OSE Immunotherapeutics to Present New Data on OSE-172 at American Association for Cancer Research Annual Meeting 2018

Chicago, April 14-18

OSE-172, SIRPa Antagonist,

- ***Prevents Metastasis Spread in Aggressive Cancer Models;***
- ***Decreases Tumor Growth and Suppressive Function of Tumor Myeloid Cells, MDSC and M2 Macrophages, in Various Cancers Models;***
- ***Potentiates Dendritic Cell Tumor Antigen Cross-Presentation Increasing T-Cell Specific Activation.***

Nantes, March 19, 2018, 18:00pm CET - OSE Immunotherapeutics SA (ISIN: FR0012127173; Mnémo: OSE) today announced that the Company will present ex-vivo and preclinical data in two poster presentations in the rapidly emerging field of myeloid/macrophage suppressive cells at the American Association for Cancer Research annual meeting being held on April 14-18, 2018 in Chicago.

The data being presented include results from human ex-vivo and preclinical studies of antagonist of SIRPa, OSE-172, the company's first-in-class checkpoint inhibitor targeting selectively the SIRPa receptor expressed on myeloid pro-tumor suppressive cells:

They have shown that selective anti-SIRPa:

- Reduced tumor growth and increased survival significantly in orthotopic hepatocellular carcinoma, mesothelioma and melanoma in monotherapy and in combination with immune checkpoints inhibitors;
- Reduced significantly metastatis development in a Triple Negative Breast Cancer model;
- Led to dramatic change in solid tumor microenvironment inducing significant increase of M1 inflammatory macrophages, activated T-cells and revealed higher dendritic cells and T-cells immune signature with reduced sign of exhaustion;
- Increased dendritic cell tumor-antigen specific presentation to T lymphocytes, leading to long-term anti-tumor memory immune responses.

About antagonist of SIRPa and cross presentation by Dendritic Cells (DCs)

The tumor microenvironment is a complex milieu. More frequently, the tumor and cell components interact to generate a highly immune suppressive environment that frustrates T-cell cytotoxicity and promotes tumor progression. Myeloid-derived suppressor cells (MDSCs) are a major component contributing to the immune suppressive environment, amplifying the immune suppressive activity of macrophages and dendritic cells with impaired cross-presentation of tumor antigens. Infiltrative DCs express elevated levels of SIRPa. Antagonist of SIRPa OSE-172 is able to reverse the suppressive activity and to reinitiate cross presentation of tumor antigens conducting to T-cell specific activation. Alterations in the antigen presentation pathway are implicated also in the primary resistance to checkpoint inhibition.

Details of the posters are as follows:

Poster: Poster 1684 / 9
Title: ***Selective SIRPa blockade potentiates dendritic cell antigen cross-presentation and triggers memory T-cell antitumor responses***
Authors: *Vanessa Gauttier[1], Sabrina Pengam[1], Justine Durand[2], Aurore Morello[1], Sophie Conchon[2], Bernard Vanhove[1], Nicolas Poirier[1]*
[1]OSE Immunotherapeutics, Nantes, France; [2]INSERM UMR1064, Nantes, France
Date : April 16, 2018
Time : 8:00 – 12:00
Place: Section 31

Poster: Poster 1753 / 18
Title: ***SIRPa inhibition monotherapy leads to dramatic change in solid tumor microenvironment and prevents metastasis development***
Authors: *Justine Durand[1], Vanessa Gauttier[2], Aurore Morello[2], Sabrina Pengam[2], Bernard Vanhove[2], Nicolas Poirier[2]*
[1]INSERM UMR1064, Nantes, France; [2]OSE Immunotherapeutics, Nantes, France
Date : April 16, 2018
Time: 8:00 – 12:00
Place: Section 33

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 a specific T lymphocyte activation. Phase III trial in advanced NSCLC: after temporary pause of new patient accrual end of June 2017, new recruitment strategy in December 2017, following the recommendation of the trial's Independent Data Monitoring Committee, to focus the trial on patients who failed a previous treatment with a PD-1/PD-L1 immune checkpoint inhibitor. In Q1 2018, after approvals from the competent authorities, resume of patient accrual in the US, in Europe, and initiation of the trial in Israel.
  Phase II 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**, 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**, 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.
- **OSE-127**, 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.

**Citi Research Equity*
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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.