OSE Immunotherapeutics Presents New Preclinical Data on its Novel Bispecific Checkpoint Inhibitor (BiCKI®) Platform Targeting PD-1 and Cytokines To Overcome Tumor Resistance to Checkpoint Inhibitor Blockade

New data presented at the International Cancer Immunotherapy Conference (CICON)

Nantes, France, September 30, 2019 – 8 a.m. CET - OSE Immunotherapeutics (ISIN: FR0012127173; Euronext: OSE) presented new data on its BiCKI® platform at the International Cancer Immunotherapy Conference (CICON) being held September 25-28, 2019, in Paris, France. The presentation focused on a novel bispecific antibody therapy being developed by the Company to fight primary and secondary resistance mechanisms developed by cancers to evade checkpoint inhibitor therapies. BiCKI® antibodies are based on anti-PD-1 backbone (OSE-279) selected on optimized bioproduction capacity. The first cytokine selected to be paired with the anti-PD-1 in the bispecific antibody is Interleukin-7 (IL-7), which has been shown to improve immune functions and cancer immunotherapy efficacy.

"Our data validates the therapeutic potential of a novel bispecific therapy combining anti-PD-1 and IL-7 cytokine to fight primary and secondary resistance mechanisms to checkpoint inhibitors. Along with Tedopi®, OSE's neoepitope product currently in a Phase 3 trial in NSCLC, BiCKI®IL-7 addresses a patient population in immune escape from checkpoint inhibitor treatment for whom the clinical need is extremely high" said Alexis Peyroles, Chief Executive Officer of OSE Immunotherapeutics.

The poster, entitled *"A novel bifunctional anti-PD-1 / IL-7 fusion protein potentiates effector function of exhausted T cell and disarms Treg suppressive activity"* * reports that OSE's bifunctional anti-PD1/IL-7 favors the T cell effector over regulatory immune balance by stimulating effector T cell functions while disarming regulatory T cells.

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**. 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.

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

ABOUT THE CONFERENCE

The Cancer Research Institute (CRI), the Association for Cancer Immunotherapy (CIMT), the European Academy of Tumor Immunology (EATI), and the American Association for Cancer Research (AACR) are proud to present the Fifth International Cancer Immunotherapy Conference.

The 2019 meeting is focused on "Translating Science into Survival," and feature talks from more than 50 leaders in the field covering all areas of inquiry in cancer immunology and immunotherapy, including: regulating T cells and their response to cancer, tumor microenvironment, genetically engineered T cells, maintenance of immune balance, novel vaccine platforms and combinations, mutational analysis and predicting response to immunotherapy, convergence of technology and cancer immunotherapy, microbiome, and metabolism.

This meeting provides an unparalleled opportunity for teaching, learning, and networking among all stakeholders in the field: scientists, clinicians, regulators, drug developers, and patient advocates.

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 a diversified first-in-class clinical portfolio consisting of several scientific and technological platforms including neoepitopes and agonist or antagonist monoclonal antibodies, all ideally positioned to fight cancer and autoimmune diseases. The most advanced therapeutic-candidate, Tedopi®, is a proprietary combination of 10 neo-epitopes aimed at stimulating T-lymphocytes and is currently in Phase 3 development in non-small cell lung cancer (NSCLC) in patients in failure after checkpoint inhibitor treatment (anti PD-1 and anti PD-L1) and in Phase 2 testing in pancreatic cancer in combination with checkpoint inhibitor Opdivo®. BI 765063 (OSE-172) (anti-SIRPa monoclonal antibody) is under a license and collaboration agreement with Boehringer Ingelheim; this checkpoint inhibitor is currently under Phase 1 clinical trial in advanced solid tumors. BiCKI® is a bispecific fusion protein platform built on the key backbone component anti-PD-1 (OSE-279) and targeting innovative targets. FR104 (an anti-CD28 mAb) has successfully completed Phase 1 testing and has potential to treat autoimmune diseases. OSE-127 (monoclonal antibody targeting the CD127 receptor, the alpha chain of the interleukin-7 receptor) is partnered with Servier under an option agreement up to the completion of a Phase 2 clinical trial planned in autoimmune bowel diseases; in parallel, Servier plans a development in the Sjögren syndrome. OSE-127 is currently under Phase 1 clinical trial.

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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 Reference Document filed with the AMF on 26 April 2019, including the annual financial report for the fiscal year 2018, 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.