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Oncolytics Biotech® Announces a Publication Demonstrating That Intravenously Delivered Oncolytic Viruses Effectively Target Tumors Even in the Presence of Neutralizing Antibodies

CALGARY, Alberta and SAN DIEGO, Oct. 02, 2018 (GLOBE NEWSWIRE) -- Oncolytics Biotech® Inc. (NASDAQ: ONCY) (TSX: ONC), currently developing pelareorep, an intravenously delivered immuno-oncolytic virus turning cold tumors hot, today announced publication of important research in the peer-reviewed journal *Cancer Immunology Research*. The research showed that pelareorep, a systemically delivered oncolytic reovirus, can destroy tumor cells via a monocyte-mediated process even after the virions have been exposed to antibodies designed to neutralize the reovirus.

"For some time there have been two schools of thought regarding oncolytic viruses: those that believe intratumoral delivery is necessary for treatment due to potential neutralization of the virus in the bloodstream and those that believe intravenous delivery is also an efficacious means of treatment with a virus," said Dr. Matt Coffey, President and Chief Executive Officer of Oncolytics Biotech. "This key publication validates the systemic delivery of oncolytic viruses by proving that oncolytic viruses delivered intravenously can be effective even in the presence of neutralizing antibodies. It sends a message to everyone in the oncology community that systemic delivery of this drug class is not only viable, but may increase its effectiveness in the presence of neutralizing antibodies."

The study was conducted by Dr. Elizabeth Ilett and Dr. Rob Berkeley from the University of Leeds and Professor Alan Melcher from The Institute of Cancer Research, London. Oncolytics Biotech donated pelareorep for research.

In the study, researchers treated pelareorep with neutralizing antibodies derived from patients undergoing virus therapy and added the antibody-coated virions to melanoma cells, which resulted in no killing of melanoma cells. However, addition of monocytes to the culture led to reactivation of the neutralized virus particles, allowing them to effectively target and destroy the melanoma cells. Three different viruses that are currently being evaluated in clinical trials were tested in the study, with neutralized forms of two of the three viruses being reactivated by monocytes, a finding with immediate clinical significance.

"This discovery suggests that cancer treatments using systemic virus therapy could be significantly expanded in the future, as we previously, but erroneously, believed that follow-up doses were useless once the body had produced antibodies against the virus," said Dr. Ilett.

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.

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. Oncolytics' clinical development program emphasizes three pillars: chemotherapy combinations to trigger selective tumor lysis and immuno-therapy and immune modulator (IMiD) combinations to produce innate and adaptive immune responses. Oncolytics is currently conducting and planning additional studies in combination with checkpoint inhibitors and targeted and IMiD 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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