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Cellular Biomedicine Group, Inc. (CBMG-NASDAQ)

CBMG: Data from Multiple Myeloma Trial to be Presented at ASH…

Based on our probability adjusted DCF model that takes into account potential future revenues of the cellular oncology and stem cell therapies, CBMG is valued at $24.00/share. This model is highly dependent upon continued clinical success of the company's pipeline and will be adjusted accordingly based on future clinical results.

Current Price (11/15/19)	$18.01
Valuation	**$24.00**

OUTLOOK

Cellular Biomedicine Group, Inc. (CBMG) is currently conducting an Investigator Initiated Trial (IIT) for its anti-BCMA CAR-T product (C-CAR088) in patients with multiple myeloma (MM). Initial results for this study will be presented at the 61st Annual meeting of the American Society of Hematology (ASH) taking place Dec 7-10, 2019. The abstract provides information on three patients treated at a dose of 1.0 x 10^6 CAR-T cells/kg. All three patients were heavily pre-treated and had failed proteasome inhibitor therapies. Two of the patients reached very good partial response (VGPR) at 4 weeks and 8 weeks respectively and the third patient reached PR at 2 weeks post infusion. We anticipate data being presented from additional patients at the meeting.

SUMMARY DATA

52-Week High	**$20.34**
52-Week Low	**$11.20**
One-Year Return (%)	**3.92**
Beta	**2.93**
Average Daily Volume (sh)	**50,694**
Shares Outstanding (mil)	**19**
Market Capitalization ($mil)	**$347**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**21**
Insider Ownership (%)	**9**
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 2019 Estimate	**-6.6**
P/E using 2020 Estimate	**-7.4**

Risk Level	**Above Avg.**
Type of Stock	**Small-Growth**
Industry	**Med-Biomed/Gene**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2018	0 A	0 A	0 A	0 A	0 A
2019	0 A	0 A	0 A	0 E	0 E
2020					0 E
2021					0 E

Earnings per Share

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2018	-$0.51 A	-$0.53 A	-$0.56 A	-$0.45 A	-$2.04 A
2019	-$0.51 A	-$0.63 A	-$0.82 A	-$0.64 E	-$2.64 E
2020					-$3.12 E
2021					-$2.97 E

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WHAT'S NEW

Business Update

Cellular Biomedicine Group, Inc. (CBMG) is a biopharmaceutical company developing cell-based therapies for cancer and degenerative diseases. The company is currently conducting investigator-initiated trials (IIT) in China for two of its chimeric antigen receptor (CAR)-T products as well as a T Cell Receptor (TCR) product. Cellular Biomedicine Group has also initiated a Phase 2 clinical trial in China for AlloJoin®, the company's allogenic stem cell therapy for knee osteoarthritis, and China's National Medical Products Administration (NMPA) has accepted the company's planned Phase 2 trial for ReJoin®, the company's autologous stem cell therapy for knee osteoarthritis.

C-CAR088

Cellular Biomedicine Group is developing C-CAR088 as a treatment for multiple myeloma. This is a CAR-T product that targets B cell maturation antigen (BCMA), which is required for the survival of long-lived bone marrow plasma cells (Moreaux *et al*., 2004) and it is known to be expressed on primary myeloma cells, but not normal tissue, of newly diagnosed MM patients (Carpenter *et al*., 2013).

The company will be presenting early results from an IIT testing C-CAR088 in MM patients that have failed multiple lines of prior therapy at the 61st Annual meeting of the American Society of Hematology (ASH). The trial is a Phase 1, 3+3, dose escalation trial being conducted in patients with relapsed/refractory MM that have failed at least 3 prior lines of treatment (NCT03815383). The accepted abstract describes results for the first three patients treated with the lowest dose of C-CAR088 (1 x 10^6 CAR-T cells/kg) (Yao *et al*., 2019). Results showed that all three patients experienced a clinical benefit from C-CAR088, with two patients experiencing very good partial response (VGPR) at four weeks and eight weeks, while the third patient reached PR at two weeks post C-CAR088 infusion. The treatment appeared to be well tolerated with no dose-limiting toxicities and only Grade 1-2 cytokine release syndrome (CRS) was observed.

Enrollment has completed for the first cohort in the study and the second cohort is currently enrolling. A total of 22 patients are expected to be enrolled in stratified cohorts at several institutions in China. In addition, the company has submitted an IND to the NMPA for approval for the Phase 1b portion of the study and is awaiting feedback.

