

VBI Vaccines (stock VBIV)

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Products and Research & Development together with clinical trials: VBI Vaccines Inc. is a biopharmaceutical company (1) developing vaccines for prevention and treatment of hepatitis B, with 3-antigen hepatitis B vaccine (comprised of the S, pre-S1, and pre-S2 surface antigens of the hepatitis B virus). This vaccine, named Sci-B-Vac® is a licensed, third-generation hepatitis B vaccine that has demonstrated safety and efficacy in over 750,000 patients, is already approved for use and commercially available in Israel. In December 2017, VBI initiated patient dosing in a global Phase 3 clinical program with two concurrent studies: PROTECT (N= 2,472), a safety and immunogenicity study, and CONSTANT (N= 4,452), a lot-to-lot consistency study. Data from these trials, were announced in June 2019 and January 2020. Their results will serve as the basis for the regulatory submissions in the U.S., Europe, and Canada, which is expected to begin in the fourth quarter of 2020. Furthermore, they are working for Immuno-therapeutic in a 2018 collaboration with Bii Biosciences for a functional cure for chronic Hepatitis B (VBI-2601, in phase 1&2, conducted in Australia, New Zealand, Thailand, South Korea, Hong Kong, and China). Bii Bio will be responsible for funding all development in the licensed territory – China, Hong Kong, Macau, and Taiwan. VBI has received gross proceeds of \$11 million, consisting of a \$4M upfront payment and a \$7M equity investment at \$3.05 per share. VBI is eligible to receive an additional \$117.5 million in potential milestone payments and potential low double-digit royalties on commercial sales in the licensed territory. VBI will retain all rights outside of the licensed territory with respect to the treatment of hepatitis B.

VBI is working for a vaccine immunotherapeutic candidate targeting glioblastoma (VBI-1901, with ongoing Phase I/IIa). They are also developing a prophylactic cytomegalovirus (CMV, VBI-1501 with positive phase 1 results) targeting two highly immunogenic cytomegalovirus antigens, gB and pp65.

VBI is developing a prophylactic pan-coronavirus vaccine candidate in collaboration with NRC (Canada), which started in March 2020 as a combination of three (1) SARS-CoV-2, coronavirus disease 2019 (“COVID-19”); (2) MERS-CoV, identified in 2012 Middle East respiratory syndrome (MERS); and (3) SARS-CoV, identified in 2002 outbreak of severe acute respiratory syndrome (SARS). The technology used is named eVLP platform, where the vaccine candidate, will be co-expressing SARS-CoV-2, SARS-CoV, and MERS-CoV spike proteins on the same particle. There are two types of developments within Prophylactic Coronavirus Vaccine Program in this company, known as the VBI-2900 vaccine, with preclinical results reported on August 2020. Three mouse studies enabled the selection of two clinical vaccine candidates: 1. VBI-290, a trivalent pan-coronavirus vaccine targeting SARS-CoV-2, SARS-CoV, and MERS-CoV; and 2. VBI-2902, a monovalent coronavirus

vaccine targeting SARS-CoV-2, by expressing a VBI's enveloped virus-like particle (eVLP) a modified, stabilized, pre-fusion form of the SARS-CoV-2 spike protein.

Location: VBI is headquartered in Cambridge, MA, with 123 employees. Its research operations are in Ottawa, Canada, research, and manufacturing facilities in Rehovot, Israel. Variation Biotechnologies Inc. was federally incorporated in Canada on August 24, 2001; Variation Biotechnologies (US), Inc. was incorporated in Delaware on December 18, 2006.

Financial analysis: The VBI in August 2020 announced an agreement with Therapure Biomanufacturing, an integrated Contract Development Manufacturing Organization, for development and manufacturing services for production of coronavirus vaccine candidates.

