

Protalix BioTherapeutics, Inc.

(PLX - NYSE)

2021 Results

Based on our DCF model and a 15% discount rate, Protalix is valued at approximately \$11.00 per share. Our model applies an 80% probability of ultimate approval and commercialization for PRX-102 in Fabry Disease. The model includes contributions from a global commercialization effort.

Current Price (3/30/2022) **\$1.05**
Valuation \$11.00

OUTLOOK

Protalix is a clinical and commercial pharmaceutical company using its proprietary ProCellEx plant-based expression system to produce therapeutic proteins for global markets. The company has one commercialized product, Eleyso that is marketed by Fiocruz in Brazil & Pfizer in the rest of the world for Gaucher Disease. Candidates include PRX-102 for Fabry Disease which received a CRL due to the FDA's inability to perform an on-site inspection. If eventually approved, Chiesi Rare Disease will commercialize the product globally.

Protalix has additional candidates in earlier stages of development including PRX-115 for the treatment of refractory gout and PRX-119, a long action DNase I for the treatment of NETs-related diseases.

PRX-102 has been submitted to the EMA for approval and is expected to be resubmitted to the FDA in 2H:22. We expect PRX-102 to be approved and sales related payments to be received in 2023. PRX-102 can fill an unmet need with several improvements over the market leader and is expected to command a premium vs. existing products. Eleyso should show moderate growth over the next quarters as partners continue their commercialization efforts. Profits from revenue generating products are expected to be invested in new candidates in coming years.

SUMMARY DATA

52-Week High **\$6.64**
 52-Week Low **\$0.70**
 One-Year Return (%) **-76.5**
 Beta **2.2**
 Average Daily Volume (sh) **300,652**

Shares Outstanding (mil) **46.3**
 Market Capitalization (\$mil) **48.6**
 Short Interest Ratio (days) **21.0**
 Institutional Ownership (%) **7.8**
 Insider Ownership (%) **17.9**

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 2021 Estimate **N/A**
 P/E using 2022 Estimate **N/A**

Zacks Rank **N/A**

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

ZACKS ESTIMATES

Revenue

(In millions of USD)

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2020	\$21.6 A	\$11.0 A	\$10.8 A	\$19.5 A	\$62.9 A
2021	\$11.3 A	\$6.4 A	\$12.0 A	\$8.5 A	\$38.4 A
2022					\$24.5 E
2023					\$68.5 E

Earnings per Share

	Q1	Q2	Q3	Q4	Year
	(Mar)	(Jun)	(Sep)	(Dec)	(Dec)
2020	\$0.10 A	-\$0.13 A	-\$0.14 A	\$0.01 A	-\$0.22 A
2021	-\$0.14 A	-\$0.25 A	-\$0.09 A	-\$0.15 A	-\$0.63 A
2022					-\$0.66 E
2023					\$0.29 E

WHAT'S NEW

Fourth Quarter and Fiscal Year 2021 Financial and Operational Review

Protalix Biotherapeutics, Inc. (NYSE: PLX) announced its 2021 financial and operational results in a March 31, 2022 [press release](#) and filing of Form [10-K](#). Promulgation of the reports was followed by a pre-market [conference call](#) which discussed recent achievements. Final results for the BRIGHT study were released a few weeks prior and Protalix expects topline data from the BALANCE study to be released next week.

Operational highlights for the quarter ended December 31st and to-date include:

- [Results](#) from Type A meeting - October 2021
- Final [dosing](#) of last patient in BALANCE - October 2021
- 2021 [Letter to Stockholders](#) - December 2022
- MAA [submitted](#) - February 2022
- Final [results](#) of Phase III BRIGHT - March 2022

In the financial realm, Protalix generated total revenues of \$38.4 million, resulting in net loss of (\$27.6) million or (\$0.62) per share.

