

## **AACR 2022: Tollys releases new preclinical data demonstrating lifelong potent anti-tumor immunity of TL-532**

- **Specific TLR3-agonist TL-532 induces lifelong anti-tumor auto-vaccination**
- **Data also showed cross-immunity against unrelated cancers**
- **These results confirm two new properties for TL-532, which showed proof-of-concept of inducing tumor cell death by apoptosis and reversing resistance to immune checkpoint inhibitors in previous studies**

**Lyon, France, March 22, 2022** — Tollys, a biopharmaceutical company developing TL-532, the first anti-cancer immunotherapy based on a new generation of synthetic toll-like receptor 3 (TLR3) specific agonist, today announces that it will release the latest preclinical developments of TL-532 at the American Association for Cancer Research (AACR) Annual Meeting 2022.

The preclinical data included in the poster identified TL-532 as the spearhead of a new rationally designed TLR3-agonist family. In monotherapy, it demonstrated substantial tolerance and promising anti-cancer and auto-vaccinal activity, which included unrelated cancers. TL-532 also demonstrated its remarkable ability to overcome Immune Checkpoint Inhibitor (ICI) tumor-resistance, thus increasing the clinical landscape for ICI combination treatment.

Further key highlights from the poster, titled 'The specific TLR3-agonist TL-532 induces lifelong anti-tumor auto-vaccination, cross-immunity against unrelated cancers and reverses resistance to immune checkpoint inhibitors':

- *In vivo* activity of TL-532 led to substantial tumor growth inhibition (88%) and delay (370%), translating into 35% Complete Response (CR) rate and 5.3-fold median survival benefit
- Interestingly, among these CRs, 62% (13/21) showed life-long tumor auto-vaccination after three consecutive rechallenges at 3, 10 and 30 months
- Remarkably, 54% (6/11) of the mice autovaccinated against bladder cancer also demonstrated cross-immunity against an unrelated and poorly immunogenic, syngeneic osteosarcoma cancer cell model (LM8)
- TL-532 treatment appeared to decrease the expression of the immune checkpoint PD-L1 on tumor cells *ex-vivo* and in cDCs *in vivo* and demonstrated a remarkable ability to reverse the anti-PD-L1 tumor-resistance when combined with the ICI leading to doubling of CR rate
- *Ex vivo* and *in vivo*, the tumor cell death by apoptosis induced by TL-532 was associated with a tumor microenvironment switch, evidenced by increases in antitumor biomarker secretion (IFN- $\alpha$ , IFN- $\lambda$ 1, IFN- $\gamma$ , CCL5, CXCL9, CXCL10, CX3CL10), decreases in protumor biomarkers CCL22 and sFAS, and was associated *in vivo* with the recruitment and activation of conventional Dendritic Cells (cDCs) and Cytotoxic T-Lymphocytes (CTLs) at the tumor site.

**Abstract title:** 'The specific TLR3-agonist TL-532 induces life-long anti-tumor autovaccination, cross-immunity against unrelated cancers and reverses resistance to immune checkpoint inhibitors'

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**Session category:** Immunology

**Session title:** Inflammation, Immunity and Cancer

**Session date and Time:** Tuesday Apr 11, 2022, 1:30 PM - 5:00 PM



**Location:** New Orleans Convention Center, Exhibition Halls D-H, Poster Section 39

**Poster board number:** 2

**Abstract number:** 2085

The complete abstract can be accessed on the [AACR annual meeting website](#).

### **About TL-532**

TL-532 is the first synthetic specific TLR3 agonist with a proprietary defined double-stranded RNA sequence. As such, TL-532 has the potential to be the best-in-class and first-to-market TLR3 agonist. TL-532 was shown to have a triple mechanism of action inducing 1) death by apoptosis selective to cancer cells - not in normal cells -, leading to the *in-situ* release of tumor specific antigens, 2) activation of the myeloid dendritic cells of the immune system to mount a specific T-cell response against the tumor antigens and 3) a switch of the tumor microenvironment by producing cytokines and chemokines which are unfavorable to tumor development. The result is the immunogenic cell death of tumor cells, accompanied by an auto-vaccination preventing the recurrence of cancer.

### **About Tollys**

Tollys is a biopharmaceutical company focused on cutting-edge cancer immunotherapy and on the biology and modulation of the TLR3 receptor. Tollys discovered and patented a family of new structurally defined dsRNA sequences able to activate the TLR3 receptor. TL-532 was selected as the lead-candidate for development. TL-532 is a structurally defined double-stranded RNA; produced synthetically and highly specific to the TLR3 receptor. The specificity for the TLR3 receptor and its defined 70 base pair sequence differentiates TL-532 from all other TLR3 agonists tested to date in clinical trials. In 2021, TL-532 was named the 'best-in-class innovation of the year' by the international board of [MATWIN](#), a European oncology innovation acceleration program. Founded in 2015 by pharmaceutical executives and scientists from the Cancer Research Center in Lyon, Tollys offices and research laboratories are based in Lyon, France. The company has raised a total of €7M (\$7.9M) from private investors and received a grant of €1.5M (\$1.7M) from Bpifrance.

[www.tollys.fr](http://www.tollys.fr)

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