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## **DelMar Pharmaceuticals VAL-083 Clinical Trial in GBM Demonstrates Continued and Promising Progress at AACR**

**VAL-083 therapy is well tolerated to date; dose limiting toxicity has not been reached after fifth cohort (20mg/m<sup>2</sup>)**

**Company confirms sixth cohort (30mg/m<sup>2</sup>) is fully enrolled**

VANCOUVER, British Columbia and MENLO PARK, Calif., April 9, 2014 /PRNewswire/ - [DelMar Pharmaceuticals, Inc.](#) (OTCQB: DMPI) ("DelMar") today announced an update on its ongoing Phase I/II clinical trial with VAL-083 in the treatment of refractory glioblastoma multiforme (GBM). The company's new data are being presented in a poster entitled, "*A Phase I/II Study of VAL-083 in Patients with Recurrent Malignant Glioblastoma Multiforme*" during the Early Phase Clinical Trials 2 Session at the 105th Annual Meeting of the American Association for Cancer Research (AACR) in San Diego.

VAL-083 is a structurally unique bi-functional alkylating agent that has documented activity against GBM in historical clinical trials sponsored by the United States National Cancer Institutes (NCI). As a potential treatment for glioblastoma, VAL-083's mechanism of action is unaffected by the expression of MGMT, a DNA repair enzyme that causes chemotherapy resistance to front-line treatment with Temodar<sup>®</sup> (temozolomide).

In summary, DelMar's data demonstrated:

- VAL-083 therapy is well tolerated; no drug-related serious adverse events have been detected in 26 patients treated to date in the current study.
- The maximum tolerated dose (MTD) has not been reached after completion of cohort 5 (20 mg/m<sup>2</sup>); analysis of cohort 6 (30 mg/m<sup>2</sup>) is ongoing.
- A dose-dependent increase in exposure with a short plasma (one to two hour) half-life and a C<sub>max</sub> of <265ng/mL (1.8uM) at 20mg/m<sup>2</sup>.

Jeffrey Bacha, DelMar's president and CEO said, "We are pleased that these interim data support continued exploration of higher dose cohorts. Our goal is in the current Phase I/II study is to determine an appropriate dose for advancement into registration directed clinical trials where VAL-083's impact on tumor growth and patient benefit can be properly assessed as a potential treatment of refractory glioblastoma. We believe we remain on track to determine an appropriate dosing regimen to position us to advance VAL-083 into registration-directed trials in the second half of 2014 following data analysis and discussions with the FDA."

Higher doses may be enrolled subject to completion of mandated safety observation period with cohort 6 (30mg/m<sup>2</sup>). All GBM patients enrolled in the current study have documented refractory progressive GBM and a dire prognosis. All GBM patients have failed front-line temozolomide and all except one had failed second-line bevacizumab (Avastin<sup>®</sup>) therapy. In early cohorts, the company also explored the safety profile of VAL-083 in patients with central nervous system (CNS) metastases of different cancers, including lung cancer.

The primary endpoint of this portion of DelMar's current study is to determine a modernized dosing regimen for advancement to registration-directed clinical trials. Cycle 1 toxicity is captured for MTD determination. Tumor volume is assessed during the study based on RANO (Revised Assessment in Neuro-Oncology) criteria after every second cycle. Patients exhibiting any evidence of continued progression at any time during the study are discontinued; therefore, no assessment of patient benefit due to slowed tumor growth is possible in this design. To date, all patients treated in cohorts 1-5 have discontinued due to tumor progression or adverse events unrelated to study drug. Two GBM patients exhibiting a response (stable disease or partial response) reported improved clinical signs with a maximum response of 28 cycles (84 weeks) prior to discontinuing due to adverse events unrelated to study.

Pharmacokinetic analyses show dose-dependent systemic exposure with a short plasma (one to two hour) half-life; average C<sub>max</sub> at 20 mg/m<sup>2</sup> is 266 ng/mL (0.18 ug/mL or ~1.8 uM). In previous clinical trials using less sensitive bioanalytical methods than today's LC-MS/MS method, intravenous infusion of approximately three to four times higher doses (60-72 mg/m<sup>2</sup>) led to C<sub>max</sub> ranging from 1.9 to 5.6 ug/mL, and the concentration-time curve was bi-exponential, similar to the finding in the current trial. The observed pharmacokinetics in this trial thus follow that which would be predicted by previously published data. *In vitro* studies indicate that uM concentrations of VAL-083, as obtained in cohorts 4 and 5, are effective against various glioma cell lines.

"DelMar's dosing schedule is designed to achieve a higher concentration (C<sub>max</sub>) and exposure (AUC) compared to the NCI dosing regimen," added Mr. Bacha. "We are hopeful that our strategy to modernize the dosing regimen will build upon the clinical promise of previous NCI-sponsored clinical trials and eventually provide physicians with an important new treatment for patients suffering from glioblastoma."

