

June 4, 2018



Oncolytics Biotech® Announces Poster Presentation Demonstrating the Ability of REOLYSIN® to Promote and Predict Response to Checkpoint Inhibitors at ASCO 2018 Annual Meeting

CALGARY, Alberta and SAN DIEGO, June 04, 2018 (GLOBE NEWSWIRE) -- Oncolytics Biotech® Inc. (TSX:ONC) (NASDAQ:ONCY), currently developing REOLYSIN® (pelareorep), an intravenously delivered immuno-oncolytic virus turning cold tumors hot, today announced a key poster presentation at the American Society of Clinical Oncology (ASCO) 2018 Annual Meeting. The meeting takes place from June 1 - 5, 2018 at McCormick Place, Chicago, IL.

“These results demonstrate that pelareorep promotes the expression of gene signatures predictive of a response to immunotherapy in breast cancer and hepatocellular carcinoma,” said Matt Coffey, President and CEO of Oncolytics Biotech. “The tumor inflammation promoting effects in breast cancer models provide a compelling explanation for the significant overall survival benefit in hormone receptor positive metastatic breast cancer patients in our phase 2, IND 213, study and we believe this will continue to drive interest in our breast cancer program.”

Highlights of the poster include:

- Pelareorep promotes expression of gene signatures that are predictive of response to checkpoint inhibitors in select cell lines
- HCC - hepatocellular carcinoma
- HR+ BC - hormone receptor positive breast cancer
- Pronounced tumor inflammatory effects of pelareorep in HR+ BC cells may explain the prominent increase in overall survival in a previous phase 2 randomized clinical study in HR+ mBC patients treated with pelareorep and may render this large breast cancer population susceptible to conventional immunotherapy regimes
- Results warrant further investigation of pelareorep in combination with checkpoint inhibitors

Presenter & Lead

Author: Grey A. Wilkinson PhD, Oncolytics Scientist, Translational Medicine

Presentation Title: Pelareorep to promote the expression of a IFN-gamma-related gene signature
Session Title: Developmental Therapeutics—Immunotherapy
Location: McCormick Place: Hall A
Abstract number: 3089
Poster Board #: 303
Date/Time: 6/4/2018; 8:00 AM-11:30 AM

The complete poster can be found online on the company website at <https://www.oncolyticsbiotech.com/technology/posters-publications>.

About REOLYSIN/Pelareorep

REOLYSIN, also known as 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 REOLYSIN[®], also known as 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 planning its first registration study in metastatic breast cancer, as well as studies in combination with checkpoint inhibitors and targeted and IMiD therapies in solid and hematological malignancies. 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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