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Oncolytics Biotech® Announces Positive Clinical Results Against Glioblastoma Multiforme at the 2020 Society of Neuro-Oncology Annual Meeting

Pelareorep delivers efficacy, safety, and tolerability in difficult-to-treat GBM

SAN DIEGO, Calif. and CALGARY, Alberta, Nov. 19, 2020 /CNW/ -- Oncolytics Biotech® Inc. (NASDAQ: ONCY) (TSX: ONC) today announced positive results from ReoGlio, an investigator-sponsored, phase 1b trial evaluating the combination of pelareorep and granulocyte-macrophage colony-stimulating factor (GM-CSF) alongside standard chemoradiotherapy and adjuvant temozolomide for the treatment of glioblastoma multiforme (GBM). The results, which were featured in a podium presentation at the 2020 Society of Neuro-Oncology Annual Meeting, show a compelling signal of efficacy and demonstrate the safety and tolerability of the pelareorep-based combination therapy in newly diagnosed GBM patients.

"The ReoGlio trial results add to a robust set of clinical data supporting the safety, tolerability, and efficacy of pelareorep in a broad range of indications," said Thomas Heineman, M.D., Ph.D., Global Head of Clinical Development and Operations at Oncolytics. "The median progression-free survival (PFS) of approximately eight months is encouraging in this challenging indication, particularly considering the improved median PFS correlated with the dose of pelareorep administered. Together, these results drive momentum to develop pelareorep across a spectrum of cancer indications."

The podium presentation, *Pelareorep and granulocyte-macrophage colony-stimulating factor (GM-CSF) with standard chemoradiotherapy/adjuvant temozolomide for glioblastoma multiforme (GBM) patients: ReoGlio phase I trial results,* was given by Susan Short, M.R.C.P., Ph.D., Professor of Clinical Oncology and Neuro-Oncology at the University of Leeds. Key data and conclusions from the presentation include:

- Evaluable patients treated at pelareorep dose level-2 ($3x10^{10}$ $TCID_{50}$) had an estimated median PFS of 9.4 months (n=6; 95% CI: 4.2-10.6)
- Evaluable patients treated at pelareorep dose level-1 ($1x10^{10}$ $TCID_{50}$) had an estimated median PFS of 6.1 months (n=6; 95% CI: 4.9-9.2)
- The estimated median PFS of all evaluable patients, regardless of pelareorep dose level, was 7.8 months (n=12; 95% CI: 4.9-9.7)
- Pelareorep, in addition to GM-CSF, standard chemoradiotherapy, and adjuvant temozolomide, was safe and well-tolerated

Oncolytics remains focused on the clinical advancement of pelareorep and will continue evaluating new commercial opportunities for pelareorep, while prioritizing the current programs and achieving the expected milestones for those in breast, gastrointestinal, and hematological malignancies. Oncolytics thanks the University of Leeds, Cancer Research UK, and The Brain Tumor Charity for designing, managing, and funding the ReoGlio trial.

About ReoGlio

The ReoGlio trial was an investigator-sponsored phase 1b, open-label trial evaluating the combination of pelareorep and GM-CSF, alongside standard chemoradiotherapy and adjuvant temozolomide, for the treatment of newly diagnosed GBM. Fifteen patients were treated in the trial, twelve of which were evaluable for efficacy analyses. The primary objective of the study was to determine the maximum tolerated dose of pelareorep and GM-CSF with standard chemoradiotherapy. Secondary objectives were to gain a preliminary assessment of the activity of the pelareorep-GM-CSF combination and to assess treatment compliance. The trial was designed and managed by the University of Leeds and funded through grants provided by Cancer Research UK and The Brain Tumor Charity.

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 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 pelareorep as a cancer therapeutic; the safety and tolerability of pelareorep-based combination therapy in newly diagnosed GBM patients; the Company's focus and strategies; the Company's plans to pursue future registrational studies; the Company's evaluation of new commercial opportunities for pelareorep; 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. In particular, we may be impacted by business interruptions resulting from COVID-19 coronavirus, including operating, manufacturing supply chain, clinical trial and project development delays and disruptions, labour shortages, travel and shipping disruption and shutdowns (including as a result of government regulation and prevention measures). It is unknown whether and how the Company may be affected if the COVID-19 pandemic persists for an extended period of time. We may incur expenses or delays relating to such events outside of our control, which could have a material adverse impact on our business, operating results and financial condition. 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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