OSE Immunotherapeutics Presents New Data Supporting Bispecific Antibody Checkpoint Inhibitor Platform (BiCKI®) and Bifunctional Therapy Targeting PD-1 and IL-7 (BiCKI®-IL-7) For Cancer Immunotherapy

Data being presented in two poster presentations at AACR Virtual Meeting II 2020 – June 22-24

Nantes, France, June 10, 2020, 6:00PM CET – OSE Immunotherapeutics (ISIN: FR0012127173; Mnémo: OSE) will present the latest progress on its bispecific antibody platform, called BiCKI®, based on an anti-PD1 backbone fused with cytokines or costimulatory molecules, and a preclinical update on its developmental BiCKI® therapy, a bifunctional anti-PD-1 / interleukin-7 (IL-7) fusion protein, called BiCKI®-IL-7[(1)], at the American Association of Cancer Research (AACR) Virtual Annual Meeting II, to be held on June 22-24, 2020.

Nicolas Poirier, Chief Scientific Officer of OSE Immunotherapeutics, commented: "*The AACR update presentations show that our BiCKI® bispecific anti-PD1 checkpoint inhibitor antibodies platform and novel bispecific therapy combining anti-PD-1 and the cytokine IL-7, called BiCKI®-IL-7, will help overcome resistance mechanisms to anti-PD(L)-1 therapies and could potentially address the needs of a patient population in immune escape from checkpoint inhibitor treatment.*"

Immune checkpoint inhibitors are now considered a new standard of care against a wide range of cancers. However, these therapies are ineffective in a significant percentage of patients, and some initial responders eventually develop resistance to these therapies with relapsed disease [(2)]. Sustained tumor antigen stimulation may result in a state of functional impairment referred to as exhaustion of tumor T lymphocytes. Disarming T regulatory cells (Tregs) is also important as Tregs contribute to dampening anti-tumor response.

The poster entitled: ***"Bispecific anti-PD1 CheckKpoint Inhibitors antibodies (BiCKI®), an optimized platform designed to tackle anti-PD-(L)1 primary and secondary resistance mechanisms"*** shows improvement of the BiCKI® platform manufacturability and drug exposure by selectively designing the structure of bispecific antibodies. By fusing costimulatory molecules, either cytokines or a dominant negative receptor to the anti PD-1 blocking antibody, it is possible to generate and select a variety of efficient bispecific molecules that act synergistically to counteract primary and secondary resistance mechanisms of anti-PD(L)1 therapies.

The poster: "***A novel bifunctional anti-PD-1 / IL-7 fusion protein potentiates effector function of exhausted T cell and disarms Treg suppressive activity"*** features data validating the therapeutic potential of providing IL-7 signals to overcome PD-1 resistance. Data shows how the bifunctional anti-PD1/IL-7 therapy BiCKI®-IL-7 favors the T-cell effector over T-regulatory immune cell balance by stimulating Teff cells and exhausted T-cells, while in parallel disarming Tregs immunosuppressive functions as opposed to IL-2 (and IL-15).

[1] **AACR Virtual Annual Meeting II poster details**

Bispecific anti-PD1 CheckKpoint Inhibitors antibodies (BiCKI®), an optimized platform designed to tackle anti-PD-(L)1 primary and secondary resistance mechanisms

Caroline Mary, Virginie Thepenier, Aurore Morello, Geraldine Teppaz, Margaux Seité, Marion Colonello, Justine Durand, Kevin Biteau, Emmanuelle Wilhelm, Nicolas Poirier

A novel bifunctional anti-PD-1 / IL-7 fusion protein potentiates effector function of exhausted T cell and disarms Treg suppressive activity

Aurore Morello, Justine Durand, Margaux Seité, Virginie Thepenier, Géraldine Teppaz, Emmanuelle Wilhelm, Sabrina Pengam, Caroline Mary, Nicolas Poirier

[2] ***Cancer J.; available in PMC 2019 Jan 1.; Mechanisms of Resistance to PD-1 and PD-L1 blockade***
Theodore S. Nowicki et al.

ABOUT OSE Immunotherapeutics

OSE Immunotherapeutics is a clinical-stage biotechnology company focused on developing and partnering therapies to control the immune system for immuno-oncology and autoimmune diseases. The company has several scientific and technological platforms including neoepitopes and agonist or antagonist monoclonal antibodies, all ideally positioned to fight cancer and autoimmune diseases. Its first-in-class clinical and preclinical portfolio has a diversified risk profile:

- **Tedopi®** (innovative combination of neoepitopes) : the company's most advanced product ; **positive results for Step-1 of the Phase 3 trial** (Atalante 1) in **Non-Small Cell Lung Cancer** post checkpoint inhibitor failure; due to Covid-19, voluntary definitive suspension of new patient accrual in the Step-2 initially planned in the trial.
  In **Phase 2 in pancreatic cancer** (TEDOPaM, sponsor GERCOR) in combination with checkpoint inhibitor Opdivo®.
- **BI 765063** (OSE-172, anti-SIRPα monoclonal antibody): developed in **partnership with Boehringer Ingelheim**; myeloid checkpoint inhibitor in **Phase 1 in advanced solid tumors**.
- **FR104** (anti-CD28 monoclonal antibody): **positive Phase 1 results**; **Phase 2-ready asset in autoimmune diseases or in transplantation**.
- **OSE-127** (humanized monoclonal antibody targeting IL-7 receptor): developed in **partnership with Servier**; **positive Phase 1 results**; two independent **Phase 2** planned in **ulcerative colitis** (OSE sponsor) and in **Sjögren's syndrome** (Servier sponsor) to start in 2020.
- **BiCKI®**: **bispecific fusion protein** platform built on the key backbone component anti-PD-1 (OSE-279) combined with new immunotherapy targets; 2nd generation of PD-(L)1 inhibitors to increase **antitumor efficacity**. **Additional innovative research programs**.
- **CoVepiT**: a **prophylactic vaccine** against **COVID-19**, developed using SARS-CoV-2 optimized neo-epitopes. First **preclinical results expected start of H2 2020**, possible **clinical trial by year end**.
  Due to the COVID-19 crisis, accrual of new patients in the clinical trial TEDOPaM is temporarily suspended and initiation timelines for both Phase 2 trials of OSE-127 could be impacted during the coming months.

For more information: **https://ose-immuno.com/en/**
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Forward-looking statements

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These forward-looking statements include statements typically using conditional and containing verbs such as "expect", "anticipate", "believe", "target", "plan", or "estimate", their declensions and conjugations and words of similar import. Although the OSE Immunotherapeutics management believes that the forward-looking statements and information are reasonable, the OSE Immunotherapeutics' shareholders and other investors are cautioned that the completion of such expectations is by nature subject to various risks, known or not, and uncertainties which are difficult to predict and generally beyond the control of OSE Immunotherapeutics. These risks could cause actual results and developments to differ materially from those expressed in or implied or projected by the forward-looking statements. These risks include those discussed or identified in the public filings made by OSE Immunotherapeutics with the AMF. Such forward-looking statements are not guarantees of future performance. This press release includes only summary information and should be read with the OSE Immunotherapeutics Universal Registration Document filed with the AMF on 15 April 2020, including the annual financial report for the fiscal year 2019, available on the OSE Immunotherapeutics' website. Other than as required by applicable law, OSE Immunotherapeutics issues this press release at the date hereof and does not undertake any obligation to update or revise the forward-looking information or statements.