Zacks Small-Cap Research

February 17, 2016
Grant Zeng, CFA
312-265-9466
gzeng@zacks.com

scr.zacks.com
10 S. Riverside Plaza, Chicago, IL 60606

Delmar Pharma (DMPI-OTCQX)

DMPI: Ready to advance VAL-083 to pivotal Phase II/III trial in 2016, pipeline will be expanded to include NSCLC and ovarian cancer– Buy

Current Recommendation	**Buy**
Prior Recommendation	Hold
Date of Last Change	11/26/2013
Current Price (02/16/16)	$0.81
Twelve- Month Target Price	**$4.00**

OUTLOOK

DMPI is a clinical/commercial stage biopharmaceutical company with a focus on oncology. We are impressed with the efficacy data and safety profile of its lead drug candidate VAL-083 for brain cancer.

DMPI recently reported positive VAL-083 Phase I/II clinical data for brain cancer and preclinical data for lung cancer and ovarian cancer. The company is on track to initiate registration directed trial of VAL-083 for brain cancer in 2016. Valuation is attractive now. We maintain a Buy rating on its shares.

SUMMARY DATA

52-Week High	**$1.52**
52-Week Low	**$0.43**
One-Year Return (%)	**3.83**
Beta	**1.13**
Average Daily Volume (sh)	**17,349**
Shares Outstanding (mil)	**40**
Market Capitalization ($mil)	**$32**
Short Interest Ratio (days)	**7.44**
Institutional Ownership (%)	**N/A**
Insider Ownership (%)	**N/A**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/A**
P/E using 2013 Estimate	**N/A**
P/E using 2014 Estimate	**N/A**
Zacks Rank	**N/A**

Risk Level	**N/A**
Type of Stock	**N/A**
Industry	**Med-Drugs**
Zacks Rank in Industry	**N/A**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Sep)	Q2 (Dec)	Q3 (Mar)	Q4 (Jun)	Year (Jun)
2015	0.00 A	0.00 A	0.00 A	0.00 A	0.00 A
2016	0.00 A	0.00 A	0.00 E	0.10 E	0.10 E
2017					0.50 E
2018					7.00 E

Earnings per Share
(EPS is operating earnings before non recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2015	-$0.04 A	-$0.03 A	-$0.03 A	-$0.02 A	-$0.11 A
2016	-$0.03 A	-$0.04 A	-$0.03 E	-$0.05 E	-$0.14 E
2017					-$0.27 E
2018					-$0.28 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

© Copyright 2016, Zacks Investment Research. All Rights Reserved.

WHAT'S NEW

Update on Fiscal Second Quarter Financials

There was no revenue reported for the fiscal second quarter ended December 31, 2015.

R&D expenses for fiscal 2Q16 were $0.79 million, as compared to $0.61 million for the same period last year.

G&A expenses for fiscal 2Q16 were $0.89 million, as compared to $0.66 million in the same period last year.

For the three months ended December 31, 2015 the Company reported a net loss of $2.6 million ($0.06 per share), compared to a net loss of $0.6 million ($0.02 per share) for the three months ended December 31, 2014 as restated.

As of December 31, 2015, DelMar held $2.0 million in cash.

According to our financial model, current cash balance can fund the company's operations into the third quarter of 2016.

A New Phase II Trial of VAL-083 to be Initiated by MD Anderson

On Jan. 13, 2016, DelMar announced that it has entered into a collaboration with MD Anderson Cancer Center to accelerate the clinical development of VAL-083 for the treatment of glioblastoma multiforme (GBM).

As part of the collaboration, MD Anderson will initiate a **new Phase II** clinical study with VAL-083 in patients with GBM at first recurrence/progression, **prior to Avastin**™ (bevacizumab) exposure. Patients eligible for the study will have recurrent GBM characterized by a high expression of MGMT, the DNA repair enzyme implicated in drug-resistance and poor patient outcomes following current front-line chemotherapy. MGMT promoter methylation status will be used as a validated biomarker for enrollment and tumors must exhibit an unmethylated MGMT promoter for patients to be eligible for the trial.

Positive Data from VAL-083 Phase II Expansion Clinical Trial Presented

On November 23, 2015, DelMar presented updated data from the fully enrolled 14-patient expansion cohort of the Company's ongoing **Phase II** clinical study of VAL-083 in refractory glioblastoma multiforme (GBM).

The expansion study is being conducted at Sarah Cannon Research Institute, Mayo Clinic, and UCSF Medical Center. The data were presented at the 20th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology (SNO) in San Antonio, Texas, held November 19-22.

Background of the Phase I/II clinical trial

DelMar initiated the **Phase I/II** clinical trial of VAL-083 for the treatment of **refractory glioblastoma multiforme (GBM)** or **progressive secondary brain tumor** in October 2011. 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 must have been previously treated for GBM with surgery, and/or radiation, if appropriate, and must have failed both Bevacizumab (Avastin) and temozolomide (Temodar), unless either or both

are contra-indicated. Patients with brain tumors that have developed due to CNS metastases were eligible for the DelMar clinical trial at early doses.

The primary outcome measures in the dose-modernization portion of the clinical trial will be the determination of maximum tolerated dose (MTD). **Secondary outcome** measures include tumor response in patients and pharmacokinetics.

An initial phase of the Phase I/II 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 in a registration directed **Phase II** clinical trial.

The study was designed for patients to receive 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 remained on VAL-083. Determination of MTD is based on 3+3 design.

Update on the Phase II Expansion Study

In the Phase I dose-escalation portion of the study, VAL-083 was well tolerated at doses up to 40mg/m^2 using a regimen of daily x 3 every 21 days. The 40 mg/m^2/d dose exhibited a favorable safety profile, with a trend toward improved survival versus lower doses. Following determination of the maximum tolerated dose (MTD) at 40 mg/m^2/d, a 14-patient Phase II expansion cohort was rapidly enrolled at a dose of 40 mg/m^2/d on day 1, 2, 3 of a 21-day cycle.

DelMar commenced enrollment in the **14-patient expansion** cohort for the trial in GBM near the end of the second quarter of 2015. The purpose of the expansion cohort is to gain additional information about the safety and efficacy of VAL-083 at a 40mg/m^2 dose prior to advancement into registration-directed Phase II/III clinical trials.

On October 21, 2015, DelMar announced the full enrollment of the Phase II expansion cohort.

To further explore the therapeutic window of VAL-083, DelMar also enrolled three (3) patients an interim dose of 45mg/m2. Patients enrolled in this clinical trial have failed both front-line therapy with temozolomide and second-line Avastin and, in most cases, one or more salvage therapies.

