OSE Immunotherapeutics Presents New Data on OSE-127 at the *American Association of Immunologists (AAI)* Annual Meeting

4 - 8 May 2018, Austin, Texas

- OSE-127 significantly decreases inflammation in colon biopsies from patients with inflammatory bowel diseases and enhances regulatory T-lymphocytes, the cells that fight inflammation.
- In patients with active mucosal lesions, the overexpression of interleukin-7 receptor (IL-7R, target of OSE-127) is significantly increased and is predictive for non-response to anti-TNFα treatment. Moreover, this non-response is strongly correlated to a mucosal defect in regulatory T-lymphocytes.

Nantes, France, May 7, 2018, - 8:00 a.m. CET – OSE Immunotherapeutics (ISIN: FR0012127173; Mnémo: OSE) presented new preclinical data* that further supports the potential of OSE-127 for the treatment of inflammatory bowel diseases, at the annual congress of the American Association of Immunologists (4-8 May 2018, Austin, Texax).

The results from colon biopsies of patients with ulcerative colitis confirm that OSE-127 antibody, IL-7Rα antagonist, significantly decreases the inflammation as measured by a reduced gamma interferon secretion level. In parallel, an increase of the score of regulatory T lymphoctyes (transcriptomic signature), the cells that help fighting inflammation, was demonstrated after treatment with OSE-127 antibody.

By specifically targeting IL-7R (predictive for non-response to inflammatory bowel disease treatments) and by enhancing in parallel regulatory T lymphocytes in the mucosa, OSE-127 offers an original clinical profile to be developed in invalidating chronic bowel diseases.

**Interleukin-7 receptor pathway controls human T cell homing to the gut and predicts response to anti-TNFα therapy in patients with inflammatory bowel disease*

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ABOUT OSE Immunotherapeutics

OSE Immunotherapeutics is a biotechnology company focused on the development of innovative immunotherapies for immune activation and regulation in the fields of immuno-oncology and autoimmune diseases. Neoepitopes innovation (Tedopi®) is today in Phase 3 in advanced lung cancers (NSCLC) after checkpoint inhibitors failure (anti PD-1 and anti PD-L1). A global license and collaboration agreement was signed in April 2018 with Boehringer Ingelheim to develop checkpoint inhibitor OSE-172 (anti-SIRPa monoclonal antibody), for the treatment of advanced

solid tumors. An option to license was exercised in July 2016 by Janssen Biotech to continue clinical development of FR104 (an anti CD28 mAb) in auto-immune diseases after positive phase 1 results. A 2-step license option was signed in 2016 with Servier Laboratories to develop OSE-127 (monoclonal antibody targeting the CD127 receptor, the alpha chain of the interleukin-7 receptor) to develop the product up to the completion of a phase 2 clinical trial planned in autoimmune bowel disease and Sjogren disease. 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.

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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 26 April 2018, including the annual financial report for the fiscal year 2017, 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.