby standardized over time and from batch to batch with consistent pharmaceutical release criteria. Each UCART product candidate targets a selected tumor antigen and bears specific engineered attributes, such as compatibility with specific medical regimens that cancer patients may undergo. Indeed, UCARTs represent a specific and powerful approach to treating any cancer patient with a given molecular “signature”. UCART is our first therapeutic product line that we are developing with our gene-editing platform to address unmet medical needs in oncology.

**Our approach aims to deliver an “off-the-shelf” product with the following benefits:**

- › **Broad availability.** Enable products to be shipped globally, thereby reducing deployment obstacles and providing accessibility to a broad patient population;
- › **Cost-effectiveness.** Streamlined manufacturing process has the potential to reduce costs;
- › **Novel features.** Develop products with specific safety and control properties;
- › **Compatibility.** Develop products taking into consideration the current standards of cancer care;
- › **Consistency.** Qualify and develop cancer products that are designed for optimal dosage, while reducing batch-to-batch variability. In addition, vectorization of TALEN® is simple and easy.



# GENE EDITING



## BACKGROUND ON GENOME EDITING

The genome is the blueprint that guides the biological function of every living being. Our efforts to modify the genome began long before we understood how it is developed. The concept of rewriting the genome to improve human life was in essence born thousands of years ago with the first selective breeding of animals and plants to optimize food production, i.e., to arrive at the most advantageous genetic characteristics. Modern biotechnology arose in the early 1970s with the development of the first methods for transgenesis; for the first time, scientists were able to go beyond selective breeding by inserting external genetic instructions into the genome of a species. These instructions—contained within a recombinant gene—can confer new characteristics.

Breakthroughs in transgenesis ultimately enabled the precise editing of a genome with controlled DNA modification at a targeted location, which was first developed in the 1980s using a process known as homologous recombination. Gene editing by homologous recombination relies on the delivery of a DNA fragment into the cell; this DNA fragment can be engineered to contain a desired genetic change flanked by matching (“homologous”) sequences. Generating DNA breaks at the target location considerably enhances the efficiency of homologous recombination, thus paving the way for gene editing via nucleases.

## NUCLEASE-BASED EDITING TECHNOLOGIES

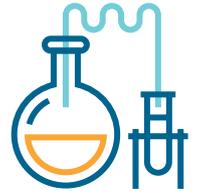
Nucleases are specialized proteins that recognize a specific DNA sequence and cleave it. Nucleases are powerful tools for gene editing, and there are four basic families of nuclease technologies based on different mechanisms of DNA recognition or action. Collectis has been a pioneer in the use of nuclease-based genome editing; we were the very first company in the field, and we have been active in it for the past 17 years. Our investigators have been working in genome editing from the beginning and include the original scientists who invented the technology. We’ve had the privilege of trying all of the competing approaches: meganucleases, ZFNs, TALEN® and CRISPRs. A far cry from early recombination-based approaches, these modern gene-editing technologies are targeted, precise and accurate.

The first generation of nucleases — meganucleases and Zinc Finger nucleases (ZFN) — were developed over 20 years ago. In terms of efficiency, they represented a vast improvement over gene editing without nucleases by homologous recombination alone. However, these approaches are costly, and the nuclease constructs themselves are very difficult to engineer in the laboratory, requiring robotic sample handling, expertise and fully dedicated labs. These drawbacks prevented meganuclease-based and ZFN-based editing technologies from being widely adopted.

TALEN® and CRISPR nucleases considerably increased the speed and reduced the cost of genome editing protocols. These two nuclease technologies offer different strengths and weaknesses, requiring the user to select the appropriate technology for a particular use. For research applications, speed and cost are critical factors. For subsequent work, a user must consider how easy it will be to direct a nuclease to cut at a specific location in addition to the ease and convenience of design. For therapeutic and industrial applications, one must consider efficiency and performance. For patient applications, safety is absolutely critical.

Accounting for these different applications, we are confident that TALEN® technology is the most effective tool today for therapeutic gene editing. We routinely achieve 85% to 90% efficiency for a single allele knockout in manufacturing while preserving very high levels of functionality and viability. These values set the standard for therapeutic genome editing and probably represent the best efficiency and viability in the industry today. Critically, this level of effectiveness is achieved with no measurable toxicity or off-target effects. TALEN® constructs clearly differentiate the desired genome sequence from other, similar sequences to produce high-quality products at competitive costs. For these reasons, we have selected TALEN® as our flagship nuclease structure for gene editing.

# OUR TECHNOLOGIES

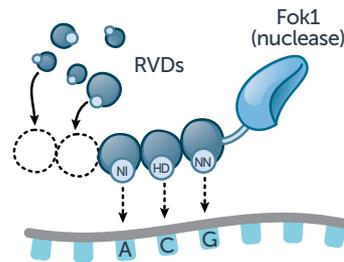


## TALEN®

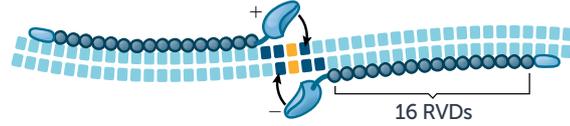
TALEN® is based on a class of proteins derived from transcription activator-like effectors, or TALEs. TALEs are highly specific DNA-binding proteins that feature an array of 33 or 34-amino acid repeats. Each repeat is highly conserved, with the exception of the so-called repeat variable di-residues (RVDs) at amino acid positions 12 and 13. The RVDs determine the DNA sequence to which the TALE will bind. This simple one-to-one correspondence between the TALE repeats and the corresponding DNA sequence makes the process of assembling repeat arrays to recognize novel DNA sequences straightforward. These TALEs can be fused

to the catalytic domain from a DNA nuclease, FokI, to generate a transcription activator-like effector nuclease (TALEN®). The resulting TALEN® constructs combine high specificity and activity, effectively generating engineered sequence-specific nucleases that bind and cleave DNA sequences only at pre-selected sites. Due to these factors, TALEN® constructs have many applications in gene editing and represent the best available technology for therapeutic applications.

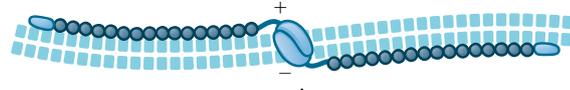
A custom TALEN is created to target the precise gene sequence



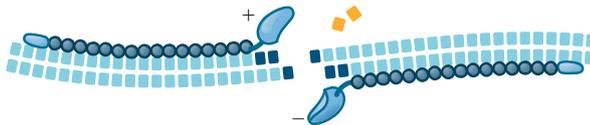
TALEN binds to its target sequence



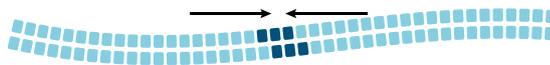
Fok1 nuclease heads clip the DNA at the target sequence



The DNA is degraded at the cleavage site and bases are lost



DNA ends are rejoined resulting in a mutation, leading to the knockout of the target gene



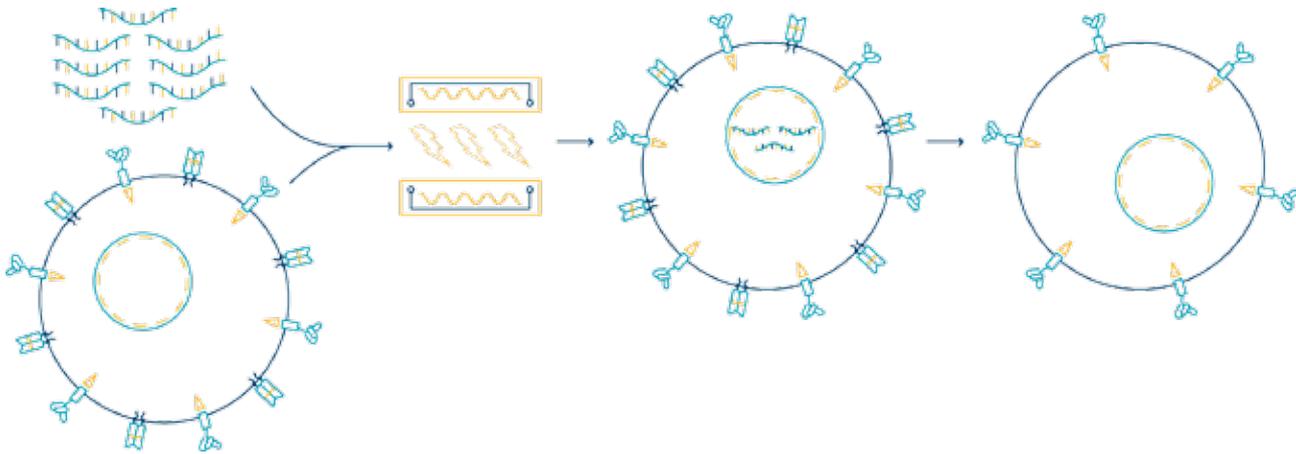
Gene Inactivation or Knockout (KO)