<i>Summary of Dose Escalation Schedule in DelMar Pharmaceuticals Phase I/II Clinical Trial for Refractory GBM</i>		
<i>Dose (mg/m<sup>2</sup>)</i>	<i>Status</i>	<i>Cumulative dose in a 33-day cycle (compared to NCI historical regimen of 125mg/m<sup>2</sup> in the same cycle-period)</i>
1.5	Completed – No DLT (dose limiting toxicity)	9 mg/m <sup>2</sup>

3.0	Complete – No DLT	18 mg/m <sup>2</sup>
5.0	Complete – No DLT	30 mg/m <sup>2</sup>
10.0	Complete – NO DLT	60 mg/m <sup>2</sup>
20.0	Complete – NO DLT	120 mg/m <sup>2</sup>
30.0	Analysis on-going	180 mg/m <sup>2</sup>
40.0	<i>To be initiated subject to no DLT in 30mg/m<sup>2</sup> dose</i>	240 mg/m <sup>2</sup>

### **About VAL-083**

VAL-083 (*dianhydrogalactitol*) represents a first-in-class, small-molecule chemotherapeutic with a unique mechanism of action that readily crosses the blood brain barrier. In more than 40 Phase 1 and 2 clinical studies sponsored by the National Cancer Institute (NCI), VAL-083 was well tolerated and demonstrated activity against a number of tumor types including lung, brain, cervical, ovarian tumors and leukemia. VAL-083 is approved in China for the treatment of chronic myelogenous leukemia and lung cancer and has received orphan drug designation in Europe and the U.S. for the treatment of gliomas. In vitro data previously presented by DelMar demonstrates that VAL-083's mechanism of action is unaffected by the expression of MGMT, a DNA repair enzyme that causes chemotherapy resistance to front-line treatment with Temodar (temozolomide). DelMar is currently studying VAL-083 in a Phase 1/2 clinical trial for patients with refractory glioblastoma multiforme patients.

### **About Glioblastoma Multiforme (GBM)**

Glioblastoma multiforme (GBM) is the most common and most malignant form of brain cancer. Approximately 15,000 people are diagnosed with glioblastoma each year in the U.S., with similar incidence in Europe. Standard of care is surgery, followed by radiation therapy or combined radiation therapy and chemotherapy with temozolomide. Approximately 60 percent of GBM patients treated with temozolomide experience tumor progression within one year. More than half of glioblastoma patients will fail the currently approved therapies.

### **About the VAL-083 Clinical Study**

The Phase I/II study is an open-label, single arm dose-escalation study designed to evaluate

the safety, tolerability, pharmacokinetics and anti-tumor activity of VAL-083 in patients with histologically confirmed initial diagnosis of primary WHO Grade IV malignant glioma (GBM), now recurrent. Patients with prior low-grade glioma or anaplastic glioma are eligible, if histologic assessment demonstrates transformation to GBM. Patients with secondary brain tumors due to CNS metastases were also treated in early cohorts, but are no longer being enrolled in the current study.

GBM patients must have been previously treated for GBM with surgery and/or radiation, if appropriate, and must have failed both Avastin and Temodar, unless either or both are contra-indicated.

Response to therapy and disease progression will be evaluated by MRI prior to every other treatment cycle. An initial phase of the study will involve dose escalation cohorts until a maximum tolerated dose (MTD) is established in the context of modern care. Once the modernized dosing regimen has been established, additional patients will be enrolled at the MTD (or other selected optimum dosing regimen).

DelMar Pharma is conducting the study at clinical sites in San Francisco, CA; Nashville, TN and Sarasota, FL. Please refer to [clinicaltrials.gov](http://www.clinicaltrials.gov) identifier NCT01478178 for further details on this clinical trial please visit: <http://www.clinicaltrials.gov/ct2/show/NCT01478178?term=VAL--083&rank=1>

### **About DelMar Pharmaceuticals**

DelMar Pharmaceuticals was founded in 2010 to develop and commercialize proven cancer therapies in new orphan drug indications where patients are failing or have become intolerable to modern targeted or biologic treatments. The Company's lead asset, VAL-083, is currently undergoing clinical trials in the United States as a potential treatment for refractory glioblastoma multiforme (GBM), the most common and aggressive form of brain cancer. VAL-083 has been extensively studied by U.S. National Cancer Institute and is currently approved for the treatment of chronic myelogenous leukemia (CML) and lung cancer in China. Published pre-clinical and clinical data suggest that VAL-083 may be active against a range of tumor types via a novel mechanism of action which distinct from current therapies.

### **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 our filings with the SEC, including, our current reports on Form 8-K. We do not undertake to update these

forward-looking statements made by us.

For further information, please visit [www.delmarpharma.com](http://www.delmarpharma.com); or contact **Jeffrey A. Bacha, President & CEO (604) 629-5989** or **Booke & Company Investor Relations, [admin@bookeandco.com](mailto:admin@bookeandco.com)**.

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