



Institut national
de la santé et de la recherche médicale



Press release

TxCell signs in-licensing global agreement with Inserm Transfert for novel population of regulatory T cells

- **CD8+Tregs are non-cytotoxic and display a unique and highly immunosuppressive mechanism of action**
- **CD8+Tregs could be integrated in TxCell's platforms to offer a different and complementary approach to treat inflammatory and autoimmune disorders**

Valbonne, France and Nantes, France, December 8, 2016 – TxCell SA (FR0010127662 – TXCL), a biotechnology company developing innovative, personalized cellular immunotherapies using regulatory T cells (Treg) to treat severe chronic inflammatory and autoimmune diseases, and **Inserm Transfert**, on behalf of Inserm, the Nantes University (Nantes, France) and the Nantes CHU, today announce the signature of an exclusive worldwide licensing agreement.

As per the terms of this agreement, TxCell has been granted an exclusive worldwide license to two patent families filed by the Center for Research in Transplantation and Immunology (CRTI), a center of excellence in the field of transplantation and immunology. The CRTI is a research unit (UMR 1064) affiliated to both Inserm, a French public organization dedicated to human health, and to the Nantes University (Nantes, France).

These patents cover a new type of regulatory T cells (Tregs) that express the CD8 marker. This is opposed to traditionally known Tregs that express CD4 such as the Type 1 Tregs and FoxP3+ Tregs. Specifically, these CD8+ Tregs are non-cytotoxic and display a unique and highly immunosuppressive mechanism of action. This mechanism is mediated through the release of cytokines with anti-inflammatory and tolerogenic (inducing immune tolerance) properties^{1,2,3,4}. As a result, CD8+ Tregs could offer a different and complementary approach to treat inflammatory disorders, including autoimmunity and transplant rejection. In addition, these patents also cover CAR-Treg cells made from these CD8+ Tregs.

The CRTI team, which is led by Ignacio Anegon and Carole Guillonnet, has already demonstrated the efficacy of these CD8+ Treg cell population in several preclinical models of inflammation including heart allograft, human skin transplant rejection and graft-versus-host disease (GvHD) in mice with humanized immune systems. In these models, the administration of CD8+ Treg cells has been shown to prevent the occurrence of skin graft rejection and GvHD,

¹ Picarda E, Bézie S, Venturi V, et al, J Clin Invest. 2014 Jun;124(6):2497-512.

² Guillonnet C, Hill M, Hubert FX, et al J Clin Invest. 2007 Apr;117(4):1096-106.

³ Bézie S, Picarda E, Ossart J, Tesson L, Usal C, Renaudin K, Anegon I, Guillonnet C. J. Clin. Invest. 2015 Oct 1;125(10):3952-64.

⁴ Bézie S, Picarda E, Tesson L, Renaudin K, Durand J, Ménoret S, Mérieu E, Chiffolleau E, Guillonnet C, Caron L, Anegon I. PLoS One 2015 Mar 12;10(3):e0119686.

respectively. As per the terms of the agreement announced today, TxCell now has exclusive worldwide rights to both these patent families for all autoimmune diseases and transplantation-related disorders.

"Regulatory T cells are composed of several subpopulations that act through complementary modes of action to prevent or treat inflammatory disorders. TxCell's unparalleled patent estate is focused on therapeutic Treg cells and already covers type 1 Treg cells and CAR-Treg cells. TxCell, by obtaining an exclusive license on patents covering a new CD8+ Treg cell subpopulation, adds a new pillar to its patent portfolio and further strengthens TxCell's position as the international Treg leading expert," said Arnaud Foussat, Senior Vice President, Corporate Development and Head of External Collaborations & Alliance Management of TxCell. *"This is the fifth academic agreement signed in 2016. Specifically, this license enables TxCell to develop new types of cell therapy products, composed of CD8+ Treg cells, including CAR-CD8+ Tregs, for the treatment of autoimmune diseases as well as transplant-related disorders with high unmet medical need."*

"It is a great satisfaction for Inserm Transfert to be involved in such a major technology transfer and to complete it successfully. This license agreement is the first step towards future collaborations with TxCell," said Pascale Augé, President of Board of Inserm Transfert.

Financial terms of the agreement have not been disclosed.

About Inserm & Inserm Transfert – <http://www.inserm-transfert.fr>

Founded in 2000, Inserm Transfert SA is the private subsidiary of the French National Institute of Health and Medical Research (Inserm). Inserm Transfert is dedicated to technology and knowledge transfer of Inserm's laboratories innovations, from scouting of invention disclosure to industrial partnership.

Founded in 1964, the French National Institute of Health and Medical research (Inserm) is a public science and technology institute that supports more than 300 laboratories across France and include nearly 15,000 researchers, engineers, technicians, post-doctoral fellow, students... Inserm is the only French public research institute to focus entirely on human health and that positions itself on the pathway from research laboratory to the bed of the patient in a multidisciplinary approach. Inserm is a core member of the National Alliance for Life and Health Sciences (Aviesan), founded in April 2009.

