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The Case Against Tarveda: An Open Letter to Organovo Shareholders

- Organovo chose to shut down rather than find a way forward itself with bioprinting
- Organovo is proposing a reverse merger with Tarveda, a non-strategic option that is a complete investor mismatch; Tarveda, which is in the cancer-drug space, would not use the Organovo bioprinting intellectual property at all
- After more than \$100 million in investment, Tarveda stumbled and has not been successful in raising venture capital (VC) funding or executing on an initial public offering (IPO) in a bull biotech market
- The likelihood of the post-merger company being successful in the future is slim; per investment bankers familiar with the situation, approximately 20% of companies in this position have been successful
- Organovo shareholders can take action and contact the company now to oppose the merger; if Organovo moves forward anyway, a vote against this deal will stop it from taking effect and causing a massive selloff

SAN DIEGO—Organovo Founder Keith Murphy sent the following letter to company shareholders:

Organovo, pointing to hurdles and timeline changes in the development of its human liver tissue for transplant, announced in August 2019 that it would seek strategic alternatives. For those unfamiliar with that process, it basically means that the Board has decided the company has hit a wall and needs to either sell itself or come up with a creative option to move forward.

On December 16, 2019, Organovo announced that its strategic alternatives review had identified Tarveda Therapeutics as its chosen merger partner. Unfortunately, Tarveda was exactly what Organovo shareholders had to fear most. Organovo would basically turn their cash and the trading stock over to Tarveda, meaning the company would stop developing bioprinting technology completely. Tarveda is a company completely unrelated to Organovo's bioprinting business. Worse, Tarveda is down on its luck and with limited other financing options. The key things Organovo shareholders need to know about Tarveda are:

- Tarveda is a mismatch with Organovo's shareholder base that would leave investors running for the exits; and
- Tarveda is a company with a technology so unexciting to its own previous investors that it has not been able to raise additional VC funding or execute an IPO in a bull biotech market and is now seeking other financing options.

Because of the problems with Tarveda, both as a company and as a choice for a merger given Organovo's shareholder base, Organovo stockholders must prepare to vote against the Tarveda merger and force Organovo's Board to go back to the beginning of the process and deliver what the shareholders demand: a deal that makes use of Organovo's unique bioprinting technology, not a deal that bails out the VC investors of a failing cancer drug company.

Tarveda is a company headquartered in Massachusetts that's had greater than \$113 million invested in it according to Crunchbase. It currently stands in early-stage clinical trials, with its most advanced program listed as a combined Phase 1/2a. That's not a lot of progress for the kind of money invested to date in Tarveda, and it will take millions more to get pivotal clinical trial data. It will likely take hundreds of millions more and significant investor dilution to move Tarveda forward.

But much worse is that Tarveda is looking for its capital through a merger with Organovo. Typically, a company at this stage is headed to one of two steps next: 1) additional VC funding to push it forward into Phase 2 data, or 2) an IPO for its next financing. Either of those steps, which have been taken by many biotech companies in 2019 because the overall finance environment was very supportive, would have indicated significant promise. Unfortunately, that's the kind of potential that Tarveda doesn't have.

Apparently, its VCs agree that Tarveda lacks potential: they themselves are not making the required investment to proceed with further clinical trials. They once gave it ample funding but have not chosen to provide the needed funds for its next phase. A company with solid scientific and clinical trial results would be a no-brainer for additional VC funding at this stage, but Tarveda apparently is not that in the judgment of the very people who initially launched it. They are not willing to risk fully funding Tarveda to its next clinical milestone and are looking to Organovo shareholders to do that.

Furthermore, Tarveda has not attracted investment dollars through an IPO. The 2019 biotech market has been both active and successful, with companies like Cortexyme, 10X Genomics, and Oyster Point Pharma finding success. Tarveda stands in stark contrast to such success stories.

Tarveda instead has been shopping for a reverse merger type deal as a way to back into being a public company for some time. In fact, they appear on lists of companies that Wall Street investment bankers have prepared that are looking for this kind of deal – companies that can't get a traditional IPO done and have few other financing options. Prior to entering into a deal with Organovo, Tarveda was running out of money. As of mid-October, per the S-4 filing on December 23, their money on hand was about three months of operations. They likely would have shut down in the near term, but the Organovo deal is a lifeline for them.

Organovo shareholders don't need to dig deeply into Tarveda's science to get the picture on how unattractive it is, because the above facts form a clear pattern. Tarveda's VCs are no longer willing to provide the company with its needed funding (except a token amount to assure they can complete the Organovo deal, which allows the VCs to unlock hundreds of millions of dollars in liquidity), and the company can't get IPO investors to bite either. If these groups who have looked hardest at Tarveda and can best judge the future of its science aren't interested, how can Organovo's Board possibly ask Organovo shareholders to place faith in its chances of success?

