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Dyadic International, Inc. (DYAI - OTCQX)

Collaborations Increase Target to $7

Based on our DCF model and a 15% discount rate, Dyadic International is valued at approximately $7.00 per share. We assume a 20% probability of ultimate success for C1, based on historical drug approval rates and quantity of projects in the pipeline. The model assumes revenue contributions from sources worldwide.

Current Price (3/27/2019)	$3.20
Valuation	**$7.00**

OUTLOOK

Dyadic has developed a gene expression system based on C1, its proprietary fungal expression system that can produce a variety of recombinant proteins. C1 is already commercial in industrial applications and is in development for use in the development and production of pharmaceutical grade proteins. C1 exhibits potential to economically produce biologic vaccines, virus like particles, antibodies, Fc-fusion, enzymes, AAVs and other biopharmaceuticals.

In 2015, the company sold its industrial business to DuPont for $75 million and retained the exclusive right to sublicense C1 for use in animal and human pharmaceutical applications. Proceeds from the DuPont sale provided cash for share repurchase and further development of the C1 platform for production of biologics. Additional R&D funding comes from partners. Dyadic is currently working with several biopharmaceutical companies and government organizations to validate the technology.

In the near term, we expect growing R&D revenue as additional partners are added. By 2020, we anticipate first sales-related revenues from C1, which represent licensing fees, upfront payments, milestones and royalties.

SUMMARY DATA

52-Week High	**3.27**
52-Week Low	**1.40**
One-Year Return (%)	**119**
Beta	**0.05**
Average Daily Volume (sh)	**45,657**
Shares Outstanding (mil)	**26.7**
Market Capitalization ($mil)	**85.4**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**6.6**
Insider Ownership (%)	**45.5**
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 2018 Estimate	**N/A**
P/E using 2019 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 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2017	$0.1 A	$0.2 A	$0.3 A	$0.2 A	$0.8 A
2018	$0.2 A	$0.2 A	$0.3 A	$0.7 A	$1.3 A
2019					$1.4 E
2020					$2.2 E

Earnings per Share

	Q1	Q2	Q3	Q4	Year
2017	$0.07 A	-$0.05 A	-$0.05 A	-$0.05 A	-$0.07 A
2018	-$0.07 A	-$0.06 A	-$0.06 A	-$0.02 A	-$0.21 A
2019					-$0.28 E
2020					-$0.32 E

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WHAT'S NEW

Fiscal Year 2018

Dyadic International Inc. (OTCQX: DYAI) released full year 2018 financial and operational results on March 27, 2019. Revenues were $1.3 million and represented research and development proceeds from partners working to develop C1. Total expenses were $8.9 million and net loss was ($5.7) million after adjusting for interest income. Loss per share was ($0.21). Total cash and investments were $41.5 million at year end, equivalent to ~$1.50 per share.

Highlights for 2018 and to date include the transition to a full SEC reporting company, eleven new funded proof of concept research collaborations and an application to become listed on the NASDAQ. On the operational and scientific front, the company launched new programs to develop adeno-associated viral vectors (AAVs), metabolites, certolizumab and nivolumab. Advances were also made with the protease deletion and glycoengineering of C1, which has led to improved expression volumes and further humanization of glycoproteins.

Revenues for the year increased 71% to $1.3 million and exceeded our estimate of $800,000. The greater amount reflects additional recognized partnerships in the fourth quarter. Total expenses increased 13% to $8.9 million. Total research and development was up 28% on additional internal research activities with third-party CROs, and BDI. General and administrative expenses fell $0.5 million compared to the year before to $4.5 million on lower litigation and legal costs, share based compensation, partially offset by higher business development and investor relations costs and higher SEC registration costs. Net loss was ($5.7) million for the period, compared to ($2.1) million in 2017. On a per share basis, net loss was ($0.21) compared to ($0.07) in the prior year.

The company has guided for cash burn of ($8) to ($10) million in 2019, which could be offset by contributions from additional deals or increased in magnitude by a new wholly-owned program launch similar to what was accomplished with AAV, nivolumab or certolizumab.

Research Collaborations

During 2018, Dyadic entered into nine proof of concept research collaborations that were fully funded by participating partners. These included Sanofi-Aventis, Mitsubishi Tanabe Pharmaceuticals, Israel Institute of Biologic Research (IIBR), a top twenty pharmaceutical company and two top tier academic institutions: Structural Genomics Consortium (SGC) (a part of the University of Oxford) and the Fraunhofer USA Center for Molecular Biotechnology. Two additional collaborations were added in the first quarter of 2019 with top 25 pharmaceutical companies, one of which is in animal health.

