



## **Transgene and BioInvent present positive data at the SITC, supporting the co-development of a next-generation oncolytic virus encoding for an anti-CTLA-4 antibody**

Lund, Sweden and Strasbourg, France – November 7, 2018 - BioInvent International AB (OMXS: BINV), focused on the discovery and development of novel and first-in-class immuno-regulatory antibodies to treat cancer, and Transgene (Euronext Paris: TNG), a biotech company that designs and develops virus-based immunotherapies, announced they will be presenting two back-to-back posters featuring positive data supporting their ongoing collaboration to develop a novel oncolytic virus encoding for an anti-CTLA-4 antibody at the annual meeting of the Society for Immunotherapy of Cancer (SITC) to be held November 7-11 in Washington, D.C.

This novel oncolytic virus combines a Transgene InVivo™ Vaccinia virus (VV)-based oncolytic vector, with BioInvent's human anti-CTLA-4 antibody (IgG1) and a human cytokine.

BioInvent and Transgene are together creating a novel armed oncolytic virus that will be able to infect and selectively replicate within the tumor, inducing cancer cell destruction, and to elicit a strong immune response that is further enhanced by the local expression of the immune checkpoint inhibitor and the cytokine. This novel oncolytic virus is expected to deliver better treatment outcomes with an improved safety profile as the patient is not exposed to the potential systemic toxicity of the anti-CTLA-4 antibody.

In the posters, Transgene and BioInvent provide further details on the strengths and advantages of their respective technologies:

- Transgene's VV is a highly oncolytic and immunogenic viral vector that has demonstrated its ability to ensure the expression of a fully functional, full-length antibody in the tumor and trigger a massive immune infiltration into the tumor with low systemic exposition to the molecule;
- BioInvent has developed a potent anti-CTLA-4 antibody, selected and characterized for its improved FcγR-dependent Treg depleting efficacy. FcγR-dependent Treg depletion was recently found to play a key role in the anti-CTLA-4 antibody's efficacy *in vivo*.

Björn Frendéus, Chief Scientific Officer of BioInvent said: "Having identified a lead human anti-CTLA-4 antibody candidate with improved Treg-depleting activity compared with ipilimumab, we are looking forward to advancing the program presented at the SITC in collaboration with Transgene, and develop a potentially safe and more efficacious strategy to combine anti-CTLA-4 and anti-PD-1/PDL1 checkpoint inhibition in the context of oncolytic virotherapy."

Eric Quéméneur, Pharm.D., Ph.D., Executive VP, Chief Scientific Officer of Transgene, said: "We are very pleased with the progress of our collaboration with BioInvent. The data that both companies present at SITC underline the potential of combining our synergistic expertise to generate a novel oncolytic virus capable of delivering a potent anti-CTLA-4 antibody directly into the tumor micro-environment. The concept of combining the merits of our respective technologies was already demonstrated in preclinical experiments and we look forward to demonstrating its potential in the clinic."

The posters will be on display both Friday, November 9 and Saturday, November 10 in the Poster Hall (Hall E). They will also be available after the conference on the companies' respective websites, [www.transgene.fr](http://www.transgene.fr) and [www.bioinvent.com](http://www.bioinvent.com).

### **Antibody-armed oncolytic Vaccinia virus to block immunosuppressive pathways in the tumor microenvironment – Poster P615**

- Authors: Marchand JB, Semmrich M, Fend L, Tornberg UC, Silvestre N, Frendéus B, Quéméneur E

**Generation and characterization of a CTLA-4 antibody with improved FcγR-dependent Treg deletion for tumor microenvironment-targeted oncolytic virotherapy of cancer – Poster 602**

- *Authors: Semmrich M, Marchand JB, Holmkvist P, Mårtensson L, Tornberg UC, Fend L, Kovacek M, Teige I, McAllister A, Quéméneur E, Frensdéus B*

**About BioInvent**

BioInvent International AB (OMXS: BINV) is focused on the discovery and development of novel and first-in-class immuno-modulatory antibodies to treat cancer. The Company's lead program is BI-1206, currently in Phase I/II for non-Hodgkin lymphoma and chronic lymphatic leukemia. BioInvent's pre-clinical portfolio is focused on targeting key immune suppressive cells and pathways of the tumor microenvironment, including regulatory T cells, tumor-associated myeloid cells and mechanisms of antibody drug-resistance. The Company has a strategic research collaboration with Pfizer Inc., and partnerships with Transgene, Bayer Pharma, Daiichi Sankyo, and Mitsubishi Tanabe Pharma. BioInvent generates near term revenues from its fully integrated manufacturing unit producing antibodies for third parties for research through to late-stage clinical trials. More information is available at [www.bioinvent.se](http://www.bioinvent.se).

**About Transgene**

Transgene (Euronext: TNG) is a publicly traded French biotechnology company focused on designing and developing targeted immunotherapies for the treatment of cancer and infectious diseases. Transgene's programs utilize viral vector technology with the goal of indirectly or directly killing infected or cancerous cells. The Company's lead clinical-stage programs are: TG4010, a therapeutic vaccine against non-small cell lung cancer, Pexa-Vec, an oncolytic virus against liver cancer, and TG4001, a therapeutic vaccine against HPV-positive head and neck cancers. The Company has several other programs in clinical development, including TG1050 (a therapeutic vaccine for the treatment of chronic hepatitis B) and TG6002 (an oncolytic virus for the treatment of solid tumors).

With its proprietary InVir.IO™, Transgene builds on its expertise in viral vectors engineering to design a new generation of multifunctional oncolytic viruses.

myvac™, an individualized MVA-based immunotherapy platform designed to integrate neoantigens, completes this innovative research portfolio.

Additional information about Transgene is available at [www.transgene.fr](http://www.transgene.fr).

Follow us on Twitter: [@TransgeneSA](https://twitter.com/TransgeneSA)

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**Transgene - disclaimer**

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