## PULSEAGILE

In 2010, Collectis acquired the assets of CytoPulse Sciences Inc., a Maryland-based company specializing in technology and equipment related to electroporation, a process using highly controlled electric fields to deliver messenger RNA (mRNA) or DNA molecules into cells. CytoPulse’s leading PulseAgile electroporation technology uses a unique electrical field wave-form that, in combination with a proprietary buffer solution, enables molecules, such as nucleases, to enter efficiently into the cell while maintaining high cell viability. PulseAgile uses a particularly effective combination of high voltage peaks, which are optimized to create transient holes in the cell membrane, followed by lower voltage pulses that help mRNA migrate into the cells. Critically, PulseAgile is optimized to preserve high cell viability and thus suited for large-scale manufacturing.

Importantly, PulseAgile provides a high-quality platform for delivering nucleases-encoding mRNA into target T-cells, where it can be translated to generate an active nuclease protein that can access and specifically cut the cell’s genomic DNA. The mRNA molecules are rapidly degraded by the cell, which means that the nucleases are only expressed for a short time, during which they operate the intended precise surgical DNA modifications.

### ELECTROPORATION



# MANUFACTURING

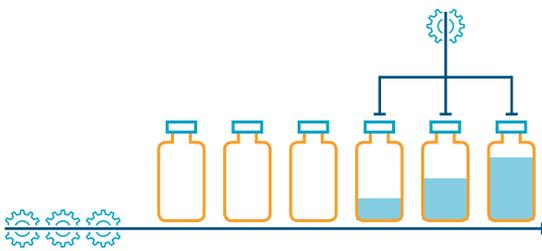
## GMP MANUFACTURING & SOLUTIONS

GMP, or Good Manufacturing Practices, are a set of regulations applicable to the manufacturing of health products, especially medicines intended for human use, such as UCART products. A company is required to comply with GMP regulations from governmental regulatory agencies in order to be granted its license to manufacture pharmaceutical products. The GMP Manufacturing & Solutions department takes manufacturing processes established at R&D level, converts them to GMP, and ensures their deployment with GMP-compliant raw materials and environments. The department is responsible for the manufacturing of clinical trial material ("CTM"), making it available for clinical studies and afterwards, and also for the manufacturing of final GMP commercial cellular gene therapy products. The team interacts internally with different departments ranging from development and planning to regulatory and legal, as well as externally with raw materials contractors or GMP manufacturing contract organizations.

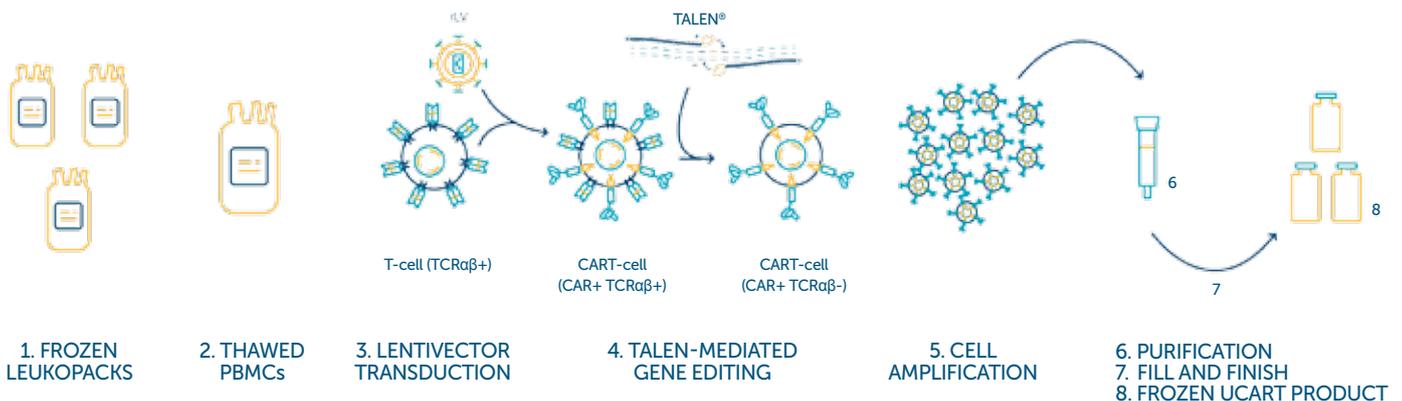
## OUR PROPRIETARY MANUFACTURING PROCESS

Our manufacturing process obtains therapeutic UCART product candidates from healthy, tested and qualified donor T-cells, rather than from patient samples. This "off-the-shelf" approach leads to lower production costs. In addition, our process — powered by TALEN® and our proprietary PulseAgile electroporation technologies — inactivates genes in a highly efficient manner that avoids harming T-cells during processing. As a result, we can manufacture quality UCART products with high yields — and potentially in bulk. We expect that T-cells from one healthy donor, and one manufacturing run of UCART, could be used to create hundreds of doses of product and more when scaling up the process. These efficiencies may not only reduce costs to patients but also lead to competitive gross profit margins.

CELLforCURE is producing clinical batches of UCART123, our first wholly-controlled UCART product candidate, to meet the needs of the first phase clinical trials, as part of the development of UCART123 in malignancies, such as acute myeloid leukemia (AML) and blastic plasmacytoid dendritic cell neoplasm (BPDCN).



### MANUFACTURING PROCESS



# OUR PARTNERS

In addition to the development of our own portfolio of product candidates targeting tumor-associated antigens, we have pursued a strategy of forging strong pharmaceutical alliances. We believe that our approach to CAR T-cell development has been validated by our strategic alliances with Servier and Pfizer. Our strategic alliances include upfront and potential milestone payments to us of up to \$3.9 billion and high single-digit royalties on future sales.

## SERVIER

In February 2014, we entered into a strategic collaboration agreement with Servier to develop and commercialize certain product candidates. Pursuant to the agreement, Servier made an upfront payment of €7.55 million (\$8.2 million). In addition, the strategic alliance, as amended in November 2015, provides for aggregate additional payments of up to €887 million (\$966 million), comprising payments upon the exercise of each option granted to Servier and payments upon the occurrence of certain specified development and commercial milestones. We are also eligible to receive tiered royalties ranging in the high single-digit percentages based on annual net sales of commercialized products. This agreement covers the development and the potential commercialization of the lead product candidate, UCART19, as well as other product candidates directed at four other targets. Under the terms of the agreement, we will be responsible for the research and development of certain product candidates through the end of their respective Phase I clinical trials. We granted Servier an exclusive option to obtain an exclusive, worldwide license on a product candidate-by-product candidate basis, with respect to each target selected by Servier and developed under the agreement, to further develop, manufacture and commercialize such products in the field of anti-tumor adoptive immunotherapy. Upon exercising each such option, Servier will assume responsibility for the further clinical development, manufacturing and commercialization of the relevant product candidate.

In November 2015, we entered into an amendment to our initial collaboration agreement with Servier, which allowed for an early exercise of Servier's option with respect to UCART19 and other product candidates. Pursuant to this amendment, Servier has exercised its option to acquire the exclusive worldwide rights to further develop and commercialize UCART19. In addition, Pfizer and Servier have announced that they have entered into an exclusive global license and collaboration agreement, under which Pfizer has obtained exclusive rights to develop and commercialize UCART19 in the United States. Following approval by the MHRA, the UCART19 clinical studies sponsored by Servier commenced in the United Kingdom in June 2016.