The initiation of adaptive Phase 1/2 human clinical study is expected at year-end 2020, pending regulatory approvals. The VBI on September 2020 entered into an agreement with Canadian government to develop a potential vaccine for COVID-19 by early 2022 through mid-stage trials conducted exclusively in Canada. Canada is contributing around 75% of the U.S.-based company's development costs and \$42.2 million for the project. (3) **(Figure 1)** Some of the recent funding are from the National Research Council of Canada (NRC) and government of Canada. VBI has also raised funds by recently issuing stock shares.

July 2020: The NRC has agreed to contribute up to CAD\$1 million for the scale-up of the technical manufacturing process for VBI's coronavirus program, VBI-2900. **September 2020:** The Government of Canada, through its Strategic Innovation Fund, agreed to contribute up to CAD\$56 million to support the development of VBI's coronavirus program, VBI-2900, through Phase 2 clinical studies, to be contributed as expenses are incurred. **Throughout the third quarter of 2020,** VBI raised total gross proceeds of \$48.8 million, issuing 10.8 million shares at an average price of \$4.4988 through its Open Market Sales Agreement, established on July 31, 2020 with Jefferies LLC. (4) From *the Income Statement* **(Figure 3)** one can see that Net Income are negative -44.91M, while the Total Revenue is only 1.82M. Furthermore, from *the Balance Sheet* **(Figure 4)** one can see that Current Ratio (Current Assets / Current Liabilities) is 1.56, while for a good company this ratio has to be at least over 2. In *the CASH Flow* **(Figure 5)** two items attract my attention, Cash from Operating Activities which is negative -37.86M and Cash from Financing Activities which is positive 94.99. This last one is result of two sources mentioned above, The Canadian Government investment to this company and issuing shares during 2020 for raising capital. This means the VBI Vaccines is operating with loss, although they have the funding and positive clinical trials for successfully applying and approving and trading Sci-B-Vac prophylactic against Hepatitis B in the U.S. - and European markets. They need to move faster and decisive, because they are behind the market of COVID vaccine, although they are special with three viruses' proteins in one vaccine (VBI-2900). **Stock analysis:** The VBIV stock, is traded in Nasdaq. In 2015-11-05 it started with a close price of \$5.6 and recently on 2020-11-02 had a closing price of \$2.35. In 2019 had reached a minimum of \$0.47 and maximums in 2017, but also in August 2020 greater than \$6.00 (\$6.46). **(Figure 2)** Shares outstanding are 231.2M, of which 5.26% are internally owned, but none of them are insider traded showing that the management of the VBI has faith in better days of the VBIV stock.

