OSE Immunotherapeutics Presents New Data Strengthening the Rationale of Myeloid Checkpoint Inhibitor OSE-172 as an Immune Cancer Treatment

Company Intends to Enter Clinic with OSE-172 in Oncology by End of 2018

Data presented at 15th Annual "Discovery on Target" Conference

NANTES, France, October 2, 2017, 18:00 p.m. CET - **OSE Immunotherapeutics SA** (ISIN: FR0012127173; Mnémo: OSE) presented new ex vivo and preclinical data on its first-in-class checkpoint inhibitor OSE-172 targeting selectively SIRP-alpha, a target expressed on myeloid suppressive cells. The data were presented at the 15th Annual Discovery on Target Conference which took place September 25-29, 2017 in Boston, MA.

Key results from the studies indicated that OSE-172 significantly:

- Reversed in vivo tumor immuno-suppressive microenvironment and decreased tumor growth in a Triple Negative Breast Cancer (TNBC) model;
- Inhibited metastasis spread in a TNBC model;
- Synergized survival when combined with PD-1/ PD-L1 blockade in a HepatoCellular Carcinoma (HCC) model, reinforcing the rationale for combination treatment;
- Induced potent memory anti-tumor immune responses when combined;
- Reduced immunosuppressive myeloid cell function from human ovarian cancer ascites in an ex vivo model; and
- Bound selectively to SIRP-alpha but did not bind to SIRP-gamma, a human costimulatory receptor required for human T-cell responses.

"Myeloid suppressive cells are involved in the tumor microenvironment of various tumors impeding T-cytotoxic cells from being effective against tumor cells. Myeloid suppressive cells play a role in tumor growth, metastasis process and immune escape mechanisms", said Bernard Vanhove, COO and Head of R&D and International Scientific Collaborations at OSE Immunotherapeutics. *"We are very encouraged by the new OSE-172 human ex vivo and preclinical data, which support the development of this anti-SIRP-alpha antibody in monotherapy and in combination with PD-1/PD-L1 checkpoint inhibitors."*

Dominique Costantini, CEO of OSE Immunotherapeutics, added: *"We congratulate all the OSE team for these demonstrative data reinforcing the rationale for OSE-172, our first-in-class myeloid checkpoint inhibitor and we look forward to beginning clinical trials in oncology by the end of 2018."*

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, autoimmune diseases and transplantation. The company has several scientific and technological platforms: neoepitopes, agonist or antagonist monoclonal antibodies, ideally positioned to fight cancer and autoimmune diseases. Its first-in-class clinical portfolio offers a diversified risk profile.

In immuno-oncology:

- **Tedopi®**, 10 combined neo-epitopes to induce specific T activation in immuno-oncology – Phase 3 trial in advanced NSCLC; follow-up of patients included ongoing after temporary pause of new patient accrual end of June 2017.
  Phase 2 with Tedopi® in combination with an immune checkpoint inhibitor planned in advanced pancreatic cancer, in collaboration with GERCOR, a cooperative group of clinical research.
- **OSE-172** (Effi-DEM), new generation checkpoint inhibitor targeting myeloid cells via the SIRP-α receptor - In preclinical development for several cancer models. Clinical program planned end of 2018.
- **OSE-703** (Effi-3), cytotoxic monoclonal antibody against the alpha chain of IL-7R - Under a research collaboration with Memorial Sloan Kettering Cancer Center, New York.

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. Phase 2 planned end of 2018 in rheumatoid arthritis.
- **OSE-127** (Effi-7), interleukin receptor-7 antagonist - In preclinical development for inflammatory bowel diseases and other autoimmune diseases. Clinical phase planned end of 2018. 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.