The protocol for UCART19, titled "Phase I open label, dose-escalation study to evaluate the safety, expansion and persistence of a single dose of UCART19 (allogeneic engineered T-cells expressing anti-CD19 chimeric antigen receptor), administered intravenously in patients with relapsed or refractory CD19 positive B-cell acute lymphoblastic leukemia (B-ALL)," was presented at the RAC meeting held on December 14, 2016 for evaluation, and unanimously approved by the RAC. In March 2017, Servier, in collaboration with Pfizer, announced the FDA approval to extend the Phase I of the CALM clinical study in the United States.



## PFIZER

In June 2014, we entered into a global strategic collaboration agreement with Pfizer pursuant to which we will collaborate to conduct discovery and pre-clinical development activities to generate CAR T-cells directed at targets selected by Pfizer or us in the field of oncology. Pursuant to the agreement, Pfizer made an upfront, non-refundable \$80 million payment to us, concurrent with Pfizer's equity investment in our Company. In addition, the strategic alliance provides for up to \$2.8 billion in potential clinical and commercial milestone payments. We are also eligible to receive tiered royalties ranging in the high single-digit percentages based on annual net sales of commercialized products. We may also receive funding for research and development costs associated with the Pfizer-selected targets and for four Cellectis-selected targets within the alliance. Pfizer has exclusive rights to pursue development and commercialization of products for a total of fifteen targets of their choice.



# ACADEMIC COLLABORATIONS

## COLLABORATION WITH CORNELL UNIVERSITY AND MD ANDERSON CANCER CENTER

In 2015, we entered into alliances with Cornell University and the MD Anderson Cancer Center to accelerate the development of our lead product candidates.

### ALLIANCE WITH CORNELL UNIVERSITY

On June 2, 2015, Cornell University and Cellectis entered into a strategic research alliance to accelerate the development of a targeted immunotherapy for patients with acute myeloid leukemia (AML). Under our alliance, we conducted research and developed clinical strategies with the objective of initiating a clinical trial at Weill Cornell on UCART123 in AML.

AML is a devastating clonal hematopoietic stem cell neoplasm that is characterized by uncontrolled proliferation and accumulation of leukemic blasts in bone marrow, peripheral blood and, occasionally, in other tissues. These cells disrupt normal hematopoiesis and rapidly cause bone marrow failure and death. In the U.S. alone, there are an estimated 19,950 new AML cases per year, with 10,430 estimated deaths per year.

The clinical research at Weill Cornell is led by principal investigator Dr. Gail J. Roboz, Director of the Clinical and Translational Leukemia Programs and Professor of Medicine.

Cornell University is also working on the development and implementation of correlative studies. Finally, Cellectis and Cornell University are working on target discovery in the AML area, in order to identify new potential targets for AML and generate new potential product candidates for AML patients.

### ALLIANCE WITH THE MD ANDERSON CANCER CENTER

On September 1, 2015, Cellectis and the MD Anderson Cancer Center entered into a research and development alliance aimed at bringing novel cellular immunotherapies to patients suffering from different types of liquid tumors, particularly multiple myeloma (MM), acute lymphoblastic leukemia (ALL), T-cell acute lymphoblastic leukemia (T-ALL) and blastic plasmacytoid dendritic cell neoplasm (BPDCN). Under this strategic alliance, the MD Anderson Cancer Center and Cellectis have agreed to collaboratively conduct several preclinical studies on candidate products: UCART123 for BPDCN, UCARTCS1 for multiple myeloma, UCART38 for T-ALL and UCART22 for ALL. Cellectis has agreed to provide funding and other support for these studies. The objective of the studies is to build on complementary expertise from the MD Anderson Cancer Center and Cellectis for the development of the product candidates. The MD Anderson Cancer Center and Cellectis are working together to develop and implement improvements to the research plan for the programs under joint direction of the MD Anderson Cancer Center and Cellectis' investigators. The objective of the studies is to demonstrate the functionalities and specificity of the UCART product candidates listed above, define the preclinical package required for clinical trial applications, and prepare a clinical trial protocol and the regulatory documents required for interactions with FDA and the clinical trial applications. Pursuant to the alliance, Cellectis is responsible for generation and manufacturing of the UCART product candidates and some of the *in vitro* and *in vivo* preclinical work. The MD Anderson Cancer Center is responsible for evaluation of the product candidates against primary patient samples and for some activities to be performed in animal models. The alliance also includes the possibility for Cellectis and the MD Anderson Cancer Center to collaborate on one or more early phase clinical studies on the same product candidates.

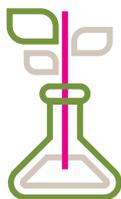




# CALYXT

# CALYXT

## IN BRIEF



Founded in 2010, Calyxt is located in Minneapolis-St. Paul, Minn., and is a wholly owned subsidiary of Collectis.

Calyxt is a consumer-centric, food- and agriculture-focused company. By combining its leading gene-editing technology and technical expertise with its innovative commercial strategy, Calyxt is pioneering a paradigm shift to deliver healthier food ingredients, such as healthier oils and high fiber wheat, for consumers and agriculturally advantageous crop traits, such as herbicide tolerance, for farmers.

### CONTACT

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### LEGAL FORM

Calyxt is a U.S. incorporated company wholly owned by Collectis S.A.

### MILESTONES

**2010:** Collectis plant sciences (now Calyxt) is founded

**2011:** Collectis acquires exclusive license to TAL Effector patents from University of Minnesota

**2012:** Developing partnerships

- › Collectis plant sciences and Bayer CropScience strengthen gene editing partnership
- › Medicago and Collectis enter into research agreement to improve therapeutic proteins using nuclease technology
- › Collectis plant sciences announces the signature of a strategic partnership with SESVanderHave in sugar beet

**2013:**

- › TAL-effector nuclease: issuance by the USPTO of two new patents
- › Collectis has successfully engineered the genome of photosynthetic algae with a view to biofuel production

**2014:**

- › Collectis plant sciences and Bayer CropScience extend their partnership to improve crops by gene editing
- › Collectis plant sciences reports generation of high oleic soybean in *Journal of Plant Biotechnology*
- › Collectis plant sciences reports improvement of oil content in algae
- › Collectis plant sciences and Two Blades Foundation announce the execution of a cross-license agreement on TAL Effector Nuclease technologies

**2015:**

- › Collectis plant sciences locks early CRISPR intellectual property uses in plants from University of Minnesota
- › Collectis plant sciences becomes Calyxt
- › S&W Seed Company and Calyxt, Inc. announce alfalfa seed collaboration
- › Calyxt launches field trials of its cold storable potato and high oleic soybean
- › University of Minnesota grants Calyxt an exclusive license to its homologous recombination technology in plants
- › Calyxt announces research collaboration and licensing agreement with Plant Bioscience Limited and Institute of Genetics and Development Biology Chinese Academy of Sciences (IGBD) for the development of new traits in wheat, rice and corn

**2016:**

- › Calyxt acquires land for new headquarters facility
- › Calyxt appoints Federico A. Tripodi to new role of CEO
- › Calyxt completes production of 30 tons of its high-oleic soybean product in Argentina
- › Calyxt expands its patent portfolio, now encompassing broad uses of technologies such as CRISPR/Cas9, Zinc Finger nucleases and TAL-effector nucleases for plant gene editing
- › Calyxt generating healthier high-oleic low-linolenic soybean variety with increased oxidative stability and enhanced shelf life
- › Calyxt produces 1,200 tons of high-oleic soybeans in U.S.