For the fiscal year ending December 31, 2021 compared to the same ending December 31, 2020:

- Revenues from selling goods were \$16.7 million, up 3% from \$16.2 million on an increase of \$2.1 million in sales of drug substance to Pfizer, partially offset by a \$1.6 million decrease in sales of drug to Brazil;
- Revenues from license and R&D services totaled \$21.6 million, down 54% from \$46.7 million, sourced mainly from the Chiesi Agreement with the decrease primarily due to lower costs incurred;
- Net research and development expenses were \$29.7 million, down 22% from \$38.2 million with the decrease primarily due to the completion of the three Phase III clinical trials of PRX-102;
- Selling, general and administrative expenses totaled \$12.7 million, up 14% from \$11.1 million, resulting from an increase in corporate costs of \$1.7 million related mainly to insurance;
- Net financial expenses were \$7.1 million down 23% from \$9.2 million. The decrease resulted primarily from the exchange of Protalix' 2021 notes; \$0.7 million decrease in interest expenses, \$0.8 million decrease in amortization of debt discount, and \$1.3 million decrease in related expenses offset by a \$0.8 million loss on extinguishment related to the exchanges;
- Net loss was (\$27.6) million vs net loss of (\$6.5) million, or (\$0.62) per share versus (\$0.22) per share;

Cash and equivalents balance including short-term bank deposits on December 31, 2021 totaled \$39.0 million versus \$38.5 at the end of 2020. Cash burn for the year was (\$11.7) million, offset by \$12.1 million in net financing cash flows generated from common stock and warrant issuance. Proceeds from the capital raise in the first quarter were offset in later periods by costs related to the extinguishment of convertible notes and payment for the promissory note.

Phase III BRIGHT Final Results

On March 18, 2022, Protalix [announced](#) final results for its Phase III clinical trial BRIGHT of PRX-102 in Fabry disease. The results indicated that intravenous (IV) 2 mg/kg PRX-102 administered once every four weeks was well tolerated and that disease remained stable as evidenced by eGFR and plasma lyso-Gb₃ levels. Fabry patients typically receive bi-weekly dosing. PRX-102's unique pegylation that was hypothesized to allow longer duration in the body is now clinically evidenced to support the option of dosing once every four weeks, a significant relief of patient burden. BRIGHT ([NCT03180840](#)) was a multicenter, multinational open-label, switch-over study designed to evaluate the safety, efficacy and pharmacokinetics of treatment with IV 2 mg/kg of PRX-102 administered every four weeks for 52 weeks. The study enrolled 30 adult patients (24 males and 6 females) who previously received an approved enzyme replacement therapy (ERT) for at least three years on a stable dose administered every two weeks, of which 28 were evaluable. Overall, 33 of 182 total treatment-emergent adverse events (TEAEs), reported in nine (30.0%) patients, were considered treatment related; all were mild or moderate in severity and the majority were resolved by the end of the study. There were no serious or severe treatment-related TEAEs and no TEAEs

led to death or study withdrawal. Of the treatment-related TEAEs, 27 were infusion-related reactions (IRRs) and the remainder were single events of diarrhea, erythema, fatigue, influenza-like illness, increased urine protein/creatinine ratio, and urine positive for white blood cells. The 27 IRRs were reported in five (16.7%) patients, all male. All IRRs occurred during the infusion or within two hours post-infusion; no events were recorded between two- and 24-hours post-infusion. None of the patients without anti-drug antibodies (ADAs) at screening developed treatment-induced ADAs following the switch to PRX-102 treatment, indicating favorable lack of immunogenicity. Plasma lyso-Gb₃ concentrations remained stable during the study with a mean change (\pm SE) of 3.01 nM (0.94) from baseline (19.36 nM \pm 3.35) to Week 52 (22.23 \pm 3.60 nM). Mean absolute eGFR values were stable during the 52-week treatment period, with a mean change from baseline of -1.27 mL/min/1.73 m²(1.39). Mean (SE) eGFR slope, at the end of the study, for the overall population, was -2.92 (1.05) mL/min/1.73m²/year indicating stability. Long-term data continues to be collected in the extension study ([NCT03614234](#)).