Updated data were presented at the 20th Annual Scientific Meeting and Education Day of the Society for Neuro-Oncology being held November 19 - 22, 2015, in San Antonio, Texas. Here are the summary of the updated data:

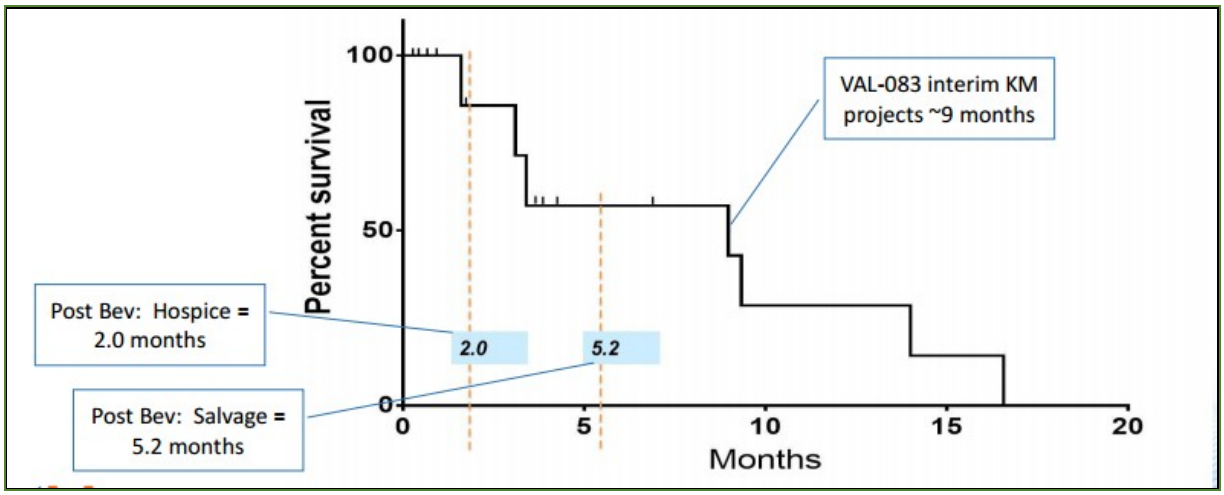
- The 14th and final patient to be enrolled in the Phase II expansion cohort initiated treatment on October 14, 2015, and all patients enrolled in the Phase II expansion cohort have received at least one cycle of treatment to date.

- Safety observations in the Phase II expansion cohort to date are consistent with the Phase I dose-escalation cohort. Generally, observed myelosuppression is mild (Grade 1), with the exception of one patient.

    - One subject previously treated with CCNU developed Grade 4 thrombocytopenia suggesting patients with prior nitrosourea treatment who may exhibit higher susceptibility to thrombocytopenia. The inclusion criteria were modified to account for this observation.

- To date, 20 GBM patients failing standard front-line therapy and bevacizumab have been treated with an assumed well-tolerated therapeutic dose of VAL-083 (30mg/m^2 /d & 40mg/m^2 /d). A Kaplan Meyer survival estimate based on interim analysis of patients enrolled in the Phase II expansion cohort is consistent with observations made in the Phase I dose-escalation portion of

the study. Preliminary analysis suggests a potentially meaningful survival benefit in this population following treatment with VAL-083 at doses ≥30 mg/m^2 /d in comparison to published reports for the same population



In 2009, Iwamoto reported a median overall survival of 2.0 months after failing bevacizumab for patients receiving only hospice care, and 5.2 months after failing bevacizumab for patients receiving further salvage therapy. The observed median survival to date following treatment with VAL-083 is **9.2 months**.

Multiple historical NCI-sponsored clinical studies of VAL-083 demonstrated that, in general, tumor regression in brain cancer was achieved following therapy in greater than 40% of patients treated and stabilization was achieved in an additional 20% to 30%. In published clinical studies VAL-083 has previously been shown to have a statistically significant impact on median survival in high grade glioma brain tumors when combined with radiation versus radiation alone with results similar or superior to other chemotherapies approved for use in GBM.

Chemotherapy	Comparative Therapy Survival		Median Survival Benefit vs. XRT
	Radiation	Radiation + Chemotherapy	
Temodar™	12.1 months	58 weeks (14.6 months)	2.5 months
VAL-083	8.3 months	67 weeks (16.7 months)	8.0 months

Reported Radiation + Chemo Survival w/ other chemotherapeutic agents in GBM

Carmustine™ (BCNU)	40-50 weeks
Lormustine™ (CCNU)	52 weeks
Nimustine™ (ACNU)	35 weeks
Avastin™	No reported benefit to survival

We think the interim survival data from the Phase II expansion cohort is highly promising. We are especially impressed with the safety profile of VAL-083 at the dose of 40 mg/m^2/d and the projected greater than 9-month median survival. Taken together with historical and recently demonstrated clinical activity, these results suggest that VAL-083's distinct anti-cancer mechanism has the potential to overcome chemo-resistance and surpass the standard of care in the treatment of GBM.

A Registration Directed Phase II/III Trial to Begin in 2016

Based on the positive interim data, DelMar will request a meeting with the FDA in 2016. The company plans to initiate a **registration directed Phase II/III trial** in **refractory GBM in 2016**. This could be a single arm or controlled trial after the feedback from the FDA.

Based on historical development of other products in GBM, it's possible that DelMar may be able to obtain FDA approval to commercialize VAL-083 to treat patients who have failed other therapies from a Phase II registration-directed clinical trial, which will save significant costs of a large Phase III clinical trial. It's also possible that the FDA may grant fast-track, accelerated approval and/or priority review status to VAL-083, which will enable DelMar to begin filing for commercial approval during the clinical trial process.

Based on historical precedent with the FDA, the **Phase II/III registration directed trial** are expected to mirror the Avastin approval study in that indication. Primary endpoints are overall survival and radiographic response. Secondary endpoints include quality of life, safety and tolerability. The trial will enroll approximately 100 patients. Patients with recurrent GBM who have failed or are ineligible for both Temodar® and Avastin® will be enrolled (the same population as in the current trial).

The recent failure of **Avastin** in the front line treatment of GBM has highlighted the need for new therapies in newly diagnosed patients, particularly those with unmethylated MGMT promoter regions who do not respond to standard of care with **temozolomide**.

The registration directed Phase II/III trial for the refractory GBM will take about 9 to 12 months. We estimate data from this will be available in 2H17 and an NDA will be filed in 2H17 or early 2018. The FDA approval will occur in late 2018 or early 2019.

DelMar also plans to develop VAL-083 as the treatment of **pediatric brain tumor**.

