OSE Immunotherapeutics Updates on Tedopi®, a Cancer Vaccine as Potential New Standard of Care in Non-Small Cell Lung Cancer After Failure to Immunotherapies

Nantes, France – October 20, 2022, 6:00 p.m. CET – OSE Immunotherapeutics SA (ISIN: FR0012127173; Mnemo: OSE) provides an update on Tedopi®, an immunotherapy activating tumor specific T-cells, developed in advanced or metastatic non-small cell lung cancer (NSCLC), ovarian cancer and pancreatic cancer. Authorizations for compassionate use* of Tedopi® in NSCLC have recently been granted by Health Agencies in Europe. Regulatory meetings are planned to validate the confirmatory Phase 3 clinical trial in NSCLC.

Compelling Phase 3 Clinical Data

Tedopi® is the first cancer vaccine to show clinically meaningful efficacy results associated with a better safety and quality of life profile in monotherapy versus active comparator (chemotherapy-based standard of care) post-immune checkpoint inhibitors (ICI) failure in advanced or metastatic NSCLC:

- Significant **overall survival** (primary endpoint) (p=0.017, HR=0.59) with 44.4% overall survival (OS) rate at 1 year with Tedopi® versus 27.5% for chemotherapy and a meaningful gain of median OS of 3.6 months (ESMO 2021);
- Improved **post-progression survival** benefit in the Tedopi® arm (7.7 months versus 4.6 months, p=0.004, HR=0.46) (ESMO 2021);
- Significant **delayed median time to worsening ECOG** performance status** with a difference of 5.3 months (p<0.01, HR=0.43) (ASCO 2022);
- Significant **better safety profile** with less severe (Grade 3-5) adverse events (11% with Tedopi® versus 35% with chemotherapy, p<0.05) (ESMO 2021);
- Significant **better Quality of Life** (Global health status: p=0.045; Role Functioning: p=0.025) (ASCO 2022) and **positive Net Treatment Benefit** (p=0.032) with Tedopi® compared to chemotherapy (ESMO 2022).

These positive clinical results in a clearly-defined target population for this first Phase 3 trial are based on a strong biological rationale: increased specific T-cell responses induced by Tedopi®'s innovative mechanism of action correlated to the overall survival in HLA-A2+ NSCLC patients. The direct activation of tumor specific T-cells by Tedopi® differs from ICI releasing the break of immune response.

Compassionate Use Authorizations in Europe - Regulatory Meeting with FDA Planned

The significant medical need for new therapeutic options in NSCLC patients post-ICI failure associated with promising efficacy, safety and quality of life data resulted in **authorizations for compassionate use** of Tedopi® from Health Agencies in Europe - in France, Italy and Spain - in third line post-chemotherapy and immunotherapy**. The medical need in this targeted population with high mortality previously led to an orphan drug designation by the FDA, while Tedopi® was recognized as a precision medicine in Europe for the treatment of HLA-A2 positive NSCLC patients.

OSE Immunotherapeutics is preparing a confirmatory Phase 3 pivotal trial to support the regulatory registration of Tedopi® as a new standard of care in advanced or metastatic NSCLC in secondary resistance post-ICI failure***. **The Company has filed a formal request for a "Type C meeting" with the US Food and Drug Administration (FDA)** to validate the new study protocol in NSCLC metastatic patients in second line after ICI-failure. OSE Immunotherapeutics has already received a "Scientific advice" from the European Medicines Agency (EMA) on this targeted population.

Nicolas Poirier, Chief Executive Officer of OSE Immunotherapeutics, comments: *"Despite progress made with immune checkpoint inhibitor-based therapies, today only a minority of NSCLC patients achieve long-term survival post-chemotherapy and immunotherapy. No treatment has yet shown efficacy and safety results in randomized controlled studies post-ICI failure. Tedopi® is the first treatment option to address this high unmet medical need in advanced or metastatic NSCLC. Considering HLA-A2-positive patients represent about 45% of all NSCLC patients, given the large use of anti-PD(L)1 and based on ICI failure data, the targeted population for Tedopi® in second line could be estimated up to 100,000 patients per year in 7 major markets across the US, Europe, China and Japan.*

The strong medical need in the identified targeted population underlined by recent compassionate use authorization along with the clinically meaningful study results confirm that Tedopi® can be positioned as a potential new standard of care in advanced or metastatic NSCLC in secondary resistance post-ICI failure.

OSE Immunotherapeutics is committed to make this innovative therapeutic option available to improve lives of patients who clearly need access to much improved treatment options.

In addition to the positive results for Tedopi® as a monotherapy in NSCLC, we are optimistic about this novel cancer vaccine's strong potential clinical value when used in combination, in a range of different indications where a large number of patients may benefit from this innovative treatment."