Dyadic is in discussions with additional partners and we expect to further collaborations to be announced. We believe that there could be an accelerating rate to additions as momentum builds and companies that are not now participating do not want to be left out. The company has outlined a variety of structures that would work for them to build collaborations including an access fee (upfront cash), research milestones, commercial milestones and royalties, equity stake in the company, partnerships or a combination of these structures.

We are optimistic on research collaborations with large pharmaceutical companies as it allows potential acquirers of this technology evaluate its potential and have a stake in its success. With numerous interested parties invested in developing the technology we anticipate that if a bidding war begins, substantial value will accrue to Dyadic shareholders.

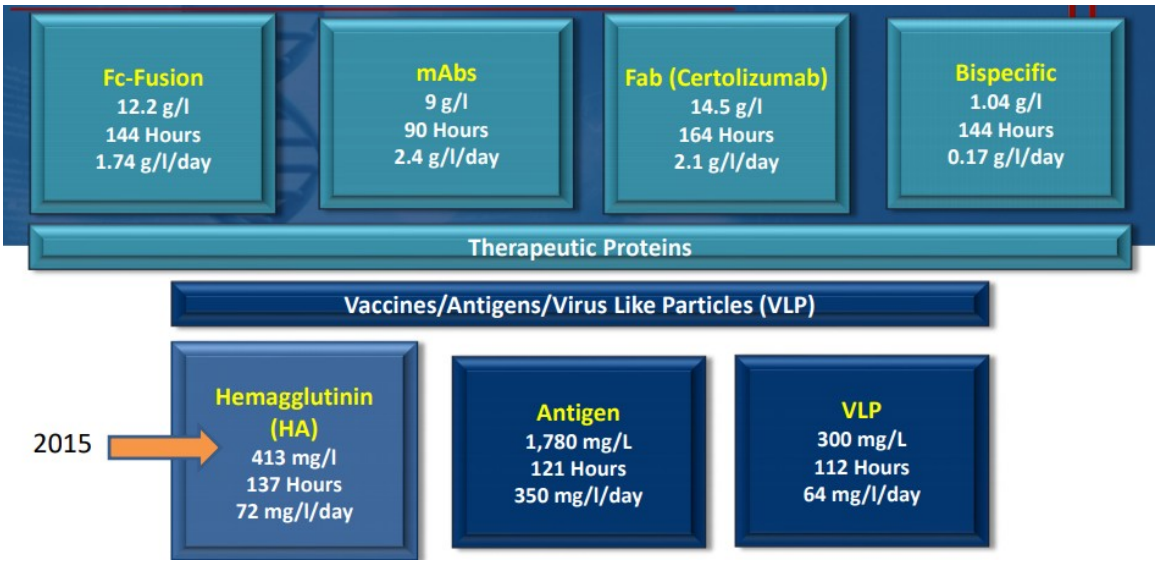
Form 10 and NASDAQ Listing

Dyadic International Inc. (OTCQX: DYAI) submitted a press release in mid-February indicating that their Form 10 was effective. With the March 27th earnings report, the company has also now filed its first Form 10-K. Dyadic will now pursue a NASDAQ listing and has filed an application to be listed on the NASDAQ Capital Markets exchange. Certain share price thresholds are required for listing, including a price in excess of $2.00 per share for 90 consecutive trading days or a price in excess of $3.00 per share for five consecutive trading days. As of March 25, 2019, Dyadic had satisfied the five day requirement. Also on March 25, the NASDAQ submitted an additional round of questions to management. Guidance was not available for timing, but when all questions are answered and the NASDAQ is able to fully review the latest 10-K, we anticipate that the uplisting will occur shortly thereafter.

Other Highlights

Dyadic continues to improve the productivity and quality of output from C1 and noted the ability of the expression system to produce certolizumab at a rate of 2.6 grams per liter per day. This opens up the opportunity for a partner or acquirer to develop a biosimilar for this drug in a market that the company pegs at $1.4 billion per year. The company also demonstrated high productivity of 17 times (1780 mg/l) the original target productivity of 100 mg/l of an antigen against the Schmallenberg virus in work performed with the Zoonoses Anticipation and Preparedness Initiative (ZAPI) project. This dramatic increase from the last update of 723 mg/l was achieved through additional protease deletions. Other advances with respect to developing the protease library in excess of 50 entries and glycosylation were also mentioned.

