

June 1, 2015



# **DelMar Pharmaceuticals Presents Updated Phase I/II Clinical Data on VAL-083 in Refractory Glioblastoma Multiforme (GBM) at ASCO**

**Preliminary analysis of dose-escalation portion of Phase I/II clinical trial shows increasing dose-dependent median survival in refractory GBM patients following treatment with VAL-083**

**Company confirms initiation of 14-patient Phase II expansion cohort**

**Conference call set for today at 6:30 PM EDT**

VANCOUVER, British Columbia and MENLO PARK, Calif., June 1, 2015 /PRNewswire/ -- [DelMar Pharmaceuticals, Inc.](#) (OTCQX: DMPI) ("DelMar" and the "Company"), a biopharmaceutical company focused on developing and commercializing proven cancer therapies in new orphan drug indications, today announced updated clinical data from its Phase I/II clinical trial of [VAL-083](#) (dianhydrogalactitol) in patients with refractory glioblastoma multiforme (GBM), the most common and deadly form of human brain cancer.

Results from DelMar's clinical study titled, "[Phase I/II study of dianhydrogalactitol in patients with recurrent malignant glioma](#)," (abstract no. 2023) were presented today during the Central Nervous System Tumor session at the [2015 American Society of Clinical Oncology \(ASCO\) Annual Meeting](#) in Chicago, IL.

Jeffrey Bacha, DelMar's president & CEO, stated, "The patients enrolled in the dose-escalation portion of our clinical trial were heavily pre-treated having failed both front-line therapy with temozolomide and, in most cases, also failing second-line Avastin and one or more salvage therapies prior to treatment with VAL-083. This population has an extremely poor prognosis. Since none of the patients' tumors were re-resected prior to VAL-083 treatment, we expected – and observed – near-term progression in most patients. However, we also considered the potential impact on patient survival based on slowing the growth of the tumor even with limited treatment."

Mr. Bacha added, "The overall survival demonstrated at the higher doses in our clinical trial with only two cycles of treatment is clinically meaningful in comparison to published outcomes in this patient population. We consider these results to be positive and supportive of the further development of VAL-083 as a potential new therapy for GBM patients who have failed other available treatments."

As previously announced, the Company will host a conference call today at 5:30 PM CDT / 6:30 PM EDT. For both "listen-only" participants and those who wish to take part in the question and answer portion of the call, the conference telephone numbers are toll-free (866) 394-9399 or international (920) 663-6223. Please reference Conference ID 57681055. A link to a live webcast will be available on the [IR Calendar](#) of the Investors section of the Company's website at [www.delmarpharma.com](http://www.delmarpharma.com), and will be archived for 30 days. Webcast participants are encouraged to go to the website 15 minutes prior to the start of the call to register, download and install any necessary software.

The study was designed to assess the safety and tolerability of patients receiving VAL-083 on days 1, 2, and 3 of a 21-day cycle. Tumor response is assessed according to RANO criteria prior to every other 21-day treatment cycle, and patients exhibiting stable disease or tumor regression at the first scan following treatment were allowed to continue treatment with VAL-083 at the dose defined for their cohort. Determination of maximum tolerated dose (MTD) is based on a 3+3 design. Currently, 30 GBM patients have been enrolled across 8 dose cohorts ranging from 1.5 to 50mg/m<sup>2</sup>/d.

All GBM patients enrolled in DelMar's Phase I/II clinical trial failed prior treatment with standard front-line (temozolomide plus radiation) and 92% also failed Avastin. Seventy-seven percent also failed one or more courses of additional salvage therapy beyond temozolomide and Avastin prior to VAL-083. Patients were not re-resected prior to treatment with VAL-083 and therefore have a growing GBM tumor at the time of enrollment in the DelMar clinical trial. O6-methylguanine methyltransferase (MGMT) expression was characterized for patients whose data or tissue blocks were available for analysis. All patients whose tumors were characterized had an unmethylated MGMT promotor, which is correlated with poor patient outcomes to currently available therapies.