Given the potential of Tedopi®, OSE Immunotherapeutics has further **strengthened the global intellectual property for Tedopi® until 2038**. This has been achieved through the grant of patents in 2022 for Europe, the US, China and Japan. These patents protect the innovative emulsion manufacturing process validated for the ready-to-use peptides combination.

On-going Combination Studies – A Further Source of Clinical Value

Tedopi® is currently being evaluated in phase 2 combination trials in three indications:

- *NSCLC*: Tedopi® plus docetaxel or Tedopi® plus nivolumab or docetaxel alone, in second-line treatment in metastatic NSCLC, progressing after first-line chemo-immunotherapy (CombiTED study: NCT04884282, 105 patients planned, sponsor: FoRT);
- *Pancreatic cancer*: Tedopi® plus FOLFIRI vs FOLFIRI as maintenance treatment in patients with advanced or metastatic pancreatic adenocarcinoma with no progression after 8 cycles of FOLFIRINOX (TEDOPaM study: NCT03806309, 106 patients planned, sponsor: GERCOR);
- *Ovarian cancer*: Tedopi® alone or in combination with pembrolizumab vs best supportive care as maintenance treatment in platinum-sensitive recurrent ovarian cancer patients (TEDOVA study: NCT04713514, 180 patients planned, sponsor: ARCAGY-GINECO).

* Compassionate use is a treatment option that allows for the use of an unauthorized medicine. Under strict conditions, products in development can be made available to nominative patients who have a disease with no satisfactory authorized therapies and who cannot enter clinical trials (https://www.ema.europa.eu/en/human-regulatory/research-development/compassionate-use).

** The ECOG score is a performance scale used to quantify the general health condition of a patient. It is subdivided into 5 grades from 0 to 5, ranging from fully active (0) to fully disabled, then to death (5).

*** Secondary resistance: after at least 12 weeks of ICI treatment in monotherapy (Task force SITC 2020 - Kluger H et al 2020).

ABOUT OSE Immunotherapeutics

OSE Immunotherapeutics is a biotech company dedicated to developing first-in-class assets in immuno-oncology and immuno-inflammation.
The Company's current well-balanced first-in-class clinical pipeline includes:

- **Tedopi®** (immunotherapy activating tumor specific T-cells, off-the-shelf, neoepitope-based): this cancer vaccine is the Company's most advanced product; positive results from the Phase 3 trial (Atalante 1) in Non-Small Cell Lung Cancer patients after checkpoint inhibitor failure. Other Phase 2 trials, sponsored by clinical oncology groups, of Tedopi® in combination are ongoing in solid tumors.
- **OSE-279** (anti-PD1): advanced preclinical stage.
- **OSE-127/S95011** (humanized monoclonal antibody antagonist of IL-7 receptor) developed in partnership with Servier; ongoing Phase 2 in ulcerative colitis (sponsor OSE Immunotherapeutics) and ongoing Phase 2a in Sjögren's syndrome (sponsor Servier).
- **VEL-101/FR104** (anti-CD28 monoclonal antibody): developed in partnership with Veloxis Pharmaceuticals, Inc. in transplantation; ongoing Phase 1/2 in renal transplant (sponsor Nantes University Hospital); Phase 1 ongoing in the US (sponsor Veloxis Pharmaceuticals, Inc.).
- **BI 765063** (anti-SIRPα monoclonal antibody on CD47/SIRPα pathway): developed in partnership with Boehringer Ingelheim in advanced solid tumors; positive Phase 1 dose escalation results of BI 765063 in monotherapy and in combination, in particular with anti-PD-1 antibody ezabenlimab; BI sponsored international Phase 1b ongoing clinical trial in combination with ezabenlimab alone or with other drugs in patients with recurrent/metastatic head and neck squamous cell carcinoma (HNSCC) and hepatocellular carcinoma (HCC).

OSE Immunotherapeutics expects to generate further significant value from its two proprietary drug discovery platforms, which are central to its ambitious goal to deliver next-generation first-in-class immunotherapeutics:

- **BiCKI® platform** focused on immuno-oncology (IO) is a bispecific fusion protein platform built on the key backbone component of anti-PD1 combined with a new immunotherapy target to increase anti-tumor efficacy. The most advanced BiCKI® candidate is targeting anti-PD1xIL-7.
- **Myeloid platform** focused on optimizing the therapeutic potential of myeloid cells in IO and immuno-inflammation (I&I). **OSE-230** (ChemR23 agonist mAb) is the most advanced candidate generated by the platform, with the potential to resolve chronic inflammation by driving affected tissues to tissue integrity.

Additional information about OSE Immunotherapeutics assets is available on the Company's website: www.ose-immuno.com
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