OSE Immunotherapeutics Presents CLEC-1, Novel Myeloid Immune Checkpoint Target for Cancer Immunotherapy,

Oral Presentation at AACR Virtual Meeting II 2020 – June 22-24

- **Tumor cells inhibit myeloid cell phagocytosis and dendritic cell antigen presentation through the novel "Don't eat me" signal mediated by CLEC-1**
- **CLEC-1 represents a new therapeutic target for immuno-oncology**
- **Antagonists of the CLEC-1 myeloid checkpoint pathway represent an innovative cancer immunotherapy approach**

Nantes, France, May 18, 2020, 7:30AM CET – OSE Immunotherapeutics (ISIN: FR0012127173; Mnémo: OSE), today announced that new preclinical data identifying a novel myeloid immune checkpoint target for cancer immunotherapy, CLEC-1 (a C-type lectin receptor) have been selected for **oral presentation[(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, comments*: "These data indicate that the myeloid checkpoint CLEC-1 is a new therapeutic target in immuno-oncology and that antagonists of the CLEC-1 pathway constitute an innovative cancer immunotherapy approach synergistic with chemotherapy or tumor-targeting antibodies. The identification of CLEC-1 and its antagonists continue to reinforce our presence in the highly attractive field of myeloid cells and macrophages, identified as poor prognostic factors in oncology and in immune escape mechanisms of cancer immunotherapies."*

These findings come from a research program conducted by OSE 's R&D team in collaboration with Dr Elise Chiffoleau *(Center for Research in Transplantation and Immunology, UMR - INSERM 1064, Nantes University Hospital).* This program is focused on the development of a cancer immunotherapy targeting a newly identified C-type lectin receptor, CLEC-1, to block suppressive functions of myeloid cells and to restore anti-tumor response of T-lymphocytes. Suppressive myeloid cells have the ability to accumulate in the tumor microenvironment and to deregulate the immune activation of T-lymphocytes.

This research has demonstrated that novel myeloid immune checkpoint CLEC-1 is a new therapeutic target of interest in immuno-oncology. The main findings being presented at AACR are:

- CLEC-1 is a novel "Don't eat me" signal (similar to the SIRPα-CD47 axis) and CLEC-1 antagonist antibodies developed by OSE Immunotherapeutics restore the phagocytosis function of macrophages and dendritic cells in synergy with tumor-targeting antibodies.
- CLEC-1 acts as a "sensor of death" by recognizing stress conditions and cell necrosis of tumor cells.
- CLEC-1 genetically deficient mice more efficiently eradicate tumor cells, in particular when combined with cytotoxic and immunogenic chemotherapy that induces cell stress conditions.

- CLEC-1 is expressed by specific subtypes of dendritic cells specialized in antigen presentation in the tumor; *in vivo* the receptor inhibits T lymphocytes cross-priming and dampens adaptative memory immune response. The absence of CLEC-1 favors the generation of adaptive memory immune responses.

(1) **AACR Virtual Annual Meeting II presentation details**

CLEC-1 is a novel myeloid immune checkpoint for cancer immunotherapy controlling damaged and tumor cells phagocytosis.
Gauttier V, Drouin M*, Saenz J, Evrard B, Mary C, Teppaz G, Desalle A, Thépenier V, Wilhelm E , Poirier N*, Chiffoleau E**
*authors contribute equally to this work

CLEC-1 suppress dendritic cell antigen presentation and is a novel myeloid immune checkpoint target for cancer immunotherapy.
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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 trials TEDOPaM and BI 765063 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

This press release contains express or implied information and statements that might be deemed forward-looking information and statements in respect of OSE Immunotherapeutics. They do not constitute historical facts. These information and statements include financial projections that are based upon certain assumptions and assessments made by OSE Immunotherapeutics' management in light of its experience and its perception of historical trends, current economic and industry conditions, expected future developments and other factors they believe to be appropriate.

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.