Exhibit I – C1 Expression Levels



Milestones

Dyadic has performed well over the last year adding eleven new collaborations over the last 15 months. The company was also able to achieve its objectives with respect to becoming a fully reporting SEC company and satisfying the requirements to be listed on the NASDAQ. Looking forward in 2019, we anticipate the following milestones:

- NASDAQ Listing – Mid-year 2019
- Advances in glycoengineering of C1
- Additional protease deletions
- Advancements in nivolumab development
- Comparison work completed for certolizumab vs. Cimzia
- Additional collaborations
- Potential cash inflow from licensing or development arrangement

Valuation

Since our initiation, Dyadic has continued to make impressive progress on all fronts, adding several additional partners, which not only provide research and development funding but also become potential revenue generating entities as they continue to advance C1 to commercialization. With additional partners and additional value being added, we see the likelihood of C1 commercialization increasing. We raise our probability of success from 15% to 20% and also shift our discounted cash flow model forward one year which raises our target price from $4.50 to $7.00. We also emphasize the relatively low risk nature of Dyadic, which has sufficient cash on its balance sheet to not only fund its programs but also to repurchase shares. Additionally, a significant proportion of R&D is funded by partners. Greater visibility of the company should accrue as it moves up to the NASDAQ providing the basis for a liquidity premium.

Summary

Dyadic is advancing its C1 platform in the protein expression industry and is also seeking additional avenues to pursue such as primary and secondary metabolites and adeno-associated viral vectors. While the current industry standard largely employs Chinese Hamster Ovary (CHO) and *E. coli* to produce the majority of pharmaceutical proteins, the improved profile of C1 can increase productivity and quality of output relative to these entrenched systems.

The details provided on the conference call demonstrate continued advancement on a broad portfolio of projects that will likely yield commercialized products, licence revenues and potentially a buyout. We see a substantial level of value based on a broad portfolio of options and an exciting technology that can revolutionize the protein expression industry. Future favorable catalysts include the addition of more collaborators, achieving output milestones and entering the clinical trial process. We see the addition of new partners and the high likelihood of even more joining Dyadic in the near term as strong evidence of value and raise our target price accordingly. In conjunction with rolling our NPV valuation forward and increasing the probability of ultimate success, we raise our target price to $7.00 per share.

PROJECTED FINANCIALS

Dyadic International, Inc. - Income Statement

Dyadic International, Inc.	2017 A	Q1 A	Q2 A	Q3 A	Q4 A	2018 A	2019 E	2020 E
Total Revenues	**$0.8**	**$0.2**	**$0.2**	**$0.3**	**$0.7**	**$1.3**	**$1.4**	**$2.2**
YOY Growth	*28%*	*52%*	*-22%*	*-3%*	*338%*	*71%*	*8%*	*57%*
Cost of R&D Revenue	$0.7	$0.1	$0.1	$0.2	$0.5	$1.0	$1.1	$1.8
Provision for Contract Losses	$0.2	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
R&D	$1.8	$0.6	$0.6	$0.5	$0.4	$2.1	$2.8	$3.2
R&D Related Party	$0.4	$0.4	$0.3	$0.3	$0.2	$1.2	$1.6	$1.8
G&A	$5.0	$1.3	$0.9	$1.0	$1.3	$4.5	$4.2	$4.6
Foreign Currency Exchange	($0.2)	$0.0	($0.0)	$0.0	$0.0	$0.0	$0.0	$0.0
Income from operations	($7.1)	($2.2)	($1.8)	($1.8)	($1.8)	($7.6)	($8.3)	($9.1)
Operating Margin	*-940%*	*-1210%*	*-1126%*	*-677%*	*-257%*	*-586%*	*-594%*	*-415%*
Interest Income	$0.6	$0.2	$0.2	$0.2	$0.2	$0.9	$0.7	$0.6
Other	$4.4	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0
Pre-Tax Income	($2.2)	($2.0)	($1.6)	($1.5)	($1.5)	($6.7)	($7.6)	($8.5)
Provision for Income Tax	($0.1)	$0.0	$0.0	$0.0	($1.0)	($1.0)	$0.0	$0.0
Tax Rate	*3%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*
Net Income	**($2.1)**	**($2.0)**	**($1.6)**	**($1.5)**	**($0.5)**	**($5.7)**	**($7.6)**	**($8.5)**
Net Margin	*-282%*	*-1108%*	*-991%*	*-585%*	*-74%*	*-439%*	*-543%*	*-386%*
Reported EPS	**($0.07)**	**($0.07)**	**($0.06)**	**($0.06)**	**($0.02)**	**($0.21)**	**($0.28)**	**($0.32)**
YOY Growth	*-25.2%*	*-202.8%*	*21.2%*	*5.1%*	*-59.7%*	*178%*	*38%*	
Shares Outstanding	28.92	28.16	28.06	27.77	26.70	27.67	26.70	26.70

Source: Company Filing // Zacks Investment R

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HISTORICAL STOCK PRICE

Dyadic International, Inc. – Share Price Chart



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