# FROM LAB TO THE FORK

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Calyxt is at the forefront of food and agriculture innovation to benefit consumers as well as farmers. Food-related issues including obesity and diabetes are some of the most prevalent health issues today and continue to grow rapidly. As awareness of these diet-related health issues grows, consumers are emphasizing a healthier lifestyle and a desire for foods that are more nutritious, better tasting, and less processed. This trend is leading to an increase in the demand for higher valued, premium segments of the food industry, such as higher fiber, reduced gluten and reduced fat products. Food companies are now looking for specialty ingredients and solutions that can help them satisfy their customers' evolving needs and drive growth in market share and new value-added products.

Our technology enables us to precisely and specifically edit a plant genome to elicit the desired traits and characteristics, resulting in a final product that has no foreign DNA. While the traits that enable these characteristics may occur naturally and randomly through evolution - or under a controlled environment through traditional agricultural technologies - those processes are imprecise and take many years, if not decades. The precision, specificity, cost effectiveness and development speed of the Company's gene-editing technologies provide meaningful disruption to the food and agriculture industries.

We believe the legacy agriculture companies have overlooked society's food-related issues and are not properly equipped to address health-driven consumer food trends. These companies have historically focused on increasing yields, profit margins and market share. They have been burdened by high research and development costs and a high degree of commoditization in their deep, farmer-focused supply chains. Genetic modification has traditionally taken an average of 13 years and over \$130 million to develop a commercially viable product. By contrast, a key advantage of our gene-editing technology platform is that we can develop products from concept to commercialization in three to six years and at a fraction of the cost. For example, we created our high oleic soybean product candidate by generating fewer than 20 independent plants that were edited with TALEN®. This contrasts with traditional genetic modification methods which require thousands of plants to achieve the same result. We developed our high oleic soybean from concept to field in under four years and expect to commercialize this product by the end of 2018.

Calyxt is developing a diversified portfolio spanning across five core crops - soybean, wheat, canola, potato and alfalfa - and a multitude of product candidates. These include high-fiber wheat that is designed to produce flour with up to three times the fiber content of standard white flour, as well as innovative, farmer-centric solutions like herbicide tolerant wheat and products with valuable supply chain benefits like cold storable potatoes that are designed to store longer and produce much less acrylamide in the frying process, a human health concern that has been linked to cancer. We believe our portfolio of product candidates, coupled with our ability to quickly develop future product candidates, affords us the opportunity to disrupt the food industry..



# PRODUCTS



By leveraging the transformative potential of gene editing, we are creating food products with consumer health benefits and crops with improved agronomic traits.

## HIGH OLEIC SOYBEAN

In past decades, the food industry has been using partial hydrogenation to enhance oxidative stability of soybean oil. This process, however, creates trans fat, which has been demonstrated to raise low-density lipoprotein, or LDL, and cholesterol levels and contribute to cardiovascular diseases. The discovery that dietary trans fat is unhealthy led to a FDA ruling in 2003 to require mandatory labeling of trans fat in 2006, with a full ban in 2018. Since FDA's 2003 ruling, commodity soybean oil has been quickly losing market shares to other vegetable oils such as palm oil and canola oil.

Calyxt develops a new soybean variety that produces oils with a fatty acid profile that contains 80% oleic acid and 20% less saturated fatty acids compared to commodity soybean oil and zero trans fats. The high level of oleic acid in our soybean oil enhances oxidative stability more than fivefold when compared to commodity soybean oil and also offers a threefold increase in fry-life. This eliminates the need for partial hydrogenation.

Our soybean product candidate is in Phase III of our development process. We are currently completing our commercialization plan and anticipate commercialization by the end of 2018.

## HIGH FIBER WHEAT

Research has shown that fiber may play a large role in maintaining bowel health, lowering cholesterol, stabilizing blood glucose levels and controlling weight gain. In recent years, the awareness of the health benefits of high fiber diets has increased. This has translated to a strong growth in demand for high fiber food products, with 35% of grocery shoppers now seeking high fiber foods. By 2018, the global market for high-fiber bread is expected to be \$36 billion, a 25% jump from 2013.

We are developing high fiber wheat traits that could be used to produce white flour with up to three times more dietary fiber than standard white flour. These new wheat varieties will not contain any transgenes and foreign DNA. We anticipate that by altering the proportion of certain slower digested carbohydrates in the wheat grain, we will increase dietary fiber. The high fiber wheat food product has the potential to lower the rate of glucose entry into circulation, and to decrease the risk of diet-related noninfectious chronic diseases, such as heart disease, colon cancer, and diabetes. Our high fiber wheat flour will be incorporated into many food products—from pasta to bread. This product is currently in Phase I of our development process.

## HERBICIDE TOLERANT WHEAT

With the constant need to increase yields, herbicides are an important component of commercial food production. Herbicide tolerance traits in crops can provide additional crop protection chemistry alternatives to control weeds and increase crop yields. We are pioneering the development of herbicide tolerant traits in wheat without the use of foreign DNA. Herbicides act by inhibiting the activity of certain plant-encoded proteins that promote growth. We aim to achieve herbicide tolerance by specifically making a subtle repair to prevent herbicides from being able to recognize and block functions of these proteins, such that the edited plant survives the application of the herbicide. Our product will contain no foreign DNA. We believe this solution, if successfully developed and commercialized, will have the potential to increase the farmer's yield and revenue. The product candidate is currently in the Discovery phase of our development process.

## POWDERY MILDEW RESISTANT WHEAT

In 2015, 225 million hectares of wheat were harvested worldwide resulting in more than 735 million metric tons of production, making wheat the third most-produced cereal in the world. Like many cereal crops, wheat is susceptible to a number of fungal diseases. One in particular, powdery mildew, which is caused by the fungal pathogen *Blumeria graminis* f. sp. *tritici*, is particularly devastating. Yield losses associated with heavy powdery mildew infestations can be as high as 40%, with grain quality also being negatively affected.

Pursuant to an agreement with Plant Bioscience Limited and Institute of Genetics and Development Biology Chinese Academy of Sciences (IGBD), Calyxt holds an exclusive option to obtain an exclusive license on traits that are newly developed by IGBD, including a trait providing for resistance to powdery mildew. This trait would not only improve yield



# MANAGEMENT TEAM

## **André Choulika, Chairman of the Board**

### **Federico Tripodi, Chief Executive Officer**

Federico Tripodi was appointed CEO of Calyxt in May 2016. He holds a Master of Business Administration degree from Washington University's Olin Business School, as well as an agronomic engineering degree from Buenos Aires University, and has gathered extensive experience in agricultural R&D and product development during his nearly two-decade career in the agricultural biotechnology and seeds industry. Prior to joining Calyxt, he worked as General Manager for Monsanto Company's Sugarcane Division in Brazil for three years. During his tenure at Monsanto, Mr. Tripodi led or participated with early discovery and late commercialization phase product launches across the Americas, which included biotechnology consumer traits (improved composition soybean oils) and farmer traits (high yield, drought tolerance, insect protection and herbicide tolerance). Mr. Tripodi started his career in Argentina in 1998 in field research of biotechnology traits and chemistry formulations until he moved to Saint Louis in 2001. Mr. Tripodi also has experience as a director of a startup and served on the board of directors for a not-for-profit.

### **Dr Dan Voytas, Chief Science Officer**

Dan graduated summa cum laude from Harvard College in 1984 and received his Ph.D. in genetics from Harvard Medical School in 1990. He is a co-founder of Calyxt and one of the inventors of the TALEN® technology. He continues to optimize the use of TALEN® for the targeted modification of plant genomes. In addition to his role at Calyxt, Voytas is a professor in the Department of Genetics, Cell Biology and Development at the University of Minnesota (UMN), which he joined in 2008, and Director of the UMN's Center for Genome Engineering. In 1992, Voytas joined the faculty at Iowa State University. Prior to this, he conducted postdoctoral research at Johns Hopkins University School of Medicine. Dan is an elected Fellow of the American Association for the Advancement of Science.

### **Dr Feng Zhang, Chief Operations Officer**

Feng Zhang obtained his Ph.D. from Iowa State University working on maize genetics and received post-doctoral training at the University of Georgia with Dr Sue Wessler. He is the co-inventor of more than 10 patents and patent applications. Before joining Calyxt, he co-invented TALEN® technology with Dr Dan Voytas at the University of Minnesota and Dr Adam Bogdanove at Iowa State University. Dr Zhang joined Calyxt in 2010 to develop and lead the trait development programs for crops and vegetables.