MAA Submission

On February 24, 2022, Protalix and partner Chiesi Global Rare Disease [announced](#) the submission of a Marketing Authorization Application (MAA) to the European Medicines Agency (EMA) for PRX-102 in treatment of adults with Fabry disease. The application was validated, confirming that all essential elements required for scientific assessment were included in the application. The MAA included data from both PRX-102's completed and ongoing trials: 12-month interim data from BALANCE, data from BRIDGE and BRIGHT, Phase I/II trial data in naïve/untreated patients, and from extension studies using bi-weekly 1 mg/kg dosing. If the MAA approved, PRX-102 will be marketable in all member nations of the European Union. Scientific evaluation of the application will be conducted by the Committee for Medicinal Products for Human Use (CHMP). Upon review completion, the CHMP will issue an opinion on whether PRX-102 may be authorized. This opinion is then expected to be adopted, and the application approved, by the European Commission. Altogether, the scientific evaluation and EC decision are expected to take up to 210 and 67 days, respectively, for a total of approximately three quarters.

2021 Letter to Stockholders

Protalix CEO, Dror Bashan, issued a [2021 Letter to Stockholders](#) on December 22, 2021. In the Letter, Bashan highlighted Protalix' 2021 milestones. On the regulatory front, Protalix and partner Chiesi completed a Type A meeting in October with the FDA for the BLA for PRX-102. With FDA guidance, the BLA resubmission is now planned for 2H:22. Progress was made toward a Marketing Authorization Application with the EMA¹ and submission is planned for 1Q:22. On the clinical front, the last patient in Phase III BALANCE trial received their final dose in October 2021. Data for BALANCE is slated to be released in 2Q:22. Topline results were also announced for Phase III BRIGHT, with results supporting a less-frequent dosing scheme of 2 mg/kg IV infusion every four weeks, a treatment regime that can reduce patient burden. Finally, Bashan recalled the exchange of Protalix' 7.50% Senior Secured Convertible Notes due 2021 for a combination of cash and new notes. All 2021 Notes were extinguished, and Protalix raised almost \$50 million in new equity. Protalix also has an ATM offering program in place. Bashan concluded with optimistic remarks about Protalix' 2022 outlook.

BALANCE Last Patient, Last Dose

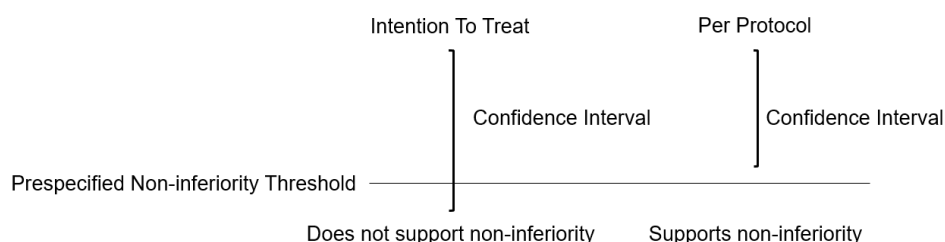
Protalix provided an [update](#) for its BALANCE study on October 15th, informing stakeholders that the last patient had received their final dose. BALANCE is Protalix' Phase III clinical trial of PRX-102 in Fabry disease. The milestone is significant as Protalix prepares resubmission for FDA approval, which will now include final two-year analyses from the BALANCE trial. Now that the final patient has received their final dose, for a total of 72 patients completed, the trial will conclude and proceed to database lock and analysis, after which final results will become available. The long-term extension studies continue with a significant majority (>90%) of patients voluntarily opting into the extension. Topline results from the BALANCE study are expected to be released in the first full week of April 2022.

On June 2, 2021, Protalix and development partner Chiesi Global Rare Diseases provided an [update](#) regarding its BALANCE clinical trial of Protalix' candidate pegunigalsidase alfa (PRX-102) and hosted a conference call and [webcast](#) the same morning to discuss results. Featured on the call was [Dr. Ulrich Granzer](#), a consultant to Protalix with specialization in drug development and regulatory affairs.

Protalix' interim analysis stated that the confidence interval for the intent to treat population fell below the non-inferiority threshold while the per protocol group population confidence interval was above the threshold. Neither the mean nor the range of the confidence interval were quantified as the data remains blinded.