Update on VAL-083 Phase I/II Clinical Trial

Update on the Clinical Data from 2015 AACR

Historical studies sponsored by the NCI achieved promising results in newly diagnosed and recurrent GBM using a dosing regimen of 25 mg/m^2/day for 5 days every five weeks. Historically, dose limiting hematologic toxic effects were noted on white blood cell (WBC) and platelet counts.

The DelMar dosing regimen uses a cycle of treatment on the first three days of every three weeks. The hypothesis is that this regimen along with improvement in management of myelosuppression in the modern era would allow for more aggressive dosing and potentially improved patient outcomes.

Data to date have demonstrated that VAL-083 is safe and well tolerated at doses up to 40mg/m^2. No drug-related serious adverse events or dose limiting toxicities (DLTs) have been detected and a maximum tolerated dose (MTD) has not been reached at doses up to 40 mg/m^2.

In accordance with the protocol, **six patients** have been enrolled at dose level 8 (50mg/m^2/d). In this cohort, one DLT consisting of Grade 4 thrombocytopenia has been observed at dose level 8 to date and three additional patients in the cohort experienced Grade 3 thrombocytopenia. The DLT-related

symptoms resolved rapidly and spontaneously without concomitant treatment. Prior to this cohort, other treatment related toxicities have been mild to moderate.

Pharmacokinetic analyses show dose-dependent linear systemic exposure with a short plasma 1-2h terminal half-life; Cmax ranged from 739–1130 ng/mL (5.1–7.7µM) at 40mg/m^2/d.

One important point of this clinical trial is that compared to historical trials of VAL083, the present regimen delivers **substantively more drug** as measured by single dose and overall exposure. A higher dose and dose intensity is achieved by DelMar's dosing regimen in the current trial.

Table 2. Comparison of dose cohorts 6 – 8 to historical NCI GBM regimen

DOSE & STUDY	Single Dose	Acute Regimen *(single cycle)*		Comparative Dose (@ 35 days)	Dose Intensity (dose per week)	Status
NCI GBM (Eagan)[8] daily x 5 q 5wks *(cycle = 35 days)*	25 mg/m^2	X 5 days =	125 mg/m^2	125 mg/m^2	25mg/m^2/wk	Historical Regimen
DelMar VAL-083 daily x 3 q 3wks *(cycle = 21 days)*	30 mg/m^2	X 3 days =	90 mg/m^2	180 mg/m^2	30mg/m^2/wk	No DLT
	40 mg/m^2		120 mg/m^2	240 mg/m^2	40mg/m^2/wk	No DLT
	50 mg/m^2		150 mg/m^2	300 mg/m^2	50mg/m^2/wk	DLT observed

Very Encouraging Preliminary Efficacy Data from 2015 ASCO Presentation

From the AACR presentation, we are very pleased to see that in the dose-escalation portion of the current clinical trial, three GBM patients were observed to have a **response** (stable disease or partial response) with improved clinical signs (maximum response of 84 weeks).

At 2015 ASCO presentation, DelMar presented very encouraging preliminary **efficacy data** from the Phase I trial.

- Patients receiving a dose >30mg/m^2 daily x 3 every 21 days had a median survival of **9.0 months** vs. 4.4 months at doses 2 daily x 3 every 21 days, demonstrating a dose-response trend.
- 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^2 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^2 daily x 3 every 21 days.
- Pharmacokinetic analysis suggests that a dose of 40mg/m^2 achieves concentrations of VAL-083 in the CNS at or above the IC_{50} observed for multiple GBM cell lines in vitro.
- At the time of the analysis, 75% of patients treated with VAL-083 had survived longer than 2 months (reported by Iwamoto 2009) following failure of bevacizumab therapy with supportive care and 48% of patients treated with VAL-083 survived longer than 5.2 months (reported by Iwamoto 2009) following failure of bevacizumab and subsequent treatment with a range of salvage therapies.

The median OS from the start of bevacizumab reported by Sakruti et al. (2014) 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 12.2 months following initiation of bevacizumab therapy.
- 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.

Cohort	Number of GBM patients	VAL-083 Cohort mg/m^2	Median PFS after start of BEV (mo)	Median PFS after start of VAL-083(mo)	Median # Cycles of VAL-083	Median survival after start of VAL-083 (mo)
all	29	All	5.9	1.2	2.0	4.6
1 - 3	9	<10	8.8	1.2	2.0	4.4
1 - 5	16	<30	6.0	1.2	2.0	5.6
1 - 7	19	<40	7.0	1.2	2.0	5.7
6	3	30	9.0	1.3	2.0	9.2
7	3	40	4.2	1.4	2.0	8.8
6+7	6	30 and 40	6.6	1.4	2.0	9.0
8	6	50	3.6	1.4	1.0	1.7*(na)

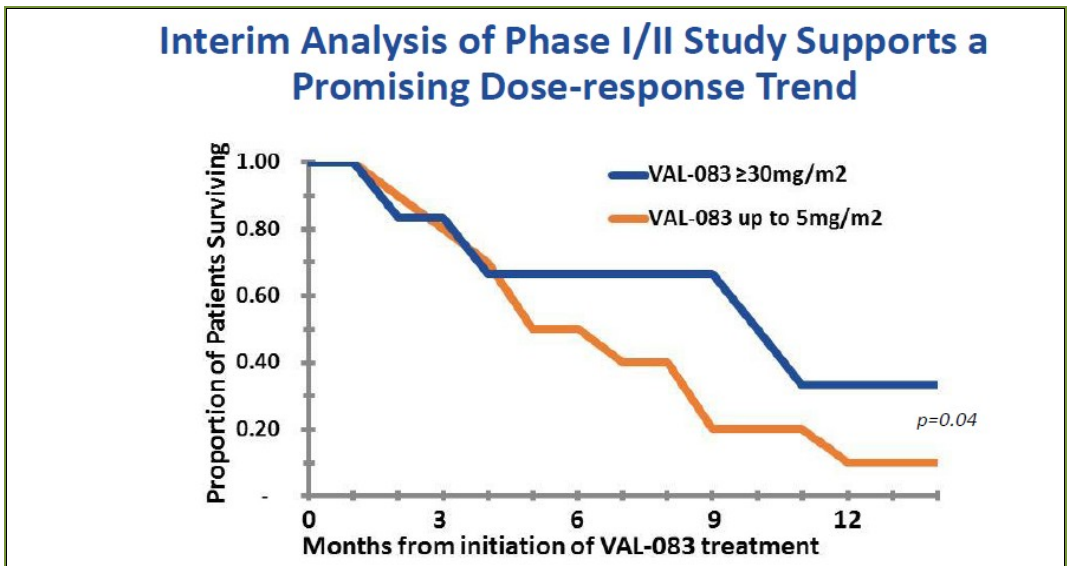
** Three of 7 patients in Cohort #8 (including current median) are still alive, two of whom have only recently begun treatment, thus explaining the short median survival in this cohort.*

Updated Data Further Presented at GBM2015

On Sept 10, DMPI presented updated data from the Phase I/II study of VAL-083 att GBM2015: 2nd International Symposium on Clinical and Basic Investigation in Glioblastoma in Toledo, Spain.

