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Oncolytics Biotech® Inc. Collaborators Present Initial Results from REO 019 Study in Multiple Myeloma Combining REOLYSIN®, Bortezomib and Dexamethasone at the ASH Annual Meeting

-- Preliminary data suggest evidence of activity and that the treatment combination was well tolerated --

CALGARY, Dec. 6, 2016 /PRNewswire/ - Oncolytics Biotech® Inc. ("Oncolytics" or the "Company") (TSX:ONC) (OTCQX:ONCYF) today announced that Dr. Kevin Kelly and colleagues made a poster presentation at the 58th American Society of Hematology ("ASH") Annual Meeting. The poster presentation, titled "Oncolytic Reovirus Immune Priming: A Phase Ib Study of REOLYSIN® with Bortezomib and Dexamethasone in Patients with Relapsed/Refractory Multiple Myeloma," provides initial findings from the Company's REO 019 Phase Ib trial. The ASH Annual Meeting runs from December 3rd to 6th in San Diego, CA.

The study is a two-stage open-label Phase Ib trial of adult patients with relapsed or refractory multiple myeloma following at least one line of therapy. This study was designed to evaluate tolerability, to confirm that the addition of REOLYSIN® to bortezomib increases endoplasmic reticulum stress and death of myeloma cells (as shown in preclinical models) and to document pharmacodynamic effects as part of the characterization of the mechanism(s) of action of REOLYSIN® in multiple myeloma. Kevin Kelly, M.D., Ph.D. of the Keck School of Medicine of the University of Southern California (USC), is the principal investigator.

"The combination of REOLYSIN®, bortezomib and dexamethasone was well-tolerated in these heavily pre-treated patients, even in those who had been previously exposed to bortezomib," said Dr. Kevin Kelly. "Preliminary evidence of activity of this combination was documented. It was also shown that the combination therapy induced the apoptosis of myeloma cells and stimulated the immune system, highlighted by improved cytotoxic T cell infiltration and activation of checkpoint inhibitors (IDO, PD-L1) in the tumor."

The dose escalation study tested three doses ranging from 3 to 9×10^{10} TCID₅₀ on days 1, 2, 8, 9, 15 and 16, with 40 mg dexamethasone and 1.5 mg/m² bortezomib on days 1, 8, and 15. Cycles were repeated every 28 days. A maximum tolerated dose was not defined

because there were no dose-limiting toxicities in the first two cohorts. Cohort 3 is still enrolling patients. The combination was well tolerated and most treatment emergent toxicities were transient and easily managed with supportive care. The most common treatment related toxicities were grade 1 diarrhea, grade 1 fatigue, grade 1 flu-like symptoms and grade 1 headache.

Three patients completed 1 cycle of treatment only, 2 completed 3 cycles, 1 completed 4 cycles and 1 completed 7 cycles. Two patients remain on protocol (1 has completed 3 cycles (Cohort 3) and the other 7 cycles (Cohort 2)). Six patients were evaluable for response, 4 patients had stable disease lasting at least 1 cycle, whereas 3 patients had progressive disease at the end of cycle 1.

"It is intriguing that this combination therapy with REOLYSIN[®] induced an immune response with mainly grade 1 level toxicity, which is consistent with what we have observed in studies with other REOLYSIN[®] combinations in solid tumors," said Dr. Matt Coffey, Interim President and CEO of Oncolytics Biotech. "These data build on what we have observed in previous studies in both multiple myeloma and solid tumours, and further investigation is needed to evaluate if the immune modulatory and anti-tumor activity of REOLYSIN[®] can provide a therapeutic opportunity to patients with hematological malignancies when combined with other targeted treatments including immunotherapies."

A copy of the poster will be available on the Oncolytics website at:
<http://www.oncolyticsbiotech.com/for-investors/presentations>.

About Multiple Myeloma

Multiple Myeloma is a cancer of the plasma cells and the second most common hematological malignancy. The American Cancer Society estimates there will be 30,330 new cases diagnosed in the United States and 12,650 deaths from the disease in 2016.

About Oncolytics Biotech Inc.

Oncolytics is a Calgary-based biotechnology company focused on the development of oncolytic viruses as potential cancer therapeutics. Oncolytics' clinical program includes a variety of later-stage, randomized human trials in various indications using REOLYSIN[®], its proprietary formulation of the human reovirus. For further information about Oncolytics, please visit: www.oncolyticsbiotech.com.

This press release contains forward-looking statements, within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements, including the Company's expectations related to the Phase 1b clinical trial in multiple myeloma, future trials in this indication, and the Company's belief as to the potential of REOLYSIN[®] as a cancer therapeutic, 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 REOLYSIN[®] as a cancer treatment, the tolerability of REOLYSIN[®] outside a controlled test, the success and timely completion of clinical studies and trials, the Company's ability to successfully commercialize REOLYSIN[®], uncertainties related to the research, development and manufacturing of pharmaceuticals,

changes in technology, general changes to the economic environment and uncertainties related to the regulatory process. 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 should consider statements that include the words "believes", "expects", "anticipates", "intends", "estimates", "plans", "projects", "should", or other expressions that are predictions of or indicate future events or trends, to be uncertain and forward-looking. 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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