¹ European Medicines Agency

Exhibit I - ITT and PP Confidence Intervals²



PRX-102 is currently being evaluated in the Phase III BALANCE trial for Fabry Disease and is Protalix' pegylated enzyme that offers enhanced longevity in the body. The pegylation provides for an extended therapeutic effect which may allow for less frequent dosing compared with current standard of care thereby reducing patient burden. The BALANCE study is a 24-month, randomized, double-blind, active control study designed to evaluate safety and efficacy of 1 mg/kg PRX-102 dosed every two weeks versus agalsidase beta (Fabrazyme). The study enrolled 78 patients who were randomized in a 2:1 ratio.

The primary endpoint evaluated in the interim analysis was comparison of mean annualized change of estimated glomerular filtration rate (eGFR) after completion of 12 months of treatment between the two arms (PRX-102 and Fabrazyme). Efficacy analysis was conducted on both Intention to Treat (ITT) and Per Protocol (PP) patient subgroups. ITT patients consisted of 77 randomized patients who received at least one dose while PP patients were those who completed at least 12 months of treatment with no major protocol violations (74 patients).

Interim results, based on analysis of the ITT population, did not achieve non-inferiority, as the lower bound of the confidence interval was not above the pre-specified threshold. The confidence interval for the PP populations, however, was above the non-inferiority margin. Two patients discontinued the study due to treatment emergent adverse events (TEAE). One of the two discontinued due to related adverse events. No deaths were registered. Overall, the safety data was favorable and appears consistent with previous clinical work on PRX-102. Final data for the trial is anticipated to be unblinded in 2Q:22.

Type A Meeting Update

On October 11th, Protalix [updated](#) stakeholders on the regulatory pathway forward for PRX-102. The company is advancing the candidate indicated for Fabry Disease in both the US and the EU. In the United States, PRX-102 was submitted to the FDA in May 2020 using the accelerated approval pathway. The FDA returned a complete response letter (CRL) in April 2021. Following an internal review of the FDA's response, Protalix requested a Type A meeting with the agency to obtain additional information on the deficiencies listed in the CRL and to identify items required for a resubmission to the agency. In an October [press release](#), details regarding the process were provided. The [Type A meeting](#) was held on September 9th and provided written notes regarding resubmission requirements. The FDA noted that the regulatory environment had changed since the original submission of PRX-102 with the March 2021 [grant](#) of traditional approval to Fabrazyme. Under these new circumstances, additional data was requested and the resubmission will include the final two-year analyses of the Phase III BALANCE clinical trial.

The October press release also provided an update on progress with the European Medicines Agency (EMA). On October 8, Protalix, Chiesi and the EMA rapporteur and co-rapporteur held a meeting to discuss the planned marketing authorization application (MAA) submission. The EMA representatives were generally supportive of the submission that occurred in February 2022.

Estimated timeline for FDA resubmission and related events:

- Type A Meeting - September 2021
- Type A Meeting Notes - October 2021
- Last patient completion of BALANCE trial - October 2021
- Availability of full data package for BALANCE - 2H:22
- Resubmission of BLA for PRX-102 - 2H:22

² Source: Created by Zacks Small Cap Research Analysts

- On-site inspection of drug substance and/or fill and finish facilities - 2H:22
- Completion of 6-month resubmission review - year-end 2022
- PRX-102 US commercialization - 2023

Exhibit II – Protalix Pipeline³

	Discovery and Preclinical	Phase 1	Phase 2	Phase 3	Marketing Application
pegunigalsidase alfa (PRX-102)	Fabry Disease				
aldornase alfa (PRX-110)	Various Respiratory Indications				
uricase (PRX-115)	Refractory Gout				
Long Acting (LA) DNase I (PRX-119)	NETs Related Diseases				