The sub-group analysis for patients receiving up to 5 mg/m^2 daily x 3 every 21 days (low dose) versus those patients receiving 30mg/m^2 or 40mg/m2 (high dose) was presented at the GBM2015 meeting.

Patients in the low dose sub-group had a median survival of 5 months versus median survival of 9 months for patients in the high dose sub-group following initiation of VAL-083 treatment (p = 0.04). Increased survival was observed at 6, 9 and 12 months following initiation of treatment in the high-dose sub-group compared to the low dose sub-group.



Dose Cohort Subgroups	6 months	9 months	12 months	Median
High *(30 & 40 mg/m^2 n=6)*	67%	67%	33%	9.2 months
Low *(up to 5mg/m^2 n=10)*	44%	33%	22%	5.1 months

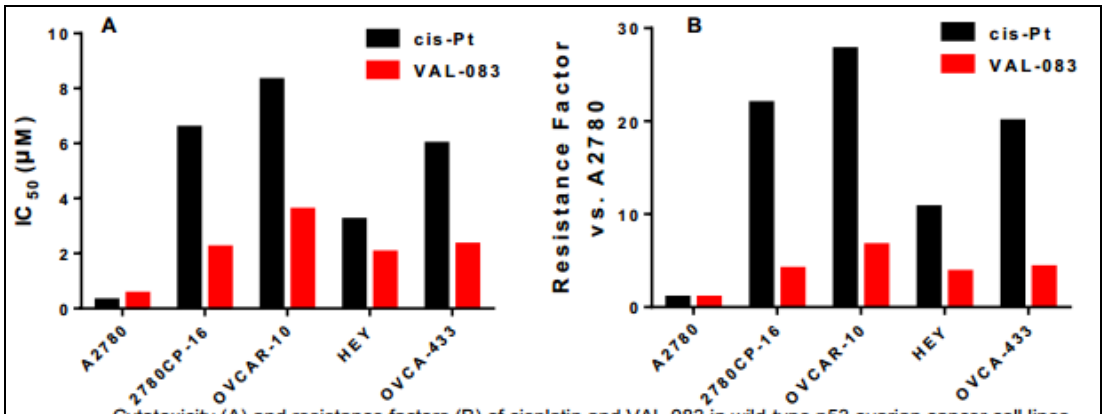
DelMar Expands VAL-083 Development Program to Ovarian Cancer

In early September, DelMar announced that it will expand its pipeline by conducting clinical trial of VAL-083 for the treatment of **ovarian cancer**.

In October, the company presented **preclinical data** from its recent research of VAL-083 as a potential new treatment for ovarian cancer at the American Association for Cancer Research (AACR) Advances in Ovarian Cancer Research: Exploiting Vulnerabilities Conference being held October 17-20, 2015 in Orlando, FL.

The presentation is entitled, "*A Comparison of the Mechanisms and Cytotoxic Activity of Dianhydrogalactitol (VAL-083) to Cisplatin in Ovarian Tumor Models Harboring Wild-type and Mutant p53"*

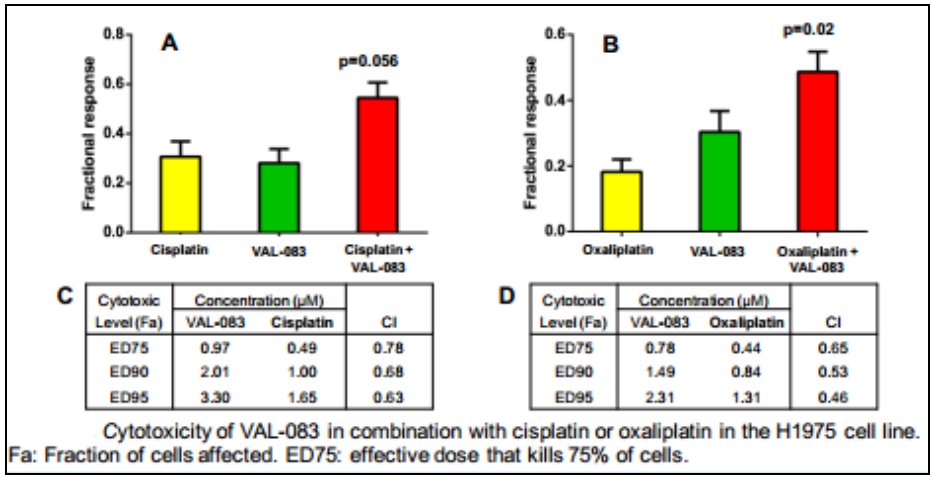
The activity of VAL-083 was examined in five ovarian cancer cell lines: including one cisplatin-sensitive (A2780), and four cisplatin-resistant (2780CP-16, OVCAR-10, Hey and OVCA-433) tumors *in vitro*. The relative tumor-killing effect (IC_{50}) was compared in cisplatin-sensitive versus cisplatin-resistant cell-lines. VAL-083 maintained significantly greater cytotoxic activity in comparison to cisplatin. These results demonstrate a lack of significant cross-resistance between cisplatin and VAL-083, further suggesting distinct modes of action for VAL-083.



Cytotoxicity (A) and resistance factors (B) of cisplatin and VAL-083 in wild-type p53 ovarian cancer cell lines. Resistance Factor is calculated the ratio of IC_{50} in the resistant cell line to the IC_{50} in A2780.

Data presented also suggested that the cytotoxic a mechanism of VAL-083 that is much less dependent on, or independent of, p53. In cisplatin-resistant (2780CP-16) ovarian cancer cells, only VAL-083 caused significant activation of p53 and p21, and induced greater Ser-15 and Ser-20 phosphorylation of p53, all of which are hallmarks of cytotoxic DNA damage. This further supports the conclusion of distinct modes of action for VAL-083 versus platinum-based chemotherapy and activity against platinum-resistant cancer phenotypes.

The combination of VAL-083 with either cisplatin or oxaliplatin in the human H1975 model demonstrated significant super-additivity ($p \leq 0.05$) and synergy (CI<1). These results suggest non-overlapping mechanism of action between the platinum drugs and VAL-083, and support the potential for synergistic benefit for a combination of VAL-083 and platinum-based therapies in the treatment of cisplatin resistant cancers.