Investment bankers familiar with the situation confirm that they see Tarveda the same way described above: a private company that had good VC backing, but that the VCs likely do not see as worthy of further investment due to unpromising results thus far. These bankers – who know the biotech space well and are familiar with and often run the type of transaction Organovo and Tarveda are seeking to close – see this merger as highly unpromising.

Per statistics from investment banks, comparable deals to this merger result in a successful turnaround for a company like Tarveda only about 20% of the time, with the other 80% of cases being situations where investors suffer significant losses as the stock drops and dilution piles up. The bankers note that the biggest challenge for such deals is shareholder base mismatch – such deals fail because there is a significant exodus out of the stock after the merger. This departure is driven by the fact that the investors for the old company don't have any ties or particular interest in the business of the new company.

The investor mismatch problem is uniquely acute in the case of Organovo. While many biotech companies have an investor base that might have interest in a different therapeutic drug play, the majority of Organovo's shareholders care more deeply about the core technology of bioprinting and want to see it succeed. They put their money to work with a belief that bioprinting would lead to both impressive advances as well as investment returns.

Organovo's Board failed the shareholders on investment returns, and now proposes to kick the shareholders again by denying them the opportunity to have their money invested in bioprinting at all. The Board is proposing this despite hearing clearly from investors that they wanted Organovo's Board to prioritize a continuing role for bioprinting with their investment dollars. These entreaties come from a wide set of communications from investors, from passionate investor voices at the annual shareholder meeting in September, to retail investor emails over the past several months, to major institutional funds expressing that they wanted the company to take such a path. Organovo's Board so far is choosing to ignore shareholders, but cannot expect shareholders to continue to tolerate such neglect.

Organovo shareholders have to act now, because if the Tarveda merger proceeds, the impact on the stock would be devastating. Multiple types of shareholders would be rapidly seeking to divest their shares in the company.

For example, Organovo's largest shareholder, ARK Invest, which holds tens of millions of shares, boldly proclaims that it invests in disruptive innovation. Their interest in Organovo is driven by an interest in 3D bioprinting, and in fact they specifically run a fund focused on 3D printing. In their offices in New York City, a very large bull statue sits near the reception desk and has written on the side in block letters: "3D PRINTING", a reference to their investment interest and the related fund they run. They are not biotech generalists but invest on specific themes like 3D bioprinting and innovative sequencing technology. It stands to reason that, if the merger goes through, their approximately 15% stake in Organovo may be sold due to the thematic mismatch alone. In reality, nearly all of Organovo's investors may act this way, as most of Organovo's retail investors also invested specifically in the promise of 3D bioprinting.

Adding to this selling pressure, another type of shareholder that would be looking to exit in the post-merger deal is Tarveda's shareholder base, which is mainly three venture capital firms that collectively hold about 90% of the company's current shares. They are not the kind of venture firms known to maintain long term positions once their portfolio companies go public. To the contrary, they most likely will be looking to sell and squeeze something back out of their investment.

In an IPO, companies successfully bring in new investors from the ranks of large public equity funds to offset the VC selling, but as we know Tarveda has been unable to become appealing to these types of public investors. They likely have already been up and down Wall Street seeking a traditional IPO, and investors didn't buy into the story. So, there is little hope of stimulating much buying to counterbalance all of the selling. It's current Organovo stockholders that will be left in the dust if this merger goes forward.

Ultimately, Organovo shareholders simply have to ask where their interests lie. Are they interested in funding work outside their own interests that the original VCs had given up on, bailing out a failing company, and allowing those VCs access to hundreds of millions of dollars in liquidity? Or do they prefer to demand to the Organovo Board that their investment dollars be used for their original intention – unlocking the potential of 3D bioprinting?

If they do insist on that, a merger with a different company can ultimately be successful. The Board can support the kind of strategic merger with a bioprinting focus that will retain the interest and the investment of current shareholders. If a growing and promising entity with something to prove is chosen, rather than a company in a downward death spiral, a whole set of new investors can be attracted to the stock to the benefit of all.

It's a simple and stark choice. Investors have the opportunity now to contact the company and let them hear how loud their voices can be. Otherwise, Organovo is expected to soon file the paperwork indicating the timing of the vote, which will take place in February or March. Investors would then have the opportunity through a vote against to register their unhappiness with Organovo's performance and the proposal.

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