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DelMar Announces Further Validation of the Mechanism of Action of VAL-083

VANCOUVER, British Columbia and MENLO PARK, Calif., Oct. 10, 2018 /PRNewswire/ -- DelMar Pharmaceuticals, Inc. (NASDAQ: DMPI) ("DelMar" or the "Company"), a biopharmaceutical company focused on the development and commercialization of new cancer therapies, today announced the publication of a peer-reviewed scientific paper on the mechanism of action for VAL-083, the Company's product candidate, in *Cell Death and Disease* by Nature Publishing Group.

The paper, entitled "Dianhydrogalactitol induces replication-dependent DNA damage in tumor cells preferentially resolved by homologous recombination," details the mechanism of action for VAL-083 (dianhydrogalactitol) involving S-phase dependent DNA double stand breaks (DSB) and homologous recombination (HR) DNA repair. This peer-reviewed publication further validates VAL-083's unique anti-tumor mechanism and differentiates it from the standard-of-care. In addition, this research supports the use of VAL-083 in combination with drugs targeting cancer cells in S-phase, including topoisomerase inhibitors. Furthermore, the results suggest VAL-083 as a potential treatment option for tumors with impaired HR DNA repair, such as high-grade ovarian carcinomas, or tumors treated with PARP inhibitors.

The research was conducted in the laboratory of Dr. Mads Daugaard at the Vancouver Prostate Center, one of the world's most respected cancer research institutes. Using non-small cell lung cancer (NSCLC) as a model system for cancer cells, the research group showed that VAL-083-induced cytotoxicity materialized when the cells entered the S-phase of the cell cycle. The resulting DNA damage subsequently triggered irreversible cell cycle arrest and ultimately cancer cell death. Further analysis revealed that cancer cells attempted to use their HR DNA repair pathway to reverse VAL-083-induced DNA damage and cancer cells with an impaired HR repair pathway were therefore particularly sensitive to VAL-083.

DelMar is currently studying VAL-083 in two collaborator-supported, biomarker driven, Phase 2 clinical trials for MGMT-unmethylated glioblastoma multiforme (GBM). As demonstrated in prior publications, the DNA repair protein MGMT is overexpressed in over 60% of GBM patients which causes resistance to the standard-of-care (temozolomide). In contrast to temozolomide, which targets the O6-position of guanine vulnerable to MGMT repair, VAL-083 targets the N7-position of guanine. This distinct mechanism-of-action differentiates VAL-083 from temozolomide and nitrosoureas, allowing VAL-083 to overcome MGMT-related chemoresistance, thereby addressing a significant unmet medical need.

About VAL-083

VAL-083 (dianhydrogalactitol) is a "first-in-class," bifunctional DNA-targeting agent that introduces interstrand DNA cross-links at the N7-position of guanine leading to DNA double-strand breaks and cancer cell death. VAL-083 has demonstrated clinical activity against a range of cancers including GBM and ovarian cancer in historical clinical trials sponsored by the U.S. National Cancer Institute (NCI). DelMar has demonstrated that VAL-083's anti-tumor activity is unaffected by common mechanisms of chemoresistance, including MGMT, in cancer cell models and animal studies. Further details regarding these studies can be found at:

http://www.delmarpharma.com/scientific-publications.html.

VAL-083 has been granted orphan drug designations by the U.S. FDA Office of Orphan Products for the treatment of glioma, medulloblastoma and ovarian cancer, and in Europe for the treatment of malignant gliomas. VAL-083 has been granted fast-track status for the treatment of recurrent GBM by the US FDA.

About DelMar Pharmaceuticals, Inc.

DelMar Pharmaceuticals is focused on the development and commercialization of new therapies for cancer patients who have limited, or no treatment options. By developing an understanding of tumor biology and mechanisms of treatment resistance, the Company identifies biomarkers to personalize new therapies in indications where patients are failing, or have become intolerable to, modern targeted, or biologic treatments.

The Company's current pipeline centers around VAL-083, a "first-in-class," small-molecule chemotherapeutic with a novel mechanism of action that has demonstrated clinical activity against a range of cancers including central nervous system, ovarian and other solid tumors (e.g. NSCLC, bladder cancer, head & neck) in U.S. clinical trials sponsored by the NCI. Based on DelMar's internal research programs, and these prior NCI-sponsored clinical studies, the Company is conducting clinical trials to support the development and commercialization of VAL-083 across multiple oncology indications to solve significant unmet medical needs.

DelMar is currently studying VAL-083 in two collaborator-supported, biomarker driven, Phase 2 clinical trials for MGMT-unmethylated GBM. Overcoming MGMT-mediated resistance represents a significant unmet medical need in the treatment of GBM. DelMar also recently announced the allowance of a separate IND for VAL-083 as a potential treatment for platinum-resistant ovarian cancer.

Further information on DelMar's clinical trials can be found on clinicaltrials.gov:

https://www.clinicaltrials.gov/ct2/results?cond=&term=val-083&cntry1=&state1=&recrs

For further information, please visit http://delmarpharma.com/; or contact DelMar Pharmaceuticals Investor Relations: ir@delmarpharma.com / (604) 629-5989.

Connect with the Company on Twitter, LinkedIn, Facebook, and Google+.

Safe Harbor Statement

Any statements contained in this press release that do not describe historical facts may constitute forward-looking statements as that term is defined in the Private Securities Litigation Reform Act of 1995. Any forward-looking statements contained herein are based on current expectations but are subject to a number of risks and uncertainties. The factors that could cause actual future results to differ materially from current expectations include, but are not limited to, risks and uncertainties relating to the Company's ability to develop, market and sell products based on its technology; the expected benefits and efficacy of the Company's products and technology; the availability of substantial additional funding for the Company to continue its operations and to conduct research and development, clinical studies and future product commercialization; and, the Company's business, research, product development, regulatory approval, marketing and distribution plans and strategies. These and other factors are identified and described in more detail in the Company's filings with the SEC, including, the Company's Annual Report on Form 10-K for the year ended June 30, 2018, the Company's Quarterly Reports on Form 10-Q and the Company's Current Reports on Form 8-K.

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