AlloJoin® Trial Underway; ReJoin® Cleared to Begin Phase 2 Trial

On September 12, 2019, Cellular Biomedicine Group announced the initiation of the Phase 2 clinical trial for AlloJoin®, the company's "off-the-shelf" allogenic human adipose-derived mesenchymal progenitor cell (haMPC) therapy for the treatment of knee osteoarthritis. This is the first Phase 2 trial that has been allowed by the NMPA since the clarification of cell therapy regulations by the agency in Dec. 2017. We anticipate approximately 108 individuals being enrolled in the study, which is staking place at six hospitals in China.

The company previously conducted a Phase 1 clinical trial of AlloJoin® in China that involved two injections three weeks apart. In 2018, Cellular Biomedicine Group announced positive 48-week data that included a good safety profile and early signs of efficacy in preventing cartilage deterioration.

On September 27, 2019, the company announced that the drug application for its autologous haMPC therapy ReJoin® was accepted by the NMPA such that a Phase 2 clinical trial can initiation in China. A previous clinical trial of ReJoin® showed significant improvement in WOMAC score when comparing baseline to 48-week data and the total knee cartilage volume showed a significant increase in patients treated with ReJoin® compared to those treated with ARTZ® (sodium hyaluronate).

New Facility to Support Clinical Trials in U.S.

On October 2, 2019, Cellular Biomedicine Group announced a lease agreement to construct a 22,000 square foot facility in Rockville, MD. This facility will allow the company to support U.S-based clinical trials for cell therapy products that show proof-of-concept activity in trials in China.

Financial Update

On November 6, 2019, Cellular Biomedicine Group announced financial results for the third quarter of 2019. As expected, the company did not report any revenues for the third quarter of 2019. R&D expenses totaled $13.1 million in the third quarter of 2019 compared to approximately $6.5 million in the third quarter of 2018. The increase was primarily the result of an agreement entered into with Duke University in which the company agreed to pay for improvements to Duke's GMP facility. G&A expenses in the third quarter of 2019 were $3.3 million, which was the same as for the third quarter of 2018. Net loss for the three months ending Sep. 30, 2019 was $15.9 million compared to a net loss of $12.7 million for the third quarter of 2018.

The company exited the third quarter of 2019 with approximately $29 million in cash and cash equivalents as well as $17 million in restricted cash. Cash burn in the third quarter of 2019 totaled $10.5 million and we anticipate quarterly burn increasing over the next 12 months as the company builds out its manufacturing capabilities in the U.S. Based on the company's current cash position, we estimate there is sufficient capital to fund operations through the first quarter of 2020.

As of Nov. 1, 2019, the company had approximately 19.3 million shares outstanding, and when factoring in stock options and warrants a fully diluted share count of approximately 22 million.

Conclusion

We are looking forward to the company's presentation at ASH in December 2019 at which time we hope to learn additional details regarding the company's MM treatment and potentially some early efficacy and duration of response data. We also anticipate continued updates regarding the company's other CAR-T, TCR, and TIL therapies as well as the Phase 2 trials for AlloJoin® and ReJoin®. Our current valuation is $24.

PROJECTED FINANCIALS

Cellular Biomedicine Group, Inc.	2018 A	Q1 A	Q2 A	Q3 A	Q4 E	2019 E	2020 E	2021 E
CAR-T	$0	$0	$0	$0	$0	$0	$0	$0
TCR	$0	$0	$0	$0	$0	$0	$0	$0
TIL	$0	$0	$0	$0	$0	$0	$0	$0
Regenerative Medicine	$0	$0	$0	$0	$0	$0	$0	$0
Kymriah	$0	$0	$0	$0	$0	$0	$0	$0
Other Income	$0	$0	$0	$0	$0	$0	$0	$0
Total Revenues	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Cost of Sales	$0	$0	$0	$0	$0	$0	$0	$0
Product Gross Margin	-	-	-	-	-	-	-	-
Research & Development	$24.2	$6.0	$9.1	$13.1	$9.3	$37.5	$60.0	$70.0
Selling and Marketing	$0.3	$0.0	$0.0	$0.0	$0.0	$0.1	$0.0	$0.0
Impairment of Non-Current Assets	$2.9	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
General & Administrative	$13.2	$3.4	$3.2	$3.3	$3.5	$13.5	$18.0	$19.0
Other (Income) Expense	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Operating Income	($40.5)	($9.4)	($12.3)	($16.5)	($12.8)	($50.9)	($78.0)	($89.0)
Operating Margin	-	-	-	-	-	-	-	-
Non-Operating Expenses (Net)	$1.6	($0.1)	($0.2)	$0.6	$0.0	$0.4	$0.0	$0.0
Pre-Tax Income	($38.9)	($9.3)	($12.1)	($15.8)	($12.8)	($50.6)	($78.0)	($89.0)
Income Taxes	($0.0)	$0.0	$0.0	$0.0	$0.0	$0.0	$0	$0
Tax Rate	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Net Income	**($38.9)**	**($9.3)**	**($12.1)**	**($15.8)**	**($12.8)**	**($50.6)**	**($78.0)**	**($89.0)**
Net Margin	-	-	-	-	-	-	-	-
Reported EPS	**($2.2)**	**($0.51)**	**($0.63)**	**($0.82)**	**($0.64)**	**($2.64)**	**($3.12)**	**($2.97)**
YOY Growth	-	-	-	-	-	-	-	-
Basic Shares Outstanding	17.7	18.2	19.2	19.3	20.0	19.2	25.0	30.0