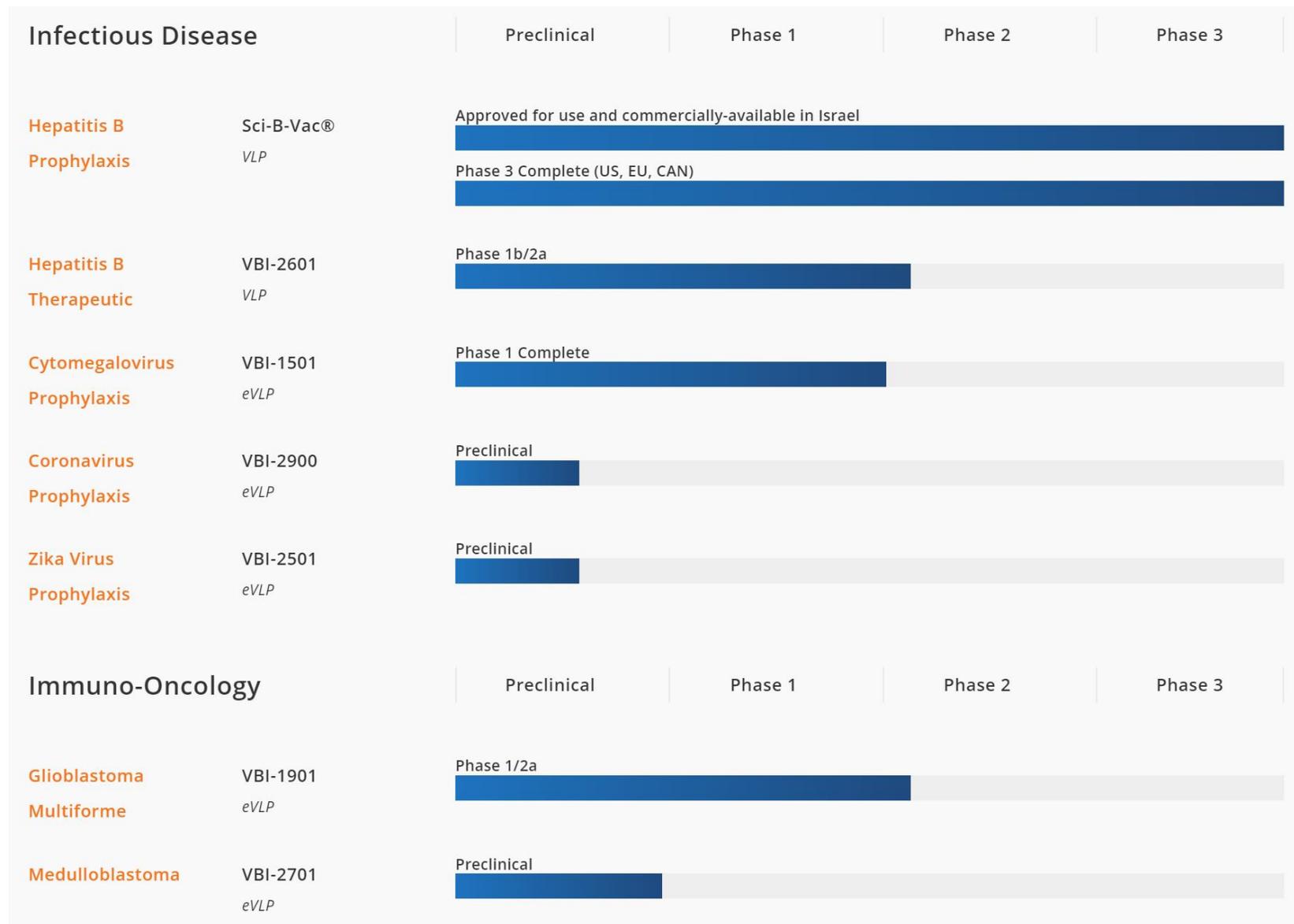


Figure 1. Vaccines in the developments and research programs of the VBI Vaccines company as of 2020 (Source ref. 2).

