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Oncolytics Biotech(R) Announces Spanish Regulatory Approval of AWARE-1 Window of Opportunity Study in Breast Cancer

Combination study with immune checkpoint inhibitor Tecentriq® to corroborate key biomarker and checkpoint inhibitor data in support of a registration pathway

CALGARY, AB and SAN DIEGO, CA / ACCESSWIRE / February 11, 2019/ Oncolytics Biotech® Inc. (NASDAQ: ONCY) (TSX: ONC), currently developing pelareorep, an intravenously delivered immuno-oncolytic virus, today announced that the Spanish Agency for Medicine and Health Products has granted final approval for the forthcoming AWARE-1 window of opportunity study in breast cancer. This study, which represents the first application of Oncolytics' master clinical supply agreement with Roche for the combination of pelareorep with a leading immune checkpoint inhibitor atezolizumab (Tecentriq®), is a precursor to Oncolytics' previously announced phase 3 breast cancer study and will add to the company's growing critical mass of biomarker data. The final study design and protocol will be announced when the first patient is enrolled in the near future.

"This study should corroborate recently identified biomarker data and confirm whether the virus' ability to promote tumor inflammation can be enhanced by the addition of checkpoint blockade," said Matt Coffey, President and CEO of Oncolytics Biotech. "This information not only increases the likelihood of success in a registration study but could reduce both timelines and costs. The biomarker data should provide the information required for investigators to be able to quickly differentiate between patients that are responding, and patients that are better served by another treatment."

Under the supply agreement, Roche will supply Tecentriq for the study with both parties having access to the clinical data. Initial biomarker and safety data from the first cohort of patients should be available by mid-2019.

The study, facilitated by SOLTI, will be coordinated by Dr. Aleix Prat, Head of Medical Oncology at the Hospital Clínic of Barcelona, Associate Professor of the University of Barcelona and the Head of the Translational Genomics and Targeted Therapeutics in Solid Tumors Group at August Pi i Sunyer Biomedical Research Institute (IDIBAPS) and member of Oncolytics' Scientific Advisory Board. SOLTI has a network of more than 300 professionals, mostly medical oncologists, in over 80 hospitals in Spain, Portugal, France and Italy.

About Breast Cancer

Breast cancer is the most common cancer in women worldwide, with over two million new cases diagnosed in 2018, representing about 25 percent of all cancers in women. Incidence rates vary widely across the world, from 27 per 100,000 in Middle Africa and Eastern Asia to 85 per 100,000 in Northern America. It is the fifth most common cause of death from cancer in women globally, with an estimated 522,000 deaths.

Breast cancer starts when cells in the breast begin to grow out of control. These cells usually form a tumor that can often be seen on an x-ray or felt as a lump. The malignant tumor (cancer) is getting worse when the cells grow into (invade) surrounding tissues or spread (metastasize) to distant areas of the body.

Genomic research has led to a better understanding of how genes and proteins classify breast cancer as hormone receptor positive, human epidermal growth factor receptor 2 negative (HR+/HER2-), hormone receptor positive, human epidermal growth factor receptor 2 positive (HR+/HER2+), hormone receptor negative, human epidermal growth factor receptor 2 positive (HR-/HER2+) or triple negative breast cancer (TNBC).

About Pelareorep

Pelareorep is a non-pathogenic, proprietary isolate of the unmodified reovirus: a first-in-class intravenously delivered immuno-oncolytic virus for the treatment of solid tumors and hematological malignancies. The compound induces selective tumor lysis and promotes an inflamed tumor phenotype through innate and adaptive immune responses to treat a variety of cancers and has been demonstrated to be able to escape neutralizing antibodies found in patients.

About SOLTI

SOLTI is a non-profit association with more than 20 years of experience in conducting innovative clinical and translational research to address unmet medical needs in breast cancer that answer questions of major scientific interest and relevance in the field of oncology. SOLTI has a network of more than 300 professionals, mostly medical oncologists, distributed in over 80 hospitals in Spain, Portugal, France and Italy. For more information, please visit www.gruposolti.org.

About Oncolytics Biotech Inc.

Oncolytics is a biotechnology company developing pelareorep, an intravenously delivered immuno-oncolytic virus. The compound induces selective tumor lysis and promotes an inflamed tumor phenotype - turning "cold" tumors "hot" - through innate and adaptive immune responses to treat a variety of cancers. Pelareorep has demonstrated synergies with immune checkpoint inhibitors and may also be synergistic with other approved immuno-oncology agents. Oncolytics is currently conducting and planning additional studies in combination with checkpoint inhibitors and targeted therapies in solid and hematological malignancies, as it prepares for a phase 3 registration study in metastatic breast cancer. For further information, please visit: www.oncolyticsbiotech.com.

This press release contains forward-looking statements, within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended and forward-looking information under applicable Canadian securities laws (such

forward-looking statements and forward-looking information are collectively referred to herein as "forward-looking statements"). Forward-looking statements, including the Company's belief as to the potential and mode of action of REOLYSIN, also known as pelareorep, as a cancer therapeutic; and other statements related to anticipated developments in the Company's business and technologies involve known and unknown risks and uncertainties, which could cause the Company's actual results to differ materially from those in the forward-looking statements. Such risks and uncertainties include, among others, the availability of funds and resources to pursue research and development projects, the efficacy of pelareorep as a cancer treatment, the success and timely completion of clinical studies and trials, the Company's ability to successfully commercialize pelareorep, uncertainties related to the research and development of pharmaceuticals, uncertainties related to the regulatory process and general changes to the economic environment. Investors should consult the Company's quarterly and annual filings with the Canadian and U.S. securities commissions for additional information on risks and uncertainties relating to the forward-looking statements. Investors are cautioned against placing undue reliance on forward-looking statements. The Company does not undertake to update these forward-looking statements, except as required by applicable laws.

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