Source: Zacks Investment Research, Inc. *David Bautz, PhD*

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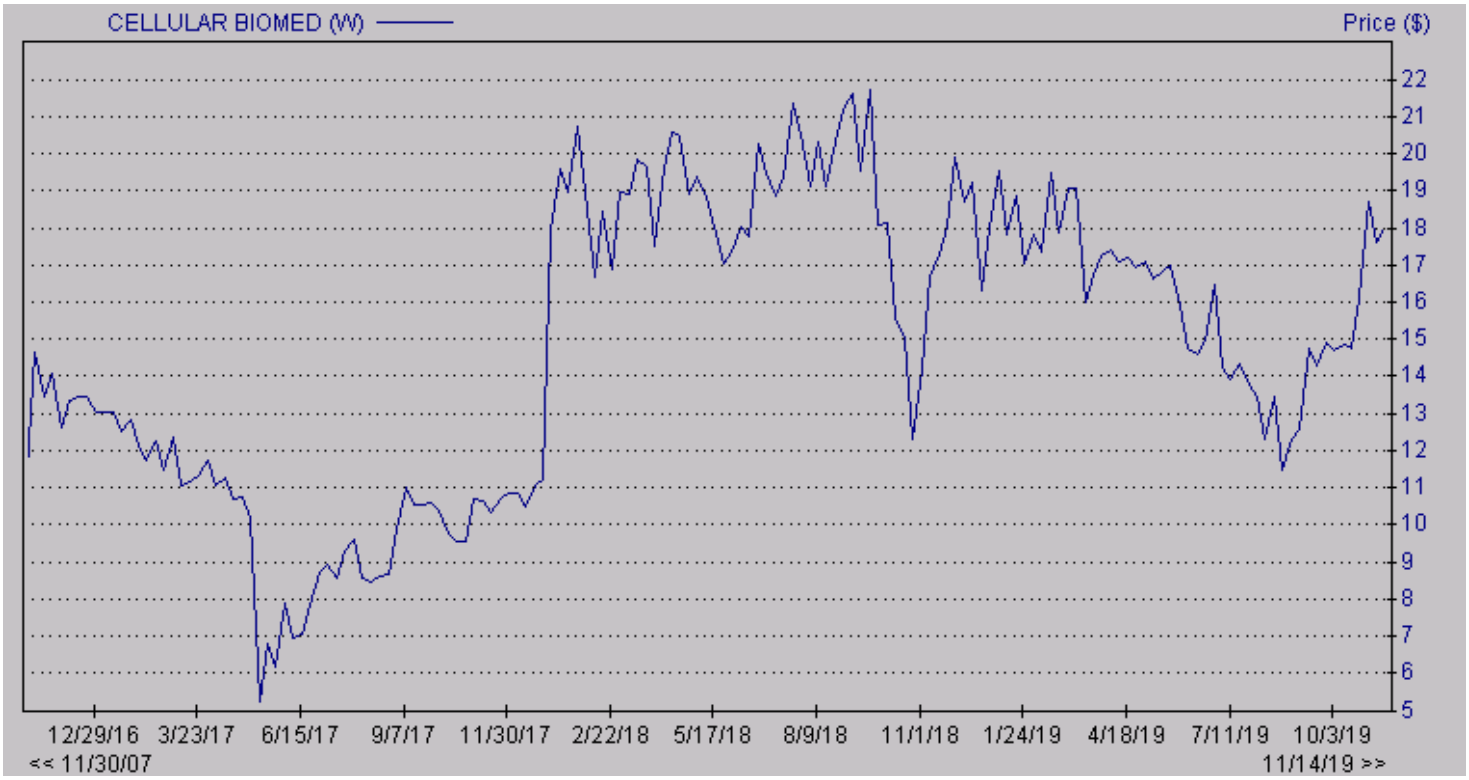
HISTORICAL STOCK PRICE



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