Inserm Transfert Media contact: communication@inserm-transfert.fr - Tél. +33 (0)1 80 05 28 83

About CRTI – <http://www.itun.nantes.inserm.fr/>

The Center for Research in Transplantation and Immunology (CRTI) is a research unit (UMR 1064) affiliated to INSERM and Nantes University. The CRTI research programs and organization rely on the definition of common scientific objectives, the development of translational research, sharing of resource, technical platforms development and research development towards clinical and industrial applications.

Main research areas are immunology, transplantation, autoimmune diseases, regenerative medicine and genetics with the aim in the long term of: (i) improving graft survival in transplanted patients thanks to novel biomarkers and immuno-intervention strategies, (ii) implementing these new tools in other clinical conditions such as IMIDs and (iii) developing alternative solutions for replacement of organs and tissues.

The CRTI UMR1064 and the clinical departments of Clinical Immunology, Nephrology and Urology at CHU Nantes together form the Institute of Transplantation-Urology-Nephrology (ITUN). The kidney and pancreas transplantation program of the ITUN ranks among the best in France and Europe.

About TxCell – www.txcell.com

TxCell is a biotechnology company that develops platforms for innovative, personalized T cell immunotherapies for the treatment of severe chronic inflammatory and autoimmune diseases with high unmet medical need. TxCell is targeting a range of autoimmune diseases (both T-cell and B-cell-mediated) including Crohn's disease, lupus nephritis, bullous pemphigoid and multiple sclerosis, as well as transplantation-related inflammatory disorders.

TxCell is the only clinical-stage cellular therapy company fully dedicated to the science of regulatory T lymphocytes (Tregs). Tregs are a recently discovered T cell population for which anti-inflammatory properties have been demonstrated. Contrary to conventional approaches based on non-specific polyclonal Tregs, TxCell is exclusively developing antigen-specific Tregs. This antigen specificity may either come from pre-existing Treg cell T-Cell Receptor (TCR) or from genetic modifications with Chimeric Antigen Receptor (CAR). TxCell is developing two proprietary technology platforms, ASTrIA, which is composed of non-modified naturally antigen-specific Tregs, and ENTrIA, which is composed of genetically-engineered Tregs.

Based in Sophia-Antipolis, France, TxCell is listed on Euronext Paris and currently has 45 employees.

Next events

Financial and business conference

Jan 9-13, 2017	J.P. Morgan Annual Healthcare Conference	San Francisco (US)
Jan 26, 2017	Invest Securities BioMed Event	Paris (France)

Scientific conference

Jan 17-20, 2017	Phacilitate Leaders Forum	Miami (US)
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Contacts

TxCell

Caroline Courme
IR & Communication Director
Tel: +33(0) 4 97 21 83 00
caroline.courme@txcell.com

Image Box – Press relations

Neil Hunter / Michelle Boxall
Tel: +44(0) 20 8943 4685
neil.hunter@imageboxpr.co.uk
michelle.boxall@imageboxpr.co.uk

NewCap – Investor relations

Julien Perez / Pierre Laurent
Tel: +33 (0)1 44 71 98 52
txcell@newcap.eu

Disclaimer

This press release contains certain forward-looking statements relating to the business of TxCell, which shall not be considered *per se* as historical facts, including TxCell's ability to develop, market, commercialize and achieve market acceptance for specific products, estimates for future performance and estimates regarding anticipated operating losses, future revenues, capital requirements, needs for additional financing. In addition, even if the actual results or development of TxCell are consistent with the forward-looking statements contained in this press release, those results or developments of TxCell may not be indicative of their in the future.

In some cases, you can identify forward-looking statements by words such as "could," "should," "may," "expects," "anticipates," "believes," "intends," "estimates," "aims," "targets," or similar words. Although the management of TxCell believes that these forward-looking statements are reasonably made, they are based largely on the current expectations of TxCell as of the date of this press release and are subject to a number of known and unknown risks and uncertainties and other factors that may cause actual results, performance or achievements to be materially different from any future results, performance or achievement expressed or implied by these forward-looking statements. In particular, the expectations of TxCell could be affected by, among other things, uncertainties involved in the development of the Company's products, which may not succeed, or in the delivery of TxCell's products marketing authorizations by the relevant regulatory authorities and, in general, any factor that could affect TxCell capacity to commercialize the products it develops, as well as, any other risk and uncertainties developed or identified in any public documents filed by TxCell with the AMF, included those listed in chapter 4 "Risk factors" of the 2015 *document de référence* approved by the AMF on May 24, 2016 under number R.16-048. In light of these risks and uncertainties, there can be no assurance that the forward-looking statements made in this press release will in fact be realized. Notwithstanding the compliance with article 223-1 of the General Regulation of the AMF (the information disclosed must be "accurate, precise and fairly presented"), TxCell is providing the information in these materials as of this press release, and disclaims any intention or obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise.