



## **ELSALYS BIOTECH ACQUIRES RIGHTS OF TRANSGENE'S ANTI-CD115 ANTIBODY**

- **Initially developed by TRANSGENE, one of ELSALYS BIOTECH's founding shareholders, this antibody inhibits a deleterious subpopulation of macrophages found in the tumor microenvironment.**
- **Based on the initial preclinical data, ELSALYS BIOTECH will give priority to developing ELB 041 (anti-CD115) in immuno-oncology, the goal being to launch a first clinical trial in 24 months.**
  - **ELSALYS BIOTECH is now conducting five antibody programs in oncology and ophthalmology.**

**Lyon, 15 December 2016,** ELSALYS BIOTECH announces the acquisition of development and marketing rights for TG3003 anti-CD115 (as of now ELB041) from TRANSGENE, a monoclonal antibody that inhibits a highly immunosuppressive macrophage subpopulation: type-2 macrophages. In exchange for the license granted to ELSALYS BIOTECH (along with all related sublicensing rights), TRANSGENE will be eligible to receive milestone payments until the medicinal product is registered and will receive royalties based on future sales.

M-CSF is a cytokine essential to the survival and differentiation of myeloid lineage cells (monocytes, macrophages, dendritic cells...). The M-CSF receptor (M-CSF-R or CD115) therefore proves to be a promising therapeutic target to modulate the activity of some of these cells, notably those implicated in the tumoral progression as the Tumor Associated Macrophages (TAM). These TAM are in effect made up of 2 subpopulations: the so-called type M1 « tumor killers » macrophages and the type M2 macrophages that suppress the immune response and promote the growth and dissemination of cancer cells. Thus, in most cancers, the strong presence of these M2 macrophages in the center of the tumor is seen as a factor of poor prognosis

The first studies conducted by TRANSGENE with the anti-CD115 ELB041 demonstrate the latter could counter this deleterious effect: it lifts the immunosuppression mediated by the M2 macrophages (Immune Checkpoint Inhibitor or ICI) while restoring the ability of the immune system to destroy the tumor cells (Antibody-Dependent Cell-mediated Cytotoxicity or ADCC). In the light of these encouraging data, ELSALYS BIOTECH will now initiate a preclinical study targeting proof-of-concept in immuno-oncology

*“ELB041 possesses unique properties. Beyond its dual mechanism of action, it selectively inhibits the formation of M2 macrophages and, unlike the anti-CD115s under development, does not block the interaction between M-CSF and its receptor, CD115, but modulates its activity. Therefore, it should not induce an increase, potentially toxic, in the concentration of serum M-CSF thereby maintaining the viability of myeloid cells. Alone or in combination, it has a favorable efficacy/toxicity ratio.”* Dr. Jacques MIZRAHI, Scientific Director at ELSALYS BIOTECH, pointed out. *“Our goal now is to undertake a clinical assessment of anti-CD115 before the end of 2018.”*

*“This new antibody provides a wonderful opportunity for ELSALYS BIOTECH. It highlights the trust we have received from TRANSGENE, which is one of the company’s founding shareholders, but also a leader in immunotherapy which intends to focus on therapeutic vaccines and oncolytic viruses”* said Dr. Christine GUILLEN, CEO and Co-founder of ELSALYS BIOTECH. *“This licensing agreement consolidates our position in immunotherapy antibodies targeting tumors and their immune and/or vascular microenvironment. We now have five development programs in this field, giving ELSALYS BIOTECH an optimum risk profile.”*

### **About ELB041**

ELB041 is a humanized antibody, potentially “best-in-disease”, that targets CD115, the M-CSF (Macrophage Colony-Stimulating Factor) found on the surface of macrophages and, more generally, on all cells in the so-called myeloid lineage.

An active member of the organism’s first line of defense, macrophages are cells with a dual personality: nested in the heart of tumors, some of them promote the immune reaction and contribute to tumor destruction (M1 macrophages), whereas others (M2 macrophages) promote the growth and dissemination of cancer cells and slow the action of the lymphocytes that eliminate them. Many clinical studies have demonstrated that patients dealing with tumors that are highly infiltrated by M2 macrophages run a high risk of relapse. More recently, scientists have discovered that macrophages’ functions actually evolve in response to changes in the tumor microenvironment. These studies led TRANSGENE to develop an antibody that is able to inhibit the activity of these deleterious macrophages.

In a first series of *in vitro* and *in vivo* studies TRANSGENE has already shown that anti-CD115:

- Inhibits the formation of M2 macrophages (immunomodulatory effect) while preserving M1 macrophages.
- Modulates, but does not block, the receptor’s activity (unlike all the anti-CD115s being developed), which prevents the release of M-CSF in the blood circulation and gives a favorable toxicity profile.
- Restores the immune system’s ability to destroy tumor cells (Antibody-Dependent Cell-mediated Cytotoxicity).
- Blocks the formation of osteoclasts, myeloid cells that contribute to the pain caused by the destruction of bone tissue associated with certain metastases.
- Potentiates anti-angiogenic action.



### About ELSALYS BIOTECH

ELSALYS BIOTECH is a fast-growing biotechnology company that designs and develops “best-in-disease” therapeutic antibodies that target tumors and their immune and/or vascular microenvironment. By restoring the ability of immune cells to recognize and kill tumors (Immune Checkpoint Inhibitors or ICI) or by blocking the mechanisms that promote their growth (targeted antibodies), ELSALYS BIOTECH widens the range of combinations of oncology and ophthalmology in novel strong potential therapeutic targets.

To drive its developments, the company relies on an academic network of international standing, an R&D platform that covers from targets sourcing to clinical development of drug candidates and a team of experts with solid experience in immuno-oncology, antibodies development and partnerships. Today ELSALYS BIOTECH has five R&D proprietary development programs in oncology and in ophthalmology.

Founded in 2013, ELSALYS BIOTECH is made up of a team of 14 people and managed by Dr Christine GUILLEN. Its founding shareholders are Transgene and Sofimac Partners, joined by IM Europe and Crédit Agricole Création in 2015. The company is located in the heart of the Biodistrict Lyon Gerland.

Further information at [www.elsalysbiotech.com](http://www.elsalysbiotech.com)

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