OSE Immunotherapeutics Presented New Data at AACR* Annual Meeting 2017 on OSE-172 (Effi-DEM), Company's Checkpoint Inhibitor Blocking Suppressive Myeloid Cells and Inducing Antitumoral Potent T Memory Response

Nantes, April 5, 2017, 8:00am CEST - **OSE Immunotherapeutics SA** (ISIN: FR0012127173; Mnémo: OSE) announced today that the Company presented significant results at the AACR* meeting in the very promising field of myeloid/macrophage suppressive cells, an abundant immune cell type infiltrating many tumors and often associated with a poor prognosis.

OSE-172 (Effi-DEM) is a first-in-class checkpoint inhibitor that blocks these suppressive cells, allowing parallel mobilization of T cells and produces dramatic anti-tumorigenic results in monotherapy and in combination with other immunotherapies as T checkpoint inhibitors.

OSE-172 is a selective SIRP-alpha antagonist monoclonal antibody. SIRP-alpha is expressed on myeloid suppressive cells (primarily on Myeloid Derived Suppressor Cells (MDSC) and Tumor Associated Macrophages (TAM)). The main ligand of SIRP-alpha is CD47, which is ubiquitously expressed in various cells and overexpressed in tumors.

The preclinical safety of OSE-172 was first established without any binding to or potential interaction with human red blood cells and platelets while CD47 is expressed on these hematological cells. Furthermore, CD47 interacts with several other ligands and physiological functions, such as the CD47/SIRP-gamma axis, another member of the SIRP family, which has been observed to play a role in human T cell proliferation. OSE-172, as selective antagonist of SIRP-alpha, is not a binder of SIRP-gamma, thus avoiding a deleterious impact on T cell immune response and allowing for a strong human effector T cell proliferation, a key advantage of this mechanism of action.

Furthermore, the efficacy of this myeloid checkpoint inhibitor has been established alone and in combination with immunotherapies as T checkpoint inhibitors. OSE-172 has demonstrated its impact on the Tumor Micro-Environment by switching M2 pro-tumorigenic macrophages into M1 anti-tumorigenic macrophages whilst increasing effector memory CD8 T cells.

When OSE-172 was combined with other immunotherapies, T memory cells transmitted efficacy against a new tumor re-challenge.

"These new data demonstrate OSE-172 as having a differentiated safety and selective pharmacological profile which provides us with the opportunity to open various potential indications in immuno-oncology field for our new myeloid checkpoint inhibitor. We are currently actively preparing the next steps of its development towards clinical stage," said Bernard Vanhove, Chief Operating Officer of OSE Immunotherapeutics, in charge of R&D and International Scientific Collaborations.

**American Association for Cancer Research, Washington April -1-5th, 2017*

The poster presented was entitled: "Selective targeting of SIRP alpha induces potent memory anti-tumor immune responses without presenting haematological toxicity" and is available on the AACR website.

ABOUT OSE IMMUNOTHERAPEUTICS

Our ambition is to become a world leader in activation and regulation immunotherapies

OSE Immunotherapeutics is a biotechnology company focused on the development of innovative immunotherapies for immune activation and regulation in the fields of immuno-oncology, auto-immune diseases and transplantation. The company has a balanced portfolio of first-in-class products with a diversified risk profile ranging from clinical phase 3 registration trials to R&D:

In immuno-oncology:

- **Tedopi® (OSE-2101), a combination of 10 optimized neo-epitopes** to induce specific T activation in immuno-oncology - **Currently in registration Phase 3 trial advanced NSCLC HLA A2+ patients EU /US -** Orphan Status in the US **- Registration expected in 2019 - A Phase 2 with Tedopi® in combination with a checkpoint inhibitor** in NSCLC is considered in 2017**.**
- **OSE-172 (Effi-DEM), new generation checkpoint inhibitor** targeting the **SIRP-α receptor - In preclinical development** for several cancer models.

In auto-immune diseases and transplantation:

- **FR104,** CD28-antagonist in immunotherapy - **Phase 1 trial completed** – For the treatment of autoimmune diseases and for use with transplantation - **Licensed to Janssen Biotech Inc.** to pursue clinical development.
- **OSE-127 (Effi-7),** interleukin receptor-7 antagonist - **In preclinical development** for inflammatory bowel diseases and other autoimmune diseases. **License option agreement with Servier** for the development and commercialization.

The portfolio's blockbuster potential gives OSE Immunotherapeutics the ability to enter global agreements at different stages of development with major pharmaceutical players.

Immunotherapy is a highly promising and growing market. By 2023 Immunotherapy of cancer could represent nearly 60% of treatments against less than 3% at present * and the projected market is estimated at $67 billion in 2018 **.

There are more than 80 autoimmune diseases that represent a significant market including major players in the pharmaceutical industry with sales towards $10 billion for the main products. The medical need is largely unmet and requires the provision of new innovative products involved in the regulation of the immune system.

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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 Reference Document filed with the AMF on 8 June 2016 under the number R.16-052, the consolidated financial statements and the management report for the fiscal year 2015, as well as the Merger Document registered with the AMF on 26 April 2016 under number E.16-026, all 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.