### **Michel Arbadji, Director of Business Development**

Michel joined Calyxt in July 2015 as Director of Business Development, and manages the external supply chain operations. Michel received his Agriculture Engineering and Master in Economics and Agriculture Machinery from the Institut National Agronomique Paris Grignon in Paris, France. Prior to joining Calyxt, Michel headed the European and Middle East Operation for Signature Control Systems, where he built and managed the distribution network, EU marketing, and sales. During that period, he served as project manager for the new business development of the European golf irrigation division at John Deere, with over 440 accounts. Michel started his career at the Toro Company EMEA, where he held several positions in business development, sales, and marketing. Over his 27-year career, he has successfully built several pioneering businesses from the R&D stage to setting up large-scale distribution channels. He has participated in several global product launches.

### **Bryan W. J. Corkal, Chief Financial Officer**

Bryan joined Calyxt in December 2016 as Chief Financial Officer, and manages the company's day-to-day financial operations. Bryan received his MBA from York University in Toronto, Canada and a B.Sc. in Civil Engineering from the University of Manitoba. Bryan is a CFA charter holder and is a CPA in the state of Missouri. Bryan brings extensive finance and commercial experience in the seeds and traits agricultural sector having worked over 17 years at Monsanto in a variety of finance and strategy roles including the acquisition and integration of several companies.

Prior to joining Calyxt, Bryan was the North America Supply Chain Finance Lead at Monsanto, a business with a total annual product cost of over \$2B. Bryan's career at Monsanto also included roles as Director of Investor Relations and Director of

Finance (regional CFO) for the Latin America North division, a region covering 30 countries throughout the Americas, where he managed the controllership, credit & collections, tax, payroll, treasury, pension plan and FP&A functions. Early in his career, Bryan worked for Ernst & Young and Delcan Corporation as a consultant on a number of projects throughout Canada and Latin America.

### **Glenn Bowers, Vice President of Breeding**

Glenn Bowers is Vice President of Breeding with responsibilities for breeding, field trialing and seed production for all crops. Glenn has a M.S. and Ph.D. degree in Plant Pathology with a focus on breeding and genetics of resistance. He spent 17 years managing a soybean breeding program with Texas A&M University, followed by a year doing the same at Purdue University. He then spent 16 years with Syngenta, first managing a soybean breeding program and then as global head of soybean breeding. He has extensive experience in Argentina and Brazil, in addition to North America. Glenn is also a certified project manager (PMP). Glenn's background lends him extensive experience in delivering products, both global and stateside, through effective collaboration between marketing and supply chain. He is skilled in creating, developing, and managing diverse and globally dispersed teams, and he possesses a deep knowledge of and experience in field trialing, disease phenotyping, and agronomy.

### **Manoj Sahoo, Chief Commercial Officer**

Manoj Sahoo holds a MBA from the Tuck School of Business at Dartmouth and Bachelor's degree in Chemical Engineering from the National Institute of Technology in India. Manoj has more than two decades of experience working in a variety of roles covering commercial, strategy, business development and M&A for global corporations in ag, food, energy and materials fields.

Prior to joining Calyxt, Manoj was Assistant Vice President for Food Ingredients and Bio-industrial Enterprise at Cargill where he was responsible for revenues over \$1 billion, leading the commercial enterprise team to triple its earnings from bio-based products and managing relationships with large institutional customers. His prior roles at Cargill included Business Development Director for Starches and Sweeteners North America as well as serving as an investment team member with the Emerging Business Accelerator.

Over the years, Manoj has also served on the boards of both Calysta Inc. and Rivertop Renewables as a Cargill representative. He was responsible for leading Cargill's equity investments in the industrial biotechnology space including co-investment in real assets with institutional financial investors to build a \$600 million commercial-scale aquaculture nutrition plant. He also serves on Industry Advisory Board of Larta Institute which assists the USDA, NIH and NSF with the commercialization assistance program.

### **Joseph B. Saluri, General Counsel, Executive Vice President – Corporate Development**

Joseph B. Saluri, J.D., has served as General Counsel and Executive Vice President - Corporate Development since May 2017. He holds a Juris Doctorate from Drake Law School and a B.S.B.A. in investment finance from Drake University. Mr. Saluri has over 20 years of legal and business experience in the global seeds and biotechnology industry, having served as Chief Legal Officer and Vice President of Business Development for Stine Seed Company, the largest supplier of soybean genetics in the U.S. market, together with its affiliates and related entities. Mr. Saluri was responsible for managing all legal matters related to the Stine Companies. He has a broad depth of experience in litigation, licensing, intellectual property, acquisitions, corporate and regulatory matters. In addition, Mr. Saluri also executed successful business development strategies at Stine that included the acquisitions of seed trait technologies, seed genetics and other ag-biotech technologies. He was involved in the execution and project management of major collaboration projects with various multinational agri-business corporations. Mr. Saluri has served on the public Board of Directors of Newlink Genetics Corporation since 2010, serving on the Compensation and Nominating and Governance Committees and on the Board of Directors of KemPharm, Inc. since 2014, where he chairs the Nominating and Governance Committee and serves on the Audit Committee. Previous to his employment at Stine, Mr. Saluri was an attorney and solicitor at law with Nicholas Critelli & Associates, PC, in Des Moines and London.



# FINANCIAL STATEMENTS



# TUNED IN WITH OUR SHAREHOLDERS

Last year's growth has been impacted by difficult macroenvironmental trends and events — the US election and Brexit especially. The Nasdaq Biotechnologies Index (NBI) was down 24 points over the year. After two years of strong increase, plus 430% in 2014 and 120% in 2015 in our share price, in 2016 our stock price decreased by 45%.

This in the range of our competitors who underwent the same decrease. The daily average volume of shares traded was 129,588 on the Nasdaq market and 102,876 on the Alternext market.

A company has to be well financed. Collectis has a strong balance sheet and is well positioned to continue its progress into the years ahead. In an industry where large investments are needed to develop potentially life-saving therapies, it is important to be well capitalized in order to successfully navigate a challenging market environment.

At Collectis, we are extremely proud of our achievements in 2016, and we maintained proactive communication with our shareholders throughout the year—just as we intend to in the years ahead.

One General Shareholders Meeting was held on May 17, giving occasion for our management team to explain the Company's positioning in the field of immuno-oncology, our corporate strategy, and to answer our shareholders' questions. In 2016, the Collectis Group issued 42 press releases, or an average of one every 9 days.

Collectis also held a meeting dedicated to individual shareholders at our head office on October 27. Approximately 60 people attended this meeting, during which the management team presented the Company—and more specifically, its therapeutic programs in development—as well as Calyxt and its products. This meeting allowed for questions from shareholders present and those sent by e-mail to be answered.

