

Notice of Exempt Solicitation Pursuant to Rule 14a-103

Name of the Registrant: Organovo Holdings, Inc.

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Written materials are submitted pursuant to Rule 14a-6(g)(1) promulgated under the Securities Exchange Act of 1934. Submission is not required of this filer under the terms of the Rule, but is made voluntarily in the interest of public disclosure and consideration of these important issues.

- Organovo's Board has a track record of bad decisions and poor business judgment since mid-2017
- The Board members selected and hired a CEO who failed shareholders. This and other results suggest that the Board doesn't understand what's needed for success in the public market
- Starting mid-2018, the Board allowed the company to run as a therapeutic company with a single pipeline project, an inappropriate strategy with an early phase program that was likely to not proceed on the best-case timeline
- Further, the Board retained the failing CEO despite terrible performance and a lack of relevant expertise when it the company switched to its therapeutic tissue-only business model
- Other unqualified personnel were also put in charge of important duties, driving the mid-2019 implosion
- Given the terrible 2017-present track record of this Board and its decisions and recommendations, shareholders would be wise to reject its plans today and vote AGAINST the merger with Tarveda

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

Organovo's Board is in the process of asking shareholders to support its proposal to merge with Tarveda, a company with uninspiring science and few other financial options. However, there have been a number of decisions and actions from the Organovo Board that suggest that their judgment and recommendations should not be trusted at all. After my departure in 2017, the decisions made by the Organovo Board call into question why anyone would vote for a plan that they propose at all. Time and again, they have demonstrated that the best course for shareholders is more likely to vote against them and take over the decision making ourselves.

After I signed my separation agreement, the Board of Directors of Organovo engaged Taylor Crouch to run Organovo despite a troubling track record as a public company CEO. Taylor was the CEO of Variagenics, a public company whose IPO initially seemed to be a success, but quickly ran into major headwinds. Variagenics' stock trajectory took a nosedive and continued a steep descent, which must sound familiar to Organovo investors.

The outcome for Variagenics stockholders will startle investors and sound even more familiar: Variagenics ended up ceasing its development efforts while holding a lot of remaining cash (\$60 million) that wasn't being put to use. They did a search for merger partners, and picked one. That new company's technologies were developed using the cash from Variagenics.

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The story sounds just like what just happened to Organovo. One would think that Mr. Crouch's history at Variagenics, having failed to engage investors sufficiently and showing a lack of vision to find a way forward even with tens of millions in cash, revealed inherent problems with his leadership style. Couldn't it have been predicted that the past would be a strong indicator of the future – as indeed it was? And yet, the very Directors who now ask shareholders to vote in favor of their plan made the decision to hire Crouch anyway, ignoring the likely pitfalls of doing so, and shareholders have suffered as a result.

The story of Variagenics has a coda that Organovo shareholders should pay heed to. Did shareholders from Variagenics make out well in the end because of Nuvelo becoming a success story? Not exactly – Nuvelo itself followed the same downward path, failing and then running its own “strategic alternatives” process and choosing its merger partner in turn. Organovo shareholders may have such a fate in store if they blindly follow the recommendations of the current Organovo Board.

The Board's troubling performance becomes evident when one considers the circumstances around the company's switch to a therapeutic tissue business model. In August 2018, shortly after its annual report placing therapeutic liver tissue squarely in the lead of its news flow, the company announced that it had “concentrated our financial resources around supporting our healthy liver therapeutic tissue development”.

In other words, the company became primarily a therapeutic tissue company, with a preclinical liver tissue as its main, and in effect its only, pipeline product. Of course, there were still commercial operations like Samsara and limited disease modeling in liver, but the company shifted even former commercial resources to the therapeutic effort.

Shareholders should ask – was it appropriate to shift these resources?

What were the qualifications of the individuals in leadership roles in the company under these new conditions? In discussing Taylor Crouch's qualifications above, his public company CEO track record was obviously extremely poor and a red flag, but he did have private company commercial/marketing experience with successful performance. But, did he have the qualifications to run a company pushing forward therapeutic tissues? Mr. Crouch's background implies that the Board retained him to oversee the company's existing pipeline of commercial products—not refocus the company to an area where senior management lacked qualifications and experience. Put yourself in the position of an Organovo board member in mid-2018 with the following facts in front of you:

- The board brought in a commercially-focused CEO to deliver revenue growth
  - The CEO announced a major commercial focus shift to disease models right after he got started
  - The shift and the CEO's execution resulted in annual revenue growth slipping from ~175% (FY2017 revenue was 2.75x that of FY2016) to 6%. In other words, growth flatlined.
  - As a result of the revenue problems, the company effectively abandoned its commercial plan and switched to a therapeutic tissue play, and
  - The CEO had no background in therapeutic tissues.
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These would have been the facts in front of you in mid-2018. The right move would be to ensure the leadership had the right experience to be successful in the new direction, but the Board did nothing. Organovo's board, through active decision or simply through inaction, let the Company and shareholders down. Given the current merger proposal with Tarveda, the question is why would shareholders today follow the recommendation of a Board with a track record leading to such poor outcomes?

At another level of the company, poorly qualified leadership directly contributed to the company's downfall in the end. The lack of experience contributed to failure to effectively oversee programs, recognize problems, and troubleshoot difficulties. When