DelMar's poster presentation can found on Company's website under the [Scientific Publications & Presentations](#) section.

In summary:

- 30 GBM patients were treated with escalating doses of VAL-083 ranging from 1.5m/m<sup>2</sup> to 50 mg/m<sup>2</sup> in a regimen of daily treatment x 3 days in a 21 day cycle.
- Patients receiving a dose  $\geq 30$ mg/m<sup>2</sup> daily x 3 every 21 days had a median survival of 9.0 months vs. 4.4 months at doses <10mg/m<sup>2</sup> daily x 3 every 21 days, demonstrating a dose-response trend.
- Median number of treatment cycles of VAL-083 = 2.0.
- Median Progression Free Survival (PFS) was short (1.2 – 1.4 months).
- Adverse events were typically mild to moderate; no treatment-related serious adverse events at doses up to 40 mg/m<sup>2</sup> daily x 3 every 21 days were observed.
- Dose limiting toxicity (DLT) was observed in two of six (33%) of patients at 50 mg/m<sup>2</sup> daily x 3 every 21 days.
- Pharmacokinetic analysis suggests that a dose of 40mg/m<sup>2</sup> achieves concentrations of VAL-083 in the CNS at or above the IC<sub>50</sub> observed for multiple GBM cell lines *in vitro*.

Iwamoto et al. (2009) examined overall survival (OS) of GBM patients following bevacizumab failure and reported that median OS for patients receiving a range of salvage

chemotherapy was 5.2 months (95% CI, 3.3, 8.4) while patients receiving supportive care only had a median survival of 2 months (95% CI 1.3, 3.3).

- At the time of the analysis, 75% of patients treated with VAL-083 had survived longer than predicted following failure of bevacizumab therapy with supportive care and 48% of patients treated with VAL-083 survived longer than predicted following failure of bevacizumab and subsequent treatment with a range of salvage therapies.

Sakruti et al. (2014) reported that the median OS from the start of bevacizumab was 12.2 months (95% CI, 10.0, 14.3) with no significant difference in OS whether bevacizumab therapy was initiated following first, second or later GBM recurrence.

- At the time of the analysis, 59% of patients treated with VAL-083 survived longer than predicted following initiation of bevacizumab therapy.

[In the Phase I/II study of dianhydrogalactitol in patients with recurrent malignant glioma](#) at the time of the analysis:

- 6 month OS following initiation of VAL-083 treatment across all dose cohorts was 41.4%, with two additional patients from later cohorts still alive, but not yet reaching 6 month OS.
- 12 month OS following initiation of VAL-083 treatment across all dose cohorts was 17.2%, with four additional patients from later cohorts still alive, but not yet reaching 12 month OS.
- Median OS for refractory GBM patients receiving VAL-083 at doses  $\geq 30\text{mg/m}^2$  was approximately 9.0 months offering the potential of meaningful survival benefit in this patient population compared to other available treatment options.

Doses in DelMar's clinical trial exceed those utilized in prior NCI-sponsored clinical trials with VAL-083 in GBM.

DOSE & STUDY	Single Dose (mg/m <sup>2</sup> )	Acute Regimen (single cycle: mg/m <sup>2</sup> )	Comparative Dose (total mg/m <sup>2</sup> @ 35 days)	Dose Intensity (mg/m <sup>2</sup> / week)	Status
NCI GBM (Eagan) daily x 5 q 5wks (cycle = 35 days)	25	X 5 d = 125	125	25	Historical Regimen <b>MYELOSUPPRESSION REPORTED</b>
DelMar VAL-083 daily x 3 q 3wks (cycle = 21 days)	30 40 50	X 3 d = 120 150	90 180 240 300	30 40 50	No DLT No DLT <b>DLT</b>

Mr. Bacha said, "We have been successful in achieving our goal to 'hit the tumor harder; more often' in comparison to the NCI-dosing regimen. The fact the VAL-083 exhibits a favorable safety profile at these clinically relevant doses also provides support for our vision to offer a new treatment to GBM patients with no viable therapeutic options."