## Alternext

December 31, 2015	<b>€27.92</b>
June 6, 2016	<b>€29.71</b>
December 30, 2016	<b>€16.21</b>

## Nasdaq

December 31, 2015	<b>\$31.03</b>
June 6, 2016	<b>\$33.64</b>
December 30, 2016	<b>\$16.95</b>

## As of February 28, 2017

Institutional investors France	<b>4.3%</b>	1,503,600
Free float other	<b>9.8%</b>	3,650,604
Industrial partners (incl Pfizer)	<b>9.5%</b>	3,350,030
Institutional investors US	<b>27.6%</b>	9,692,072
Investitional investors Europe & other	<b>10.0%</b>	3,520,923
Free float France	<b>15.3%</b>	5,356,271
Company related holder (incl BPI and P. Bastid)	<b>23.5%</b>	8,261,560
<b>Total</b>	<b>100%</b>	<b>35,335,060</b>



## BALANCE SHEET – ASSETS

STATEMENT OF CONSOLIDATED FINANCIAL POSITION (€ in thousands)

	December 31, 2015	December 31, 2016
<b>Assets</b>		
<b>Non-current assets</b>		
Intangible assets	956	1 274
Property, plant, and equipment	5 043	16 033
Other non-current financial assets	845	656
<b>Total non-current assets</b>	<b>6 844</b>	<b>17 963</b>
<b>Current assets</b>		
Inventories and accumulated costs on orders in process	158	112
Trade receivables	6 035	3 441
Subsidies receivables	9 102	8 276
Other current assets	4 685	8 414
Cash and cash equivalent and Current financial assets	314 238	276 216
<b>Total current assets</b>	<b>334 218</b>	<b>296 459</b>
<b>TOTAL ASSETS</b>	<b>341 062</b>	<b>314 422</b>

## BALANCE SHEET – EQUITY AND LIABILITIES

(€ in thousands)

	December 31, 2015	December 31, 2016
<b>LIABILITIES</b>		
<b>Shareholders' equity</b>		
Share capital	1 759	1 767
Premiums related to the share capital	420 682	473 306
Treasury share reserve	(184)	(307)
Currency translation adjustment	(1 631)	2 501
Retained earnings	(137 188)	(157 695)
Net income (loss)	(20 544)	(60 776)
<b>Total shareholders' equity - Group Share</b>	<b>262 894</b>	<b>258 795</b>
Non-controlling interests	725	1 779
<b>Total shareholders' equity</b>	<b>263 619</b>	<b>260 574</b>
<b>Non-current liabilities</b>		
Non-current financial liabilities	66	28
Non-current provisions	437	532
<b>Total non-current liabilities</b>	<b>503</b>	<b>560</b>
<b>Current liabilities</b>		
Current financial liabilities	1 921	1 641
Trade payables	6 611	9 223
Deferred revenues and deferred income	54 758	36 931
Current provisions	953	563
Other current liabilities	12 697	4 930
<b>Total current liabilities</b>	<b>76 940</b>	<b>53 288</b>
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>	<b>341 062</b>	<b>314 422</b>

## INCOME STATEMENT

Full Years (€ in thousands, except per share data)

	For the year ended December 31, 2015	For the year ended December 31, 2016
<b>Revenues and other income</b>		
Revenues	50 346	40 491
Other income	6 039	10 516
<b>Total revenues and other income</b>	<b>56 385</b>	<b>51 007</b>
<b>Operating expenses</b>		
Royalty expenses	(2 475)	(1 605)
Research and development expenses	(52 410)	(70 899)
Selling, general and administrative expenses	(27 238)	(39 230)
Other operating income	1 060	345
Other operating expenses	(3 246)	(434)
<b>Total operating expenses and other operating income (expenses)</b>	<b>(84 309)</b>	<b>(111 824)</b>
<b>Operating income (loss)</b>	<b>(27 924)</b>	<b>(60 818)</b>
<b>Financial gain (loss)</b>	<b>7 550</b>	<b>42</b>
<b>Net income (loss)</b>	<b>(20 373)</b>	<b>(60 776)</b>
Attributable to shareholders of Collectis	(20 544)	(60 776)
Attributable to non-controlling interests	171	-
<b>Basic earnings attributable to shareholders of Collectis per share (€/share)</b>	<b>(0.60)</b>	<b>(1.72)</b>
<b>Diluted earnings attributable to shareholders of Collectis per share (€/share)</b>	<b>(0.60)</b>	<b>(1.72)</b>

## CASH FLOW STATEMENT (€ in thousands)

	For the year ended December 31,		
	2014	2015	2016
<b>Cash flows from operating activities</b>			
Net loss for the period	(972)	(20,373)	(60,776)
Net loss for the period of discontinued operations	(2,822)	-	-
Net (loss) income for the period of continuing operations	1,850	(20,373)	(60,776)
<b>Reconciliation of net loss and of the cash used for operating activities</b>			
Adjustments for			
- Amortization and depreciation	1,372	1,745	1,998
- Net loss on disposals	(24)	(10)	58
- Net finance expenses (revenue)	(7,095)	(7,550)	(42)
- Expenses related to share-based payments	548	30,103	52,974
- Provisions	(959)	(251)	(330)
- Other non cash items	(303)	-	(1,294)
- Interest (paid) / received	305	964	1,531
<b>Operating cash flows before change in working capital</b>	<b>(4,306)</b>	<b>4,628</b>	<b>(5,880)</b>
Decrease (increase) in inventories	97	(23)	45
Decrease (increase) in trade receivables and other current assets	(6,971)	1,143	(901)
Decrease (increase) in subsidies receivables	(2,317)	(612)	(1,014)
(Decrease) increase in trade payables and other current liabilities	1,643	2,669	(3,962)
(Decrease) increase in deferred income	54,326	(4,569)	(17,847)
<b>Change in working capital</b>	<b>46,779</b>	<b>(1,392)</b>	<b>(23,679)</b>
Net cash flows provided by (used in) operating activities of continuing operations	42,473	3,236	(29,559)
Net cash flows provided by (used in) operating activities of discontinued operations	(748)	-	-
<b>Net cash flows provided by (used in) operating activities</b>	<b>41,725</b>	<b>3,236</b>	<b>(29,559)</b>
<b>Cash flows from investment activities</b>			
Proceeds from disposal of property, plant and equipment	38	100	21
Sale (Acquisition) of subsidiaries net of cash disposed of	505	(2,850)	-
Acquisition of intangible assets	(7)	(87)	(305)
Acquisition of property, plant and equipment	(347)	(3,890)	(12,377)
Net change in non-current financial assets	(1,542)	-	158
Sale (Acquisition) of current financial assets	-	(238)	(35,516)
Net cash flows provided by (used in) investing activities of continuing operations	(1,353)	(6,965)	(48,018)
<b>Net cash flows provided by (used in) investing activities</b>	<b>(1,353)</b>	<b>(6,965)</b>	<b>(48,018)</b>
<b>Cash flows from financing activities</b>			
Increase in share capital net of transaction costs	58,775	199,299	645
Decrease in borrowings	(1,032)	(564)	(82)
Treasury shares	161	67	(124)
Net cash flows provided by financing activities of continuing operations	57,904	198,802	438
<b>Net cash flows provided by (used in) financing activities</b>	<b>57,904</b>	<b>198,802</b>	<b>438</b>
<b>(Decrease) increase in cash</b>	<b>98,276</b>	<b>195,073</b>	<b>(77,139)</b>
<b>Cash and cash equivalents at the beginning of the year</b>	<b>7,559</b>	<b>112,347</b>	<b>314,238</b>
Effect of exchange rate changes on cash	6,511	6,818	4,403
Cash from continuing operations	112,347	314,238	241,502
<b>Cash and cash equivalents at the end of the period</b>	<b>112,347</b>	<b>314,238</b>	<b>241,502</b>

# GOVERNANCE

## EXECUTIVE COMMITTEE

### Dr. André Choulika, Chief Executive Officer

André Choulika, Ph.D., is one of the founders of Collectis and served as Chief Executive Officer since the company's inception in 1999. He is Chairman of the Board of Directors since 2011 and President of Calyxt since August 2010. From 1997 to 1999, Dr. Choulika worked as a post-doctoral fellow in the Division of Molecular Medicine at Boston Children's Hospital, where he was one of the inventors of nuclease-based genome editing technologies and a pioneer in the analysis and use of meganucleases to modify complex genomes. After receiving his Ph.D. in molecular virology from the University of Paris VI (Pierre et Marie Curie), he completed a research fellowship in the Harvard Medical School Department of Genetics. His management training is from the HEC (Challenge +).

### Dr. Julia Berretta, VP Business Development and Strategic Planning

Julia Berretta, Ph.D., joined Collectis in 2010 in the scientific alliance and business development department. She has served as VP Business Development and Strategic Planning since 2014. Prior to joining Collectis, she worked as a researcher at the CNRS in Gif-sur-Yvette. Julia Berretta received her Ph.D. in molecular biology from the Université Paris XI, and holds a specialized Master's Degree in innovation management from Neoma Business School.