Milestones

- BRIDGE final results - 4Q:20
- BRIGHT top line results - February 2021
- PRX-102 Target Action Date - April 27, 2021
- PRX-102 CRL Announced - April 28, 2021
- Receipt of notes from FDA regarding CRL - May 2021
- Oral presentation on PRX-102 in females by Dr. Camilla Tøndel at ERA-EDTA Congress - June 2021
- BALANCE Interim results - June 2021
- ATM Agreement with HCW - July 2021
- Request Type A meeting regarding PRX-102 - August 2021
- Attend Type A meeting regarding PRX-102 - September 2021
- Final dosing of last patient in BALANCE trial - October 2021
- EMA submission of PRX-102 - 1Q:22
- BALANCE final unblinded data release - 2Q:22
- Resubmission of BLA for PRX-102 - 2H:22
- On-site inspection of drug substance and/or fill and finish facilities - 2H:22
- Completion of FDA 6-month resubmission review - year-end 2022
- Preclinical and toxicology work for PRX-115 - 2022
- Preclinical and toxicology work for PRX-119 - 2022
- EMA approval and EU commercialization of PRX-102 - 1H:23
- IND submission for PRX-115 - 2023
- IND submission for PRX-119 - 2023
- PRX-102 commercialization - 2023

³ Source: Protalix FY:21 Form 10-K

Summary

Protalix [announced](#) its 2021 financial and operational results in a March 30, 2022 press release and filing of Form [10-K](#), and hosted a [conference call](#) which discussed recent achievements and looked forward to a number of material events.

Protalix generated total revenues of \$38.4 million, resulting in net loss of (\$27.6) million or (\$0.62) per share. Cash and equivalents balance including short-term bank deposits on December 31, 2021 totaled \$39.0 million versus \$38.5 at the end of 2020 which is expected to be sufficient to support operations until 3Q:23. Cash burn for the year was (\$11.7) million, offset by \$12.1 million in net financing cash flows.

The PRX-102 studies have produced readouts providing additional support for the safety, efficacy and potential for superiority compared to Fabrazyme. BRIGHT results were released just a few weeks ago and topline for the important BALANCE study is expected in the next several days. Results from the BALANCE study will be included with the upcoming 2H:22 resubmission of the BLA to the FDA for PRX-102. On the other side of the Atlantic, Protalix submitted its MAA to the EMA and should see a response from the European agency around year end. Based on our forecasts, timeline and estimates, we maintain our target price of \$11.00 per share.