C

Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Cisplatin	CI
ED75	0.97	0.49	0.78
ED90	2.01	1.00	0.68
ED95	3.30	1.65	0.63

D

Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Oxaliplatin	CI
ED75	0.78	0.44	0.65
ED90	1.49	0.84	0.53
ED95	2.31	1.31	0.46

Cytotoxicity of VAL-083 in combination with cisplatin or oxaliplatin in the H1975 cell line.
Fa: Fraction of cells affected. ED75: effective dose that kills 75% of cells.

These data have been developed in collaboration with researchers at MD Anderson Cancer Center.

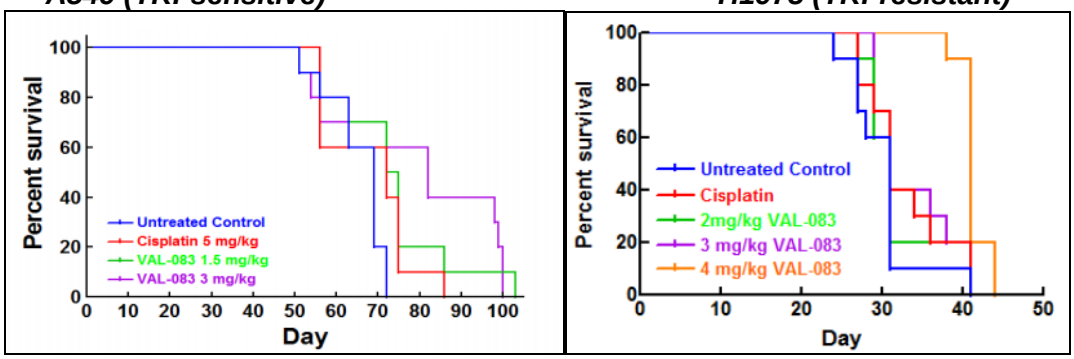
Pipeline will also be Expanded to NSCLC

Preclinical Data Support Development of VAL-083 for NSCLC

Recently, DMPI presented promising preclinical data supporting VAL-083 activity in non-small cell lung cancer at the AACR's New Horizons in Cancer Research Meeting, at the AACR annual meeting and at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics.

The data presented at the AACR New Horizons meeting showed that VAL-083 is superior to **cisplatin** in both *in vivo* tumor models that are sensitive and resistant to tyrosine kinase inhibitors (TKI) and has synergistic effect in combination with cisplatin. The data suggests important clinical and market potential of VAL-083 in **NSCLC**.

A549 (TKI-sensitive) ***H1975 (TKI-resistant)***



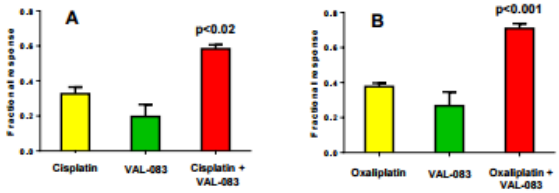
The data presented at the AACR annual meeting demonstrated that VAL-083's mechanism is distinct from platinum-based chemotherapy, the current standard of care for NSCLC. VAL-083 retains its high level of anti-cancer activity in p53 mutated NSCLC cell lines compared to cisplatin or oxaliplatin.

In addition, the combination of VAL-083 with either cisplatin or oxaliplatin demonstrated superadditivity/synergy against NSCLC cell lines, including those resistant to tyrosine kinase inhibitors. These results support the potential benefit of a VAL-083/platinum combination therapy in newly diagnosed NSCLC patients.

Combination of VAL-083 with cisplatin or oxaliplatin in H460, A549 and H1975 NSCLC

The combination of VAL-083 with either cisplatin or oxaliplatin in the human NSCLC models demonstrated significant superadditivity ($p \leq 0.05$) and/or synergism ($CI < 1$) for both combinations. Significantly, this cytotoxic effect of VAL-083 in combination with either platinum drug was observed in both TKI-resistant (H1975 and H460) and TKI-sensitive (A549) NSCLC cells. These results suggest non-overlapping mechanism of action between the platinum drugs and VAL-083, and support the potential for synergistic benefit for a combination of VAL-083 and platinum-based therapies in the treatment of lung cancer.

Human H460 NSCLC cell line

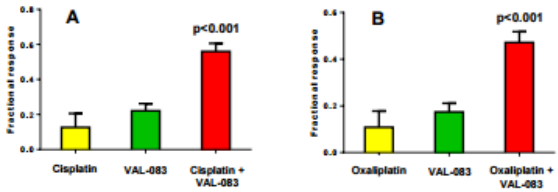


Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Cisplatin	CI
ED75	0.42	0.38	0.92
ED90	0.92	0.85	0.91
ED95	1.58	1.45	0.90

Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Oxaliplatin	CI
ED75	0.29	0.21	0.86
ED90	0.51	0.37	0.82
ED95	0.73	0.54	0.81

Figure 4. The cytotoxic effect of VAL-083 in combination with cisplatin (**A**) or oxaliplatin (**B**) on H460 cells. The table provides CI values for the Fa shown and achieved at indicated drug concentrations. Data, where applicable, are shown as Mean +/- SE, N=4.

Human A549 NSCLC cell line

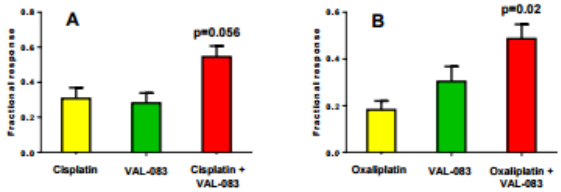


Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Cisplatin	CI
ED75	1.79	0.67	0.87
ED90	3.09	1.16	0.82
ED95	4.48	1.68	0.79

Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Oxaliplatin	CI
ED75	1.55	0.46	0.91
ED90	2.26	0.68	0.78
ED95	2.92	0.88	0.71

Figure 5. The cytotoxic effect of VAL-083 in combination with cisplatin (**A**) or oxaliplatin (**B**) on A549 cells. The table provides CI values for the Fa shown and achieved at indicated drug concentrations. Data, where applicable, are shown as Mean +/- SE, N=7.

Human H1975 NSCLC cell line



Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Cisplatin	CI
ED75	0.97	0.49	0.78
ED90	2.01	1.00	0.68
ED95	3.30	1.65	0.63

Cytotoxic Level (Fa)	Concentration (μM) VAL-083	Oxaliplatin	CI
ED75	0.78	0.44	0.65
ED90	1.49	0.84	0.53
ED95	2.31	1.31	0.46

Figure 6. The cytotoxic effect of VAL-083 in combination with cisplatin (**A**) or oxaliplatin (**B**) on H1975 cells. The table provides CI values for the Fa shown and achieved at indicated drug concentrations. Data, where applicable, are shown as Mean +/- SE, N=4.