### Dr. Philippe Duchateau, Chief Scientific Officer

Philippe Duchateau, Ph.D., joined Collectis in 2001 to pioneer the field of gene editing and has served as Chief Scientific Officer since 2012. After receiving his Ph.D. in 1993 in biochemistry and molecular biology at the Institut Pasteur (Lille, France), he completed a research fellowship from 1993 to 2001 at the University of California, San Francisco, within the Cardiovascular Research Institute. Dr. Duchateau has led Collectis' Research department since 2004.

### Eric Dutang, Chief Financial Officer

Eric Dutang, Certified Public Accountant in France, joined Collectis as Deputy Chief Financial Officer in May 2015. Eric began his career as financial auditor with KPMG, first in Paris for five years and then in New York for two years. He worked for publicly-traded companies in France and the U.S. including Vivendi, Veolia Environnement, and Cablevision. He then became a member of the transactions and advisory teams in Paris for seven years where he carried out acquisitions/disposals for both publicly-traded companies and private equity funds. After serving at KPMG, he worked on international business developments for French publicly-traded groups, including Air Liquide and Thales. Eric holds a Master of Finance and Executive MBA from HEC Paris (France)/ Babson Massachusetts (USA).

### Dr. Loan Hoang-Sayag, Chief Medical Officer

Loan Hoang-Sayag, MD, joined Collectis in January 2016 as Chief Medical Officer with the mission to bring the Company's product candidates into clinical development. Dr. Hoang-Sayag is a board-certified physician in hematology and medical oncology from respectively Necker-Paris V René Descartes University, and St-Antoine- Paris VI University and has 20 years+ of hematology and oncology experience – from clinical and academic setting and 15+ years in industry oncology drug development. Prior to joining Collectis, she was Senior Medical Director at Quintiles Transnational where she

was heading the European Oncology Medical team. Dr. Hoang-Sayag started her industry career at Hoffmann-La Roche in France where she was responsible for clinical development and medical affairs activities for different oncology drugs. She then moved to Pierre Fabre Oncology, and was leading several clinical programs, prior to moving to Quintiles in 2005. Her drug development experience encompasses new chemotherapeutic entities, small molecules, monoclonal antibodies, antibody drug conjugates, stem cell therapy and checkpoint inhibitors, in hematologic malignancies and solid tumors.

### Stephan Reynier, Chief Regulatory and Compliance Officer

Stephan Reynier, MSc, joined Collectis in April 2011. He serves as Chief Regulatory and Compliance Officer after holding the position of Head of Programs at Ectyccell, a former subsidiary of Collectis, from April 2011 to 2014 with the mission of managing and coordinating internal and external collaborative programs. As Chief Regulatory and Compliance Officer, Mr. Reynier is in charge of ensuring a speedy and successful development of the UCART product family by establishing close interactions with regulatory agencies such as EMA and FDA, while securing compliance to applicable regulations, regulatory guidelines and quality assurance standards. Mr. Reynier has extensive experience, from his previous positions as Senior Director at Voisin Consulting Life Sciences and European Associate Director Medical Affairs at Gilead Sciences, in the design and implementation of regulatory strategies for the development of drugs and biologics, with a strong focus on cell and gene therapy. Mr. Reynier graduated as Agro-Engineer in France and received a Master of Science in Chemical Engineering from the University of Toronto, Canada.

### Dr. Mathieu Simon, Executive Vice President, Chief Operating Officer

Mathieu Simon, MD, has served as Executive Vice-President since 2012, and as Chief Operating Officer since 2013. Dr. Mathieu Simon joined Collectis Board of Directors in 2013. Prior to Collectis, Dr. Simon was Senior Vice President Head of Global Pharmaceutical Operations at Pierre Fabre S.A. From 1994 to 2010, Dr. Simon has served at Wyeth Pharmaceuticals in both senior corporate and regional roles (Head of International Marketing and Medical Affairs and managing Director of several Wyeth Affiliates). Dr. Simon today is an advisor at the European Commission D.G. Research and Innovation. In addition to his Collectis role, Dr. Simon is also Senior Strategic Advisor at Messier Maris Partners, an international investment-banking boutique located in New York, London and Paris and investment partner of Scientifica Capital located in Milan and Zurich. Dr. Simon is also an independent director at Vaximm, a swiss german immuno-oncology company.

### Dr. David Sourdive, Executive Vice President Technical Operations

David Sourdive, Ph.D., is a co-founder of Collectis and joined the Board of Directors in 2000. Dr. Sourdive holds the position of Executive Vice President, Technical Operations, with the mission to develop the Company's industrial and technological basis as well as to deploy its operations in the pharmaceutical arena. Dr. Sourdive combines a strong scientific expertise with experience in managing industrial programs bringing innovative technologies to industrial fruition. He served as Executive Vice President Corporate Development from 2008 to 2016. In addition to his role at Collectis, Dr. Sourdive has also served on the board of directors of the Mediterranean Institute for Life Sciences. David Sourdive graduated from École Polytechnique, received his Ph.D. in molecular virology at Institut Pasteur and completed a research fellowship in the Emory University Department of Microbiology and Immunology. His management training is from the HEC (Challenge +) and his decade long experience in industrial program management was acquired at the French Department of Defense (DGA) prior to Collectis' inception.

**Marie-Bleuenn Terrier, General Counsel**

Marie-Bleuenn Terrier joined Collectis as Legal Counsel in 2008, and was appointed General Counsel in 2013. Prior to joining Collectis, she worked as Legal Counsel for Pfizer from 2004 to 2006, and for Boehringer Ingelheim from 2006 to 2008. Marie-Bleuenn Terrier has served as Secretary of the Board of Directors of Collectis since 2015. She holds a Master's degree in Law from the Panthéon La Sorbonne University in Paris.

**Federico A. Tripodi, Chief Executive Officer of Calyxt, subsidiary of Collectis**

Federico A. Tripodi was appointed CEO of Calyxt in May 2016. He holds a Master of Business Administration degree from Washington University's Olin Business School, as well as an agronomic engineering degree from Buenos Aires University, and has gathered extensive experience in agricultural R&D and product development during his nearly two-decade career in the ag biotech and seeds industry. Prior to joining Calyxt, he worked as General Manager for Monsanto Company's Sugarcane Division in Brazil for three years. He held other roles for Monsanto in Saint Louis, Mo., spanning Corporate Strategy (2011-2013), Omega-3 Program Lead (2009-2011), Oilseeds Global Quality Management Lead (2008-2009) and multiple other roles that involved managing multidisciplinary research teams in the technology organization between 2001 and 2008. During his tenure at Monsanto, Mr. Tripodi led or participated with early discovery and late commercialization phase product launches across the Americas, which included biotech consumer traits (improved composition soybean oils) and farmer traits (high yield, drought tolerance, insect protection and herbicide tolerance). Mr. Tripodi started his career in Argentina in 1998 in field research of biotechnology traits and chemistry formulations until he moved to Saint Louis in 2001. Mr. Tripodi also has experience as a director of a startup and serves on the board of directors for a not-for-profit.

## BOARD OF DIRECTORS

**Dr. André Choulika, Ph.D., Chairman****Laurent Arthaud, Independent Director**

Laurent Arthaud has served as a member of Collectis' Board of Directors since 2011. Mr. Arthaud has been the Managing Director of Life Sciences and Ecotechnologies for Bpifrance Investissement (formerly CDC Entreprises, a subsidiary of Caisse des Dépôts) since 2012. From 2006 to 2012, Mr. Arthaud held the position of Deputy CEO at CDC Entreprises. Mr. Arthaud is a graduate of the École Polytechnique and the l'École Nationale de Statistique et d'Administration Économique.

**Pierre Bastid, Independent Director**

Pierre Bastid has served as a member of Collectis' Board of Directors since 2011. Mr. Bastid has 25 years experience in turning around, developing and running technology businesses in Asia, Europe and the U.S. In particular, he initiated and completed the most successful European management buy out of the last 15 years: he bought the Power Conversion Division of French Engineering Alstom for \$100M in 2005 and sold it to General Electric in 2011 for \$3B.