As expected, based on historical clinical experience from prior NCI-sponsored research, observed DLT with VAL-083 is thrombocytopenia, which resolves rapidly and

spontaneously.

"Based on analysis of hematologic toxicity data, it was determined that a dose of 50 mg/m<sup>2</sup>/d x 3 days in a 21 day cycle is above the MTD," stated Mr. Bacha. "Therefore, in accordance with the protocol that we have filed with the U.S. Food and Drug Administration (FDA), a Phase II expansion cohort of up to 14 patients has been initiated at the prior well-tolerated dose of 40 mg/m<sup>2</sup>/d. A small additional (3 patient) cohort at an interim 45mg/m<sup>2</sup>/d dose will also be studied in parallel with the expansion cohort, and the expansion cohort may be continued at this higher dose if safety data warrants."

The purpose of the Phase II expansion cohort is to gain additional information about the safety and efficacy of VAL-083 at the dosing regimen being considered for advancement into later-stage clinical trials.

"The primary goal of our Phase I/II clinical trial is to confirm a dosing regimen for advancement into registration-directed Phase II/III clinical trials. Based on the limitations of this trial design and the relatively small sample size, we must consider observations to date suggesting clinical activity and dose-response to be anecdotal, yet highly promising. We are very pleased to be taking the next steps toward advancing VAL-083 into pivotal trials as a potential new treatment for patients with refractory GBM," concluded Mr. Bacha.

### **About VAL-083**

VAL-083 is a "first-in-class", small-molecule chemotherapeutic. In more than 40 Phase 1 and 2 clinical studies sponsored by the U.S. National Cancer Institutes, VAL-083 demonstrated safety and efficacy in treating a number of cancers 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.

As a potential treatment for glioblastoma, VAL-083's mechanism of action appears to be unaffected by the expression of MGMT, a DNA repair enzyme that causes chemotherapy resistance to front-line treatment with Temodar<sup>®</sup> (temozolomide).

DelMar is currently studying VAL-083 in a multi-center Phase I/II clinical trial for patients with refractory glioblastoma multiforme (GBM) in accordance with the protocol that has been filed with the U.S. Food and Drug Administration (FDA). Eligible GBM patients must have failed both Avastin<sup>®</sup> (bevacizumab) and Temodar<sup>®</sup> (temozolomide) unless either of these therapies was contraindicated. (ClinicalTrials.gov Identifier NCT01478178).

The four current sites for the VAL-083 clinical trial include: The University of California, San Francisco (UCSF); The Mayo Clinic, Rochester MN; The Sarah Cannon Cancer Research Institute (SCRI), Nashville TN; and the SCRI affiliate site at Florida Cancer Specialists in Sarasota FL. DelMar anticipates opening additional clinical sites as the trial progresses. Further information on this clinical trial can be found on the company's website at [www.delmarpharma.com](http://www.delmarpharma.com).

### **About DelMar Pharmaceuticals, Inc.**

DelMar Pharmaceuticals, Inc. was founded 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 drug in development, VAL-083, is currently undergoing clinical trials in the U.S. as a potential treatment for refractory glioblastoma multiforme. 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 that could provide improved treatment options for patients.

For further information, please visit <http://delmarpharma.com/>; or contact DelMar Pharmaceuticals Investor Relations: [ir@delmarpharma.com](mailto:ir@delmarpharma.com) / (604) 629-5989. Follow us on Twitter [@DelMarPharma](https://twitter.com/DelMarPharma) or [Facebook.com/delmarpharma](https://facebook.com/delmarpharma). Investor Relations Counsel: Amato & Partners LLC.

### **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.*

To view the original version on PR Newswire, visit <http://www.prnewswire.com/news-releases/delmar-pharmaceuticals-presents-updated-phase-iii-clinical-data-on-val-083-in-refractory-glioblastoma-multiforme-gbm-at-asco-300091811.html>

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