These data provide support for the potential of VAL-083 as a viable treatment option for NSCLC patients failing platinum-based therapy.

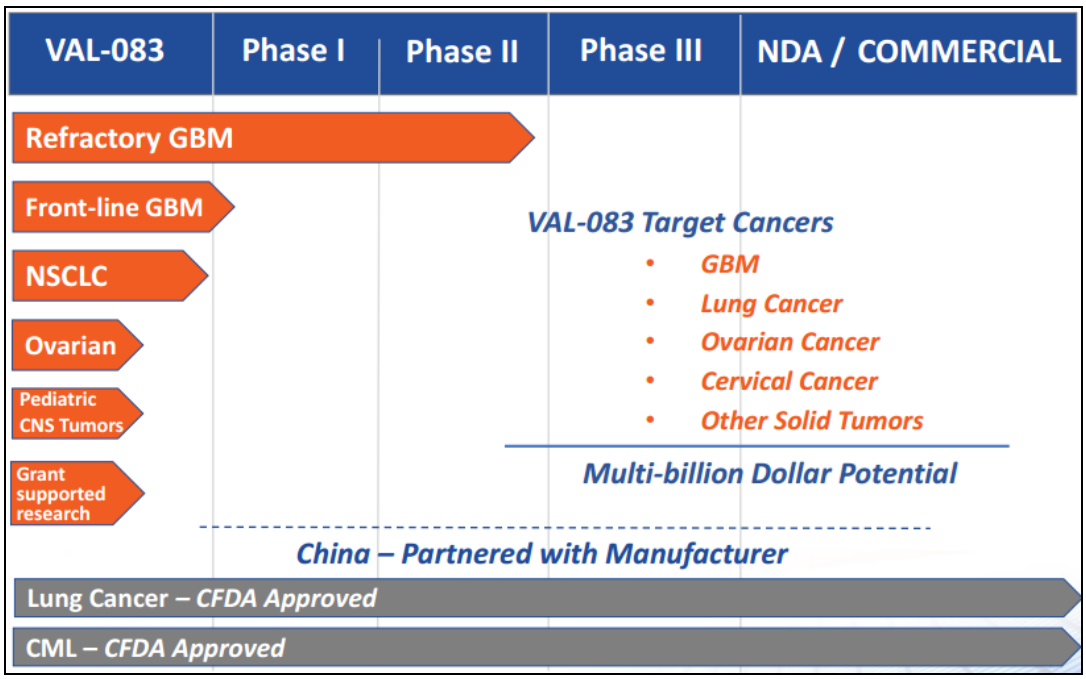
Clinical Development Plan for NSCLC Revealed

On Sept 8, DMPI presented the VAL-083 NSCLC clinical development plan in a poster entitled,"Post-Market Clinical Trial of Dianhydrogalactitol in the Treatment of Relapsed or Refractory Non-Small Cell Lung Cancer" at the 16th World Conference on Lung Cancer in Denver, Colorado.

This is an open label post-market **Phase IV** study of VAL-083 in treatment of NSCLC patients who have failed standard platinum doublet therapy. Up to 20 patients will be enrolled into the study. Study patients will receive VAL-083 intravenous (IV) dose of 40 mg/day for five consecutive days, with 1-2 weeks' rest, for two courses, followed by maintenance therapy 40 mg/day IV for five consecutive days every 28 days. Patients will continue to receive treatment until withdrawal criteria are met or the patient receives up to 12 cycles of therapy, whichever comes first.

The primary endpoint is the assessment of disease control rate, defined as objective response rate, including complete (CR), partial (PR) response rates, and stable disease (SD). Secondary endpoints will include evaluation of progression free survival (PFS) and overall survival (OS). Results will provide guidance to treating physicians under the context of VAL-083's current approval in China and clinical proof-of-concept to support DelMar's global development of VAL-083 as a potential new treatment for NSCLC.
The study will be considered complete when the last patient either experiences disease progression or an intolerable toxicity, or withdraws from the study. The study is anticipated to take approximately **1-2 years.**

VAL-083 is already approved in China for NSCLC. New clinical data will support sales growth in China and achieve royalty revenue to DelMar through sales partnership. The company is positioning VAL-083 for global development in lung cancer.



We are Bullish on DMPI Shares

We maintain our Buy rating on DelMar shares and our 12-month price target is $4.00 per share. Our call is based on recent clinical progress the company has made and attractive valuation of the company shares.

DMPI is a clinical and commercial stage biopharmaceutical company focused on the development and commercialization of oncology drugs. The Company's lead drug candidate VAL-083 is currently in a **Phase I/II** trial for the treatment of recurring GBM.

Previous multiple clinical studies conducted by NCI have demonstrated that VAL-083 is safe and efficacious for the treatment of GBM. Interim data from the Company's Phase I/II trial confirmed the efficacy and safety profile of VAL-083 in GBM patients. Based on the data currently available, DMPI intends to initiate a registration directed **Phase II/III** trial of VAL-083 for **recurring GBM** in 2016. This will be a significant milestone for DelMar which will position the Company as a late stage development company.

DelMar also plans to expand its pipeline by initiating clinical trials of VAL-083 for lung cancer and ovarian cancer.

VAL-083 has been approved in China for leukemia and lung cancer and DMPI has acquired its commercial rights in China market. Delmar is seeking to enter into a marketing partnership that could generate upfront fees, milestones and royalty revenue for DMPI, which is a de-risking event for the Company.

VAL-083 is a first-in-class alkylating agent with a different mechanism of action from that of **Temodar**, current market leader for GBM. The unique MOA of VAL-083 overcomes the resistance problem for Temodar.

Currently, DMPI shares are trading at around $0.77 per share, which values the Company at about $31 million in market cap based on 40 million outstanding shares. This is a deep discount compared to its peers. We noticed that most small biotech companies of development stage are valued from $50 million to $1 billion depending on how advanced the pipeline is and which indications the company is targeting. DMPI's lead drug candidate VAL-083 is in a Phase I/II clinical trial and will enter a registration directed Phase II/III trial in 2016.

We estimate VAL-083 could be approved by the FDA in late 2018 or early 2019 for recurring GBM. The broad application of VAL-083, including first line, second line and third line treatment of GBM, and other cancers, means a great market potential for VAL-083, which could be a blockbuster for DelMar. We estimate DMPI will be profitable in fiscal 2019 with an EPS of $0.06 based on product sales of $35 million. EPS will grow to $0.36 in fiscal 2020 based on total product sales of $70 million.

