

September 20, 2021



# **Oncolytics Biotech® Announces Preclinical Data Demonstrating the Synergistic Immunotherapeutic Effects of Pelareorep Combined with Radiotherapy**

**Combination treatment with pelareorep and radiotherapy promoted the tumor infiltration of anti-cancer T cells and prolonged survival in a murine cancer model**

**Increased infiltration of anti-cancer T cells was observed both in tumors exposed to local treatment with radiation and pelareorep and in tumors located away from the treatment site**

SAN DIEGO and CALGARY, AB, Sept. 20, 2021 /CNW/ -- Oncolytics Biotech® Inc. (NASDAQ: ONCY) (TSX: ONC) today announced preclinical data demonstrating the synergistic immunotherapeutic effects of pelareorep combined with radiotherapy in a murine cancer model. The data were featured in a poster presentation at [The International Conference on Immunotherapy Radiotherapy Combinations](#), which took place in Paris, France from September 14 – 17, 2021.



Preclinical studies presented in the poster evaluated various treatment combinations of pelareorep, ionizing radiation (radiotherapy), and anti-PD-1 therapy in mice with two bilateral tumors, each located subcutaneously (under the skin) on a different side of the body. Radiotherapy and/or pelareorep treatment was delivered locally to one tumor (denoted the primary tumor), while the second tumor (denoted the abscopal tumor) was not directly exposed to either therapy. Anti-PD-1 therapy was delivered systemically.

Results showed that in primary tumors, pelareorep monotherapy led to a numerical increase in the number of infiltrating anti-cancer CD8+ T cells, which reached statistical significance when combined with radiotherapy (a 15-fold increase compared to control). In abscopal

tumors, both pelareorep monotherapy and pelareorep-radiation combination therapy led to a statistically significant increase in infiltrating anti-cancer CD8+ T cells. This effect was not seen with single-agent radiotherapy in either the primary or the abscopal tumors.

Local delivery of radiotherapy alone and the pelareorep-radiotherapy combination into primary tumors significantly improved survival compared to untreated controls. Compared to single-agent radiotherapy, the pelareorep-radiotherapy combination led to a numerical increase in survival, which reached statistical significance when anti-PD-1 therapy was added to the treatment regimen.

"The observed increases in survival and in the number of anti-cancer immune cells within both primary and abscopal tumors following treatment is indicative of the synergistic immunotherapeutic effects of the pelareorep-radiotherapy combination," said Thomas Heineman, M.D., Ph.D., Global Head of Clinical Development and Operations at Oncolytics. "This is a compelling finding that has the potential to be broadly applicable across multiple cancer indications and warrants further study. Together with prior clinical and preclinical data, these results also highlight pelareorep's potential as an enabling technology to enhance the efficacy of a wide range of therapies."

A copy of the poster titled, "*Combination treatment with radiotherapy and oncolytic reovirus generates CD8+ T cell infiltration in primary and abscopal tumours in an organoid model of basal-like breast cancer*," can be found on the *Posters & Publications* page of Oncolytics' website ([LINK](#)).

### **About Oncolytics Biotech Inc.**

Oncolytics is a biotechnology company developing pelareorep, an intravenously delivered immunotherapeutic agent. This compound induces anti-cancer immune responses 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 clinical trials evaluating pelareorep in combination with checkpoint inhibitors and targeted therapies in solid and hematological malignancies, as it advances towards a registration study in metastatic breast cancer. For further information, please visit: [www.oncolyticsbiotech.com](http://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 contained in this press release include statements regarding Oncolytics' belief as to the mode of action and potential and benefits of pelareorep as a cancer therapeutic; Oncolytics' expectations as to the purpose, design, outcomes and benefits of its current or pending clinical trials involving pelareorep; our goals, objectives and strategies; and other statements related to anticipated developments in Oncolytics' business and technologies. In any forward-looking statement in which Oncolytics expresses an expectation or belief as to future results, such expectations or beliefs are expressed in good faith and are believed to have a reasonable basis, but there can be no assurance that the*

*statement or expectation or belief will be achieved. Such forward-looking statements involve known and unknown risks and uncertainties, which could cause Oncolytics' 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, Oncolytics' 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 Oncolytics 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 Oncolytics' 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 any obligation to update these forward-looking statements, except as required by applicable laws.*

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