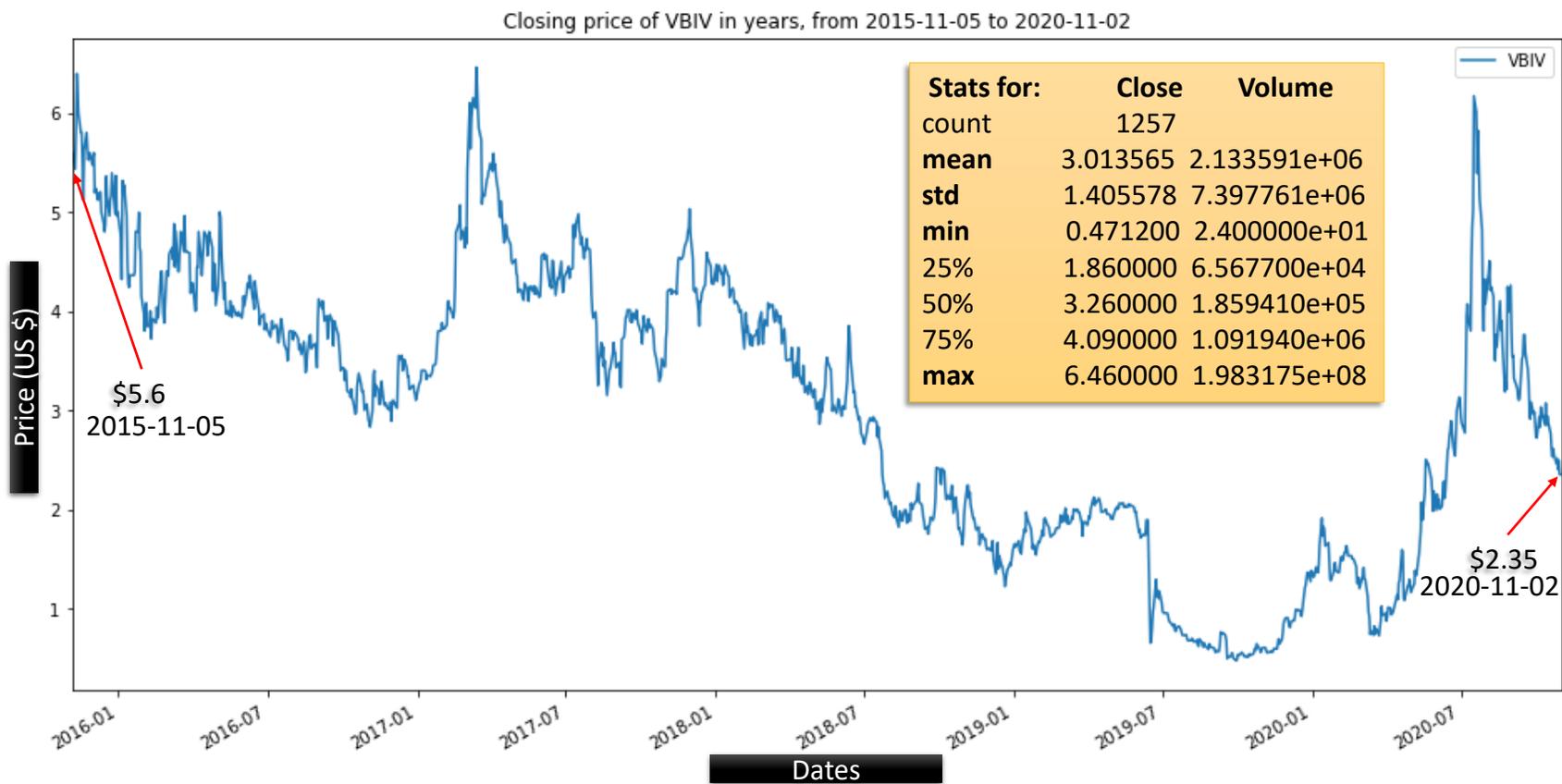


Figure 2: Changes in the VBIV stock price from the end of 2015 to the end of 2020.

Figure 3. VBI Vaccines Inc. Income statement. (Source: finviz.com as of 11/03/2020)

[income statement](#) | [balance sheet](#) | [cash flow](#)

Period End Date		TTM	12/31/2019	12/31/2018
Period Length		12 Months	12 Months	12 Months
Total Revenue		1.82	2.22	3.35
Cost of Revenue		9.20	7.90	4.51
Gross Profit		-7.38	-5.68	-1.15
Selling, General and Administrative			14.09	14.51
Research and Development		15.30	26.33	38.44
Unusual Expense/Income			6.29	6.30
Total Operating Expense		45.69	54.62	63.76
Operating Income		-43.87	-52.40	-60.41
Interest Income Net		-1.04	-2.41	-3.19
Other Income Net				
Net Income Before Taxes		-44.91	-54.81	-63.60
Provision for Income Taxes		0.00	0.00	0.00
Net Income		-44.91	-54.81	-63.60
Income Avail. to Common Excl. Extraord.		-44.91	-54.81	-63.60
Income Avail. to Common Incl. Extraord.		-44.91	-54.81	-63.60
Diluted Average Shares		169.95	119.45	65.65
Diluted EPS Excl. Extraord.		-0.30438	-0.45889	-0.96881
Diluted EPS Incl. Extraord.		-0.30438	-0.45889	-0.96881