In addition to Collectis, Mr. Bastid is currently a large shareholder, serving on the Board of Pharnext (another very innovative biotech company), Hougou (his own investment company), ZAKA and GRID (his own Paris based and New-York based real estate companies), Shango (his own Private Equity company), EVOK (his own hotel group), Nepteam (a shipbuilding company). Mr. Bastid also advises a number of Investment and Private Equity firms. Pierre is a trustee of Juilliard School of Music and other non-profit organizations based in the U.S.

**Alain Godard, Independent Director**

Mr. Godard has served as a member of Collectis' Board of Directors since 2007. He is a graduate of the Ecole Nationale Supérieure Agronomique de Toulouse and began his agronomy career in 1967 in Africa as a researcher at the Institut de Recherche pour les Huiles et Oléagineux. He joined the French chemical group Rhône-Poulenc in 1975 where he got various management positions in France and abroad before becoming CEO of the agrochemical subsidiary in 1991. In 1999 he was directly involved in the merger of Rhône-Poulenc and Hoechst to create Aventis and was appointed CEO of the Aventis CropScience subsidiary with a significant involvement in seeds and ag biotechnology. He left Aventis in 2002 to create a consulting company specialized in agriculture and biotechnology.

**Jean-Marie Messier, Independent Director**

Jean-Marie Messier has served as a member of our Board of Directors since May 2015. He is co-founder and head of Messier Maris & Associés, an international investment banking firm. Mr. Messier has served on the Board of Directors of Rentabiliweb Group since May 2011. After graduating from the French university, Ecole Polytechnique, Mr. Messier attended the Ecole Nationale d'Administration. He became Managing Partner at Lazard Frères in 1988, a position he held for six years. Prior to this, he was responsible for the French Government's Privatization plan. Mr. Messier served as President of Vivendi Universal from 1994 to 2002. During these years, he founded the mobile firm Cegetel and turned Vivendi into a conglomerate focused on two core activities: utilities and communications, selling off assets in other areas.

**Dr. Annick Schwebig, Independent Director**

Annick Schwebig, MD, has served as a member of Collectis' Board of Directors since 2011. In 2000, she founded the French subsidiary of Actelion, of which she is the General Manager. Actelion is a biopharmaceuticals company specializing in innovative treatments to serve unmet medical needs. A graduate of the University of Paris medical school, Dr. Schwebig worked as a senior manager at the biopharmaceuticals company Bristol-Myers Squibb for 17 years from 1983 to 2000.

**Dr. Mathieu Simon, MD, Director****Dr. David Sourdive, Ph.D., Director**

## COMMITTEES OF THE BOARD OF DIRECTORS

**Audit and Finance committee**

Laurent Arthaud, Director

Pierre Bastid, Director

**Compensation Committee**

Alain Godard, Independent Director

Dr Annick Schwebig, Director

**External Auditors****Statutory Auditor**

Ernst & Young

JMH Conseils

**Alternate Auditor**

Georges Rey Conseils

Auditex

## CLINICAL ADVISORY BOARD

### Pr. Catherine Bollard

Professor Catherine Bollard, MBChB, MD, FRACP, FRCPA, is Chief, Division of Allergy and Immunology and Director of the Program for Cell Enhancements and Technologies for Immunotherapy at the Children's Research Institute, Children's National Health System and The George Washington University. A distinguished hematologist and immunotherapist, Dr. Bollard's research interests focus on areas that include developing cell and gene therapies for patients with cancer and underlying immune deficiencies.

### Pr. Hervé Dombret

Professor Hervé Dombret, MD, is Head of the Leukemia Unit at the Hôpital Saint Louis, Paris, and Director of Clinical Research in the Hematology, Immunology and Transplantation Unit, University of Paris Diderot. He is also Director of the University Hematology Research Center in Hôpital Saint-Louis and has a PhD in Oncogenesis. His main fields of interest include clinical and translational research in acute myeloid leukemia, acute lymphoblastic leukemia, myelodysplastic syndromes and chronic myeloid leukemia.

### Pr. John Gribben

Professor Gribben holds the Gordon Hamilton Fairley Chair of Medical Oncology at St. Bartholomew's Hospital, Barts Cancer Institute, Queen Mary, University of London, where his research group is currently focused on immunological approaches to the treatment of hematological cancers. He was a research fellow at University College London and Dana-Farber Cancer Institute, Harvard Medical School. He joined the faculty at Harvard Medical School, the Dana-Farber Cancer Institute and Brigham and Women's Hospital in 1992. He is a founding member of the CLL Research Consortium, was Associate Editor of Blood from 2008-2014 and was elected a Fellow of the Academy of Medical Science. He will be President-Elect of The European Hematology Association (EHA) from 2017 to 2019.

### Pr. Ola Landgren

Professor Ola Landgren, MD, is Chief of the Myeloma Service at Memorial Sloan Kettering Cancer Center New York and Professor of Medicine at Weill Cornell Medical College. He is a board-certified hematologist-oncologist whose research focuses on the development of novel treatment strategies and advanced disease monitoring. He has a strong interest in the development of early-treatment clinical trials, targeting high-risk smoldering myeloma. He develops new strategies (including cell-based, molecular-based and imaging-based) and implements advanced MRD testing in clinical trials at MSK.

### Dr. Marcela Maus

Doctor Marcela V. Maus, MD, PhD, is Director of Cellular Immunotherapy at the Massachusetts General Hospital in Boston and Assistant Professor at Harvard Medical School. She is a board-certified hematologist-oncologist with extensive research experience in all aspects of preclinical and clinical design and use of cell therapies and gene-modified T-cells for cancer. Dr Maus completed undergraduate studies at MIT and her MD and PhD at Penn. As a graduate student, she worked with Dr. Carl June on the biology of human T cell activation. She completed residency training in internal medicine at the University of Pennsylvania Health System, and completed fellowship training in Hematology and Medical Oncology at Memorial Sloan Kettering Cancer Center. Her research focuses on the preclinical development and clinical translation of engineered T-cell therapies.

### Pr. Dietger Niederwieser

Professor Dietger Niederwieser, MD, is Professor of Medicine, Head of the Division of Hematology and Medical Oncology at University of Leipzig and University Hospital. His therapeutic areas of expertise include Clinical Immunology, Hematology and Oncology, and his research is focused on stem cell transplantation, cell therapies and gene therapies. He has extensive experience in health economics, outcomes research, clinical development of innovative drugs and clinical studies.

### Pr. Kanti Rai

Professor Rai, an internationally renowned leukemia researcher and hematologist, brings extensive knowledge and experience from his 50-year career spanning groundbreaking clinical leukemia research. He is the Joel Finkelstein Cancer Foundation Professor of Medicine at the Hofstra North Shore-LIJ School of Medicine, where he is also Professor of Molecular Medicine. He is currently Chief of the Chronic Lymphocytic Leukemia (CLL) Research and Treatment Program at Northwell Cancer Institute and an Investigator at The Feinstein Institute for Medical Research.

### Pr. Catherine Thieblemont

Professor Thieblemont is Professor of Hematology in the Paris VII-University, France, and Head of the Hemato-Oncology Department in the Hospital Saint-Louis – Paris, France, where she develops specific therapeutic programs for refractory/relapsed lymphomas and chronic lymphocytic leukemia. She belongs to the administrative and scientific committees of the LYSA, the lymphoma study association, to the board of directors of the IELSG, the International extranodal lymphoma study association, and to the Fellowships and Grants Committee of The European Hematology Association (EHA).

### Pr. Koen van Besien

Professor van Besien serves as Director of the Stem Cell Transplant Program at Weill Cornell Medical Center and is an Attending Physician at New York Presbyterian Hospital. A graduate of the College ND de la Paix in Namur, Belgium, and University of Leuven, Belgium. Professor van Besien also holds a PhD from the University of Maastricht in the Netherlands. He completed a hematology/oncology fellowship at Indiana University and in Bruges, Belgium, and was a faculty member of the transplant program at MD Anderson Cancer Center. The Professor also directed the transplant program at the University of Illinois and the transplant and lymphoma programs at the University of Chicago. He is Editor-in-chief of Leukemia and Lymphoma.



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