OSE Immunotherapeutics Presents New Data on Anti-SIRPa (Effi-DEM), the Checkpoint Inhibitor blocking Pro-Tumor and Suppressor Myeloid Cells at "Advances in Immuno-Oncology Congress", London, May 15-16, 2017

Nantes, May 15, 2017, 6:15 p.m. - OSE Immunotherapeutics SA (ISIN: FR0012127173; Mnémo: OSE) announced today that the Company presented in oral session significant data on Selective Anti-SIRPa OSE-172 (Effi-DEM), at the "2nd Annual Advances in Immuno-Oncology Congress" in London on May 15, 2017.

OSE-172 (Effi-DEM) is a humanized monoclonal antibody targeting SIRPa, expressed on suppressive myeloid cells (Myeloid Derived Suppressor Cells, MDSC and Tumor Associated Macrophages, TAM) as well as effector myeloid cells (anti-tumoral macrophages) involved in the Tumor Micro-Environment. As a selective antagonist of SIRPa, OSE-172 promotes recruitment of effector over suppressive myeloid cells, in particular it inhibits M2 pro-tumorigenic macrophage cells and increases M1 anti-tumorigenic cells, whilst increasing effector memory CD8 T-cells resurrecting key immune defenses.

OSE-172 does not bind to red blood cells and platelets constituting a potential hematologic safety advantage.

Moreover OSE-172 is very selective as it antagonizes SIRPa and does not bind human T-cells (no SIRP-γ binding, receptor of the SIRP family expressed on T-cells), allowing for a strong human effector T cell proliferation in parallel with a blockade of suppressive myeloid cells. This original mechanism of action provides reduction of tumor growth in various solid tumor models through a straight transformation in the Tumor Micro-Environment:

When used as monotherapy or combined with activators of the T-cell response, anti-PD-L1 (checkpoint inhibitor) and anti-41BB (costimulatory receptor), OSE-172 was very effective allowing effector macrophages and T-cells to work together with significant tumor shrinkage. In parallel with the transformation of suppressive into effector myeloid cells, Tumor Micro-Environment was also dramatically modified allowing intra-tumoral accumulation of cytolytic natural killer (NK) and of effector B cells. A particular interest is a significant decrease of peripheral regulatory T-cells (suppressive Tregs).

"Our myeloid checkpoint inhibitor OSE -172 demonstrates its strong impact on the Tumor Micro-Environment beyond myeloid cells, tackling cancer through a specific blockade of SIRPa," said Nicolas Poirier, Chief Scientific Officer of OSE Immunotherapeutics.

FOR MORE INFORMATION ON 2ND ANNUAL ADVANCES IN IMMUNO-ONCOLOGY CONGRESS

http://www.immunooncology-congress.com/

15-16 May 2017, London

Session: Discovery of Immuno-Oncology Therapies: Selective Anti-SIRPa: Next Generation Checkpoint Inhibitor Targeting Pro-Tumors And Suppressors Myeloid Cells

Nicolas Poirier, Ph.D., CSO, OSE Immunotherapeutics

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®, 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 2020 - 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 28 April 2017 under the number R.17-038, including the annual financial report for the fiscal year 2016, 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.