Based on our financial model and the Company's fundamentals, we have a price target of $4.00 per share for DMPI. We think a P/E ratio of 30x is appropriate for DMPI considering its growth in the next few years. Based on this P/E multiple, we come up with our price target of $4.00 per share using 25% discount for 4.5 years. Our price target values DMPI at $160 million in market cap, which we think is still conservative compared to its peers.

But risk is still high at this point for DMPI. Although VAL-083 has been approved in China for marketing, its indications are leukemia and lung cancer, different from the current indication of GBM under development in the US. The bars on both clinical and regulatory hurdle in the US are higher. We remind investors that risks associated with drug development are high. But generally speaking, DMPI is a name with a favorable risk/reward profile for investors with a high risk tolerance and longtime investment horizon.

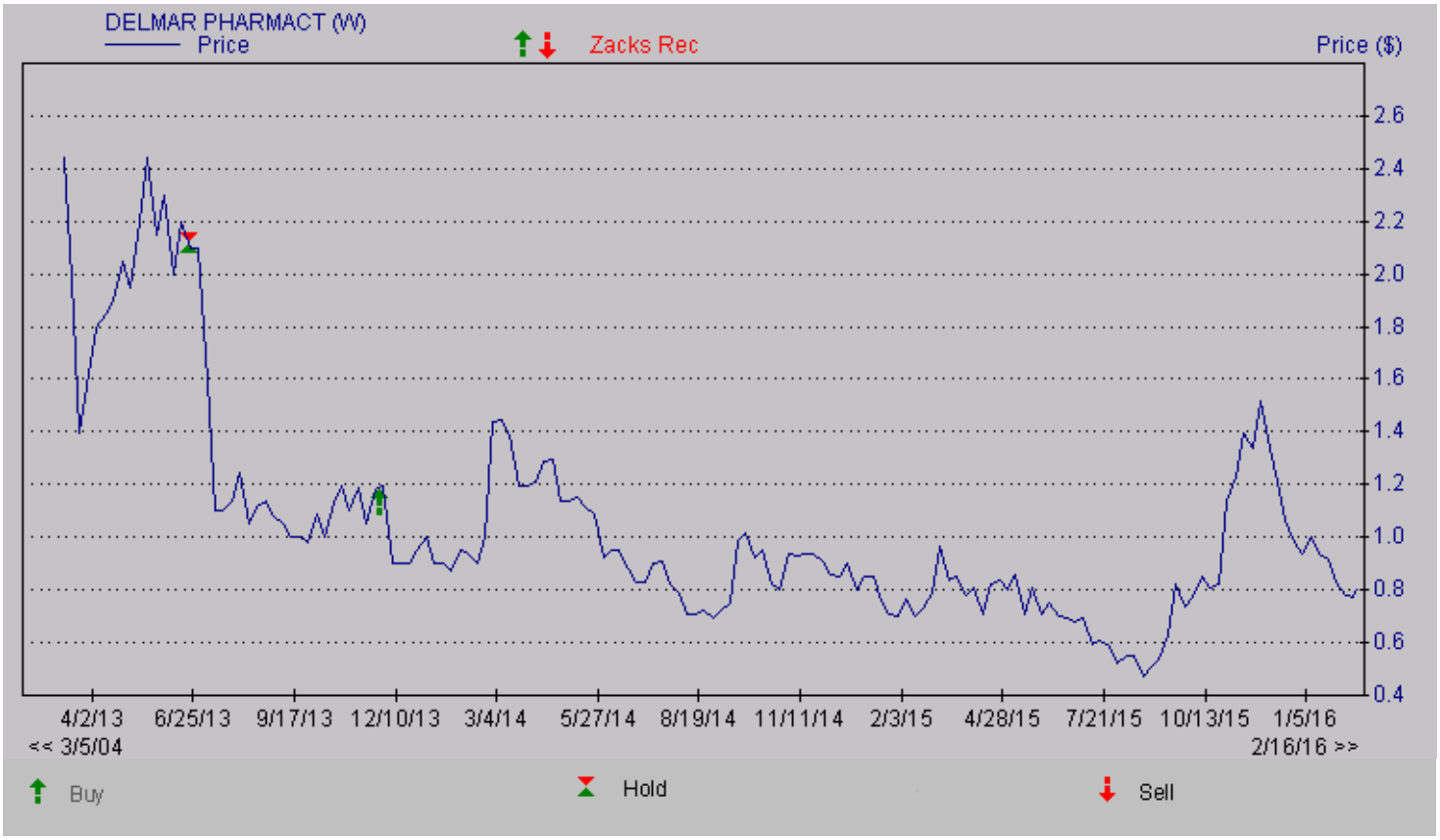
PROJECTED INCOME STATEMENT

_	FY14	Sept	Dec	Mar	June	FY15	Sept	Dec	Mar	June	2016	2017	2018	2019	2020
$ in millions except per share data	FY	Q1	Q2	Q3	Q4	FY	Q1	Q2	Q3	Q4	FYE	FYE	FYE	FYE	FYE
Milestone	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Royalty	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.10	$0.10	$0.50	$2.00	$2.50	$3.50
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	*400.0%*	*300.0%*	*25.0%*	*40.0%*
Product Sales	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$5.00	$35.00	$70.00
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	*600.0%*	*100.0%*
Total Revenues	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.10**	**$0.10**	**$0.50**	**$7.00**	**$37.50**	**$73.50**
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	*400.0%*	*1300.0%*	*435.7%*	*96.0%*
CoGS	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.50	$3.50	$7.00
Gross Income	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.00**	**$0.10**	**$0.10**	**$0.50**	**$6.50**	**$34.00**	**$66.50**
Gross Margin	-	-	-	-	-	-	-	-	-	*100.0%*	*100.0%*	*100.0%*	*92.9%*	*90.7%*	*90.5%*
R&D	$2.12	$0.67	$0.61	$0.64	$0.63	$2.56	$0.60	$0.79	$0.85	$1.50	$3.74	$7.00	$7.50	$9.00	$12.00
% R&D	-	-	-	-	-	-	-	-	-	*1500.0%*	*3743.0%*	*1400.0%*	*107.1%*	*24.0%*	*16.3%*
SG&A	$3.13	$0.45	$0.66	$0.50	$0.57	$2.17	$0.47	$0.89	$0.70	$0.85	$2.91	$7.50	$15.00	$20.00	$24.50
% SG&A	-	-	-	-	-	-	-	-	-	*850.0%*	*2914.7%*	*1500.0%*	*214.3%*	*53.3%*	*33.3%*
Others	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
% Other	-	-	-	-	-	-	-	-	-	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Operating Income	**($5.3)**	**($1.1)**	**($1.3)**	**($1.1)**	**($1.2)**	**($4.7)**	**($1.1)**	**($1.7)**	**($1.6)**	**($2.3)**	**($6.6)**	**($14.0)**	**($16.0)**	**$5.0**	**$30.0**
Operating Margin	-	-	-	-	-	-	-	-	-	-	-	-	-	*13.3%*	*40.8%*
Other Income (Net)	$6.9	($0.2)	$0.2	($0.5)	$0.4	($0.1)	($0.5)	($1.0)	($0.1)	($0.1)	($1.7)	($0.8)	($0.8)	($0.8)	($0.8)
Pre-Tax Income	**$1.6**	**($1.3)**	**($1.1)**	**($1.6)**	**($0.7)**	**($4.8)**	**($1.6)**	**($2.6)**	**($1.7)**	**($2.4)**	**($8.3)**	**($14.8)**	**($16.8)**	**$4.2**	**$29.2**
Net Taxes (benefit)	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$5.0
Tax Rate	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*17.1%*
Reported Net Income	**$1.6**	**($1.3)**	**($1.1)**	**($1.6)**	**($0.7)**	**($4.8)**	**($1.6)**	**($2.6)**	**($1.7)**	**($2.4)**	**($8.3)**	**($14.8)**	**($16.8)**	**$4.2**	**$24.2**
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Margin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weighted avg. Shares Out	*31.9*	*36.5*	*37.8*	*39.0*	*39.0*	*38.1*	*42.5*	*44.0*	*50.0*	*52.0*	*47.1*	*55.0*	*60.00*	*65.00*	*70.00*
Reported EPS	**$0.05**	**($0.04)**	**($0.03)**	**($0.04)**	**($0.02)**	**($0.13)**	**($0.04)**	**($0.06)**	**($0.03)**	**($0.05)**	**($0.18)**	**($0.27)**	**($0.28)**	**$0.06**	**$0.35**
YOY Growth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
One time charge	($6.82)	$0.00	$0.00	$0.51	$0.00	$0.51	$0.54	$0.97	$0.00	$0.00	$1.51	$0.00	$0.00	$0.00	$1.00
Non GAAP Net Income	**($5.2)**	**($1.3)**	**($1.1)**	**($1.1)**	**($0.7)**	**($4.3)**	**($1.1)**	**($1.7)**	**($1.7)**	**($2.4)**	**($6.8)**	**($14.8)**	**($16.8)**	**$4.2**	**$25.2**
Non GAAP EPS	**($0.16)**	**($0.04)**	**($0.03)**	**($0.03)**	**($0.02)**	**($0.11)**	**($0.03)**	**($0.04)**	**($0.03)**	**($0.05)**	**($0.14)**	**($0.27)**	**($0.28)**	**$0.06**	**$0.36**