Figure 4. VBI Vaccines Inc. Balance Sheet. (Source: finviz.com as of 11/03/2020)

[income statement](#) | [balance sheet](#) | [cash flow](#)

Period End Date		12/31/2019	12/31/2018	12/31/2017
Cash and Equivalents				
Short Term Investments				
Cash and Short Term Investments		44.21	59.27	67.69
Accounts Receivable - Trade, Net		0.20	0.06	0.14
Total Receivables, Net		0.20	0.06	0.14
Total Inventory		1.07	0.91	0.79
Total Current Assets		46.96	61.73	70.43
Property, Plant And Equipment - Gross		14.41	10.94	4.61
Property, Plant And Equipment - Net		11.65	8.53	2.25
Goodwill, Net		2.21	8.27	8.97
Intangibles, Net		60.76	58.25	63.34
Long Term Investments				
Other Long Term Assets		0.62	0.83	0.68
Total Assets		122.20	137.60	145.66
Accounts Payable		1.13	6.05	1.81
Accrued Expenses		12.07	12.06	9.63
Notes Payable/Short Term Debt		0.00	0.00	0.00
Current Port. of LT Debt/Capital Leases		14.85	1.10	1.60
Other Current Liabilities		1.71	4.17	0.20
Total Current Liabilities		29.76	23.38	13.24
Long Term Debt		0.00	12.93	11.54
Capital Lease Obligations				
Total Long Term Debt		0.00	12.93	11.54
Total Debt		14.85	14.03	13.14
Other Liabilities		4.19	3.17	1.09
Total Liabilities		33.95	39.47	25.87
Common Stock		284.96	246.42	201.81
Additional Paid-In Capital		66.43	63.45	60.89
Retained Earnings		-262.39	-207.57	-143.97
Unrealized Gain (Loss)				
Other Equity		-0.75	-4.16	1.06
Total Equity		88.25	98.13	119.79
Total Liabilities and Equity		122.20	137.60	145.66
Total Common Shares Outstanding		178.26	97.34	64.08
Full-Time Employees		123	108	98
Number of Common Shareholders		814	820	834

[income statement](#) | [balance sheet](#) | **cash flow**

Period End Date		TTM	12/31/2019	12/31/2018
Period Length		12 Months	12 Months	12 Months
Net Income		-44.91	-54.81	-63.60
Depreciation/Depletion		1.62	1.20	0.54
Amortization				
Deferred Taxes				0.00
Non-Cash Items		11.63	11.53	5.05
Changes in Working Capital		-6.21	-6.63	12.47
Cash from Operating Activities		-37.86	-48.71	-45.53
Capital Expenditures		-1.04	-3.67	-5.99
Other Investing Cash Flow Items				0.00
Cash from Investing Activities		-26.04	-3.67	-5.99
Financing Cash Flow Items			-2.83	-3.01
Total Cash Dividends Paid				
Issuance (Retirement) of Stock		97.75	40.25	46.62
Issuance (Retirement) of Debt				
Cash from Financing Activities		94.99	37.41	43.62
Foreign Exchange Effects		-0.13	-0.09	-0.52
Net Cash - Beginning Balance			59.27	67.69
Net Cash - Ending Balance			44.21	59.27
Net Change in Cash		30.96	-15.06	-8.42
Cash Interest Paid		1.73	2.03	1.98
Cash Taxes Paid				

Figure 5. VBI Vaccines Inc. Cash Flow. (Source: finviz.com as of 11/03/2020)

Disclaimer: The above material has no intention, in no way to provide any advice for trading of mentioned stock. The written material it represents facts accumulated from references and my private opinion. For clarity, as of today, I own VBIV stocks. The stock information was retrieved from Yahoo and analyzed by me in Python 3.8.

References

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