PROJECTED FINANCIALS

Protalix BioTherapeutics, Inc. - Income Statement⁴

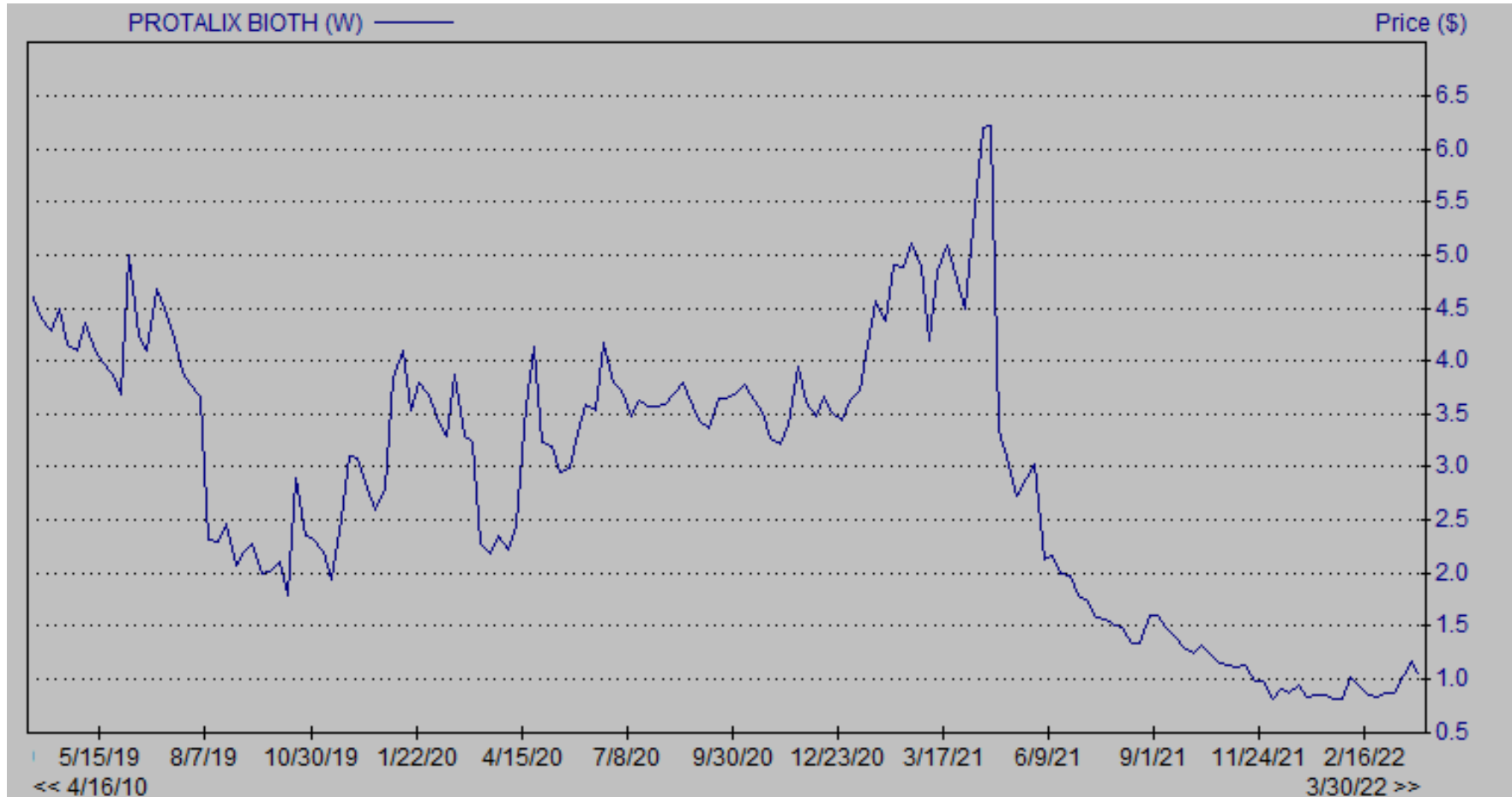
Protalix Biotherapeutics	2020 A	Q1 A	Q2 A	Q3 A	Q4 A	2021 A	2022 E	2023 E
Total Revenues (\$US '000)	\$62,898	\$11,320	\$6,427	\$12,054	\$8,549	\$38,350	\$24,454	\$68,488
YOY Growth	15%	-48%	-41%	12%	-56%	-39%	-36%	180%
Cost of Revenues	\$10,873	\$4,765	\$4,733	\$3,703	\$3,148	\$16,349	\$11,449	\$13,477
Research & Development	\$38,167	\$7,122	\$7,689	\$7,282	\$7,641	\$29,734	\$31,480	\$28,000
Selling, General & Admin	\$11,148	\$3,138	\$3,171	\$2,954	\$3,466	\$12,729	\$12,650	\$12,350
Income from operations	\$2,710	(\$3,705)	(\$9,166)	(\$1,885)	(\$5,706)	(\$20,462)	(\$31,125)	\$14,661
Operating Margin	4%	-33%	-143%	-16%	-67%	-53%	-127%	21%
Financial Expenses	\$9,671	\$2,156	\$2,203	\$2,410	\$752	\$7,521	\$0	\$0
Financial Income	(\$438)	(\$335)	(\$128)	(\$96)	\$158	(\$401)	(\$200)	(\$200)
Pre-Tax Income	(\$6,523)	(\$5,475)	(\$11,241)	(\$4,199)	(\$6,667)	(\$27,582)	(\$30,925)	\$14,861
Net Income	(\$6,523)	(\$5,475)	(\$11,241)	(\$4,199)	(\$6,667)	(\$27,582)	(\$30,925)	\$14,861
Net Margin	-10%	-48%	-175%	-35%	-78%	-72%	-126%	22%
Reported EPS	(\$0.22)	(\$0.14)	(\$0.25)	(\$0.09)	(\$0.15)	(\$0.63)	(\$0.66)	\$0.29
Basic Shares Outstanding	29,148	39,934	45,437	45,557	45,557	44,121	47,120	51,000

Source: Company Filing // Zacks Investment Research, Inc. Estimates

⁴ Financial statement information presents data as originally reported.

HISTORICAL STOCK PRICE

Protalix BioTherapeutics, Inc. – Share Price Chart⁵



⁵ Source: Zacks Research System

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