Source: company filings and Zacks estimates

© Copyright 2016, Zacks Investment Research. All Rights Reserved.

HISTORICAL ZACKS RECOMMENDATIONS



DISCLOSURES

The following disclosures relate to relationships between Zacks Small-Cap Research ("Zacks SCR"), a division of Zacks Investment Research ("ZIR"), and the issuers covered by the Zacks SCR Analysts in the Small-Cap Universe.

ANALYST DISCLOSURES

I, Grant Zeng, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report. I believe the information used for the creation of this report has been obtained from sources I considered to be reliable, but I can neither guarantee nor represent the completeness or accuracy of the information herewith. Such information and the opinions expressed are subject to change without notice.

INVESMENT BANKING, REFERRALS, AND FEES FOR SERVICE

Zacks SCR does not provide nor has received compensation for investment banking services on the securities covered in this report. Zacks SCR does not expect to receive compensation for investment banking services on the Small-Cap Universe. Zacks SCR may seek to provide referrals for a fee to investment banks. Zacks & Co., a separate legal entity from ZIR, is, among others, one of these investment banks. Referrals may include securities and issuers noted in this report. Zacks & Co. may have paid referral fees to Zacks SCR related to some of the securities and issuers noted in this report. From time to time, Zacks SCR pays investment banks, including Zacks & Co., a referral fee for research coverage.

Zacks SCR has received compensation for non-investment banking services on the Small-Cap Universe, and expects to receive additional compensation for non-investment banking services on the Small-Cap Universe, paid by issuers of securities covered by Zacks SCR Analysts. Non-investment banking services include investor relations services and software, financial database analysis, advertising services, brokerage services, advisory services, investment research, investment management, non-deal road shows, and attendance fees for conferences

© Copyright 2016, Zacks Investment Research. All Rights Reserved.

sponsored or co-sponsored by Zacks SCR. The fees for these services vary on a per client basis and are subject to the number of services contracted. Fees typically range between ten thousand and fifty thousand per annum.

POLICY DISCLOSURES

Zacks SCR Analysts are restricted from holding or trading securities in the issuers which they cover. ZIR and Zacks SCR do not make a market in any security nor do they act as dealers in securities. Each Zacks SCR Analyst has full discretion on the rating and price target based on his or her own due diligence. Analysts are paid in part based on the overall profitability of Zacks SCR. Such profitability is derived from a variety of sources and includes payments received from issuers of securities covered by Zacks SCR for services described above. No part of analyst compensation was, is or will be, directly or indirectly, related to the specific recommendations or views expressed in any report or article.

ADDITIONAL INFORMATION

Additional information is available upon request. Zacks SCR reports are based on data obtained from sources we believe to be reliable, but are not guaranteed as to be accurate nor do we purport to be complete. Because of individual objectives, this report should not be construed as advice designed to meet the particular investment needs of any investor. Any opinions expressed by Zacks SCR Analysts are subject to change without notice. Reports are not to be construed as an offer or solicitation of an offer to buy or sell the securities herein mentioned.

ZACKS RATING & RECOMMENDATION

ZIR uses the following rating system for the 1068 companies whose securities it covers, including securities covered by Zacks SCR:
Buy/Outperform: The analyst expects that the subject company will outperform the broader U.S. equity market over the next one to two quarters.
Hold/Neutral: The analyst expects that the company will perform in line with the broader U.S. equity market over the next one to two quarters.
Sell/Underperform: The analyst expects the company will underperform the broader U.S. Equity market over the next one to two quarters.

The current distribution is as follows: Buy/Outperform- 18.0%, Hold/Neutral- 74.4%, Sell/Underperform – 7.0%. Data is as of midnight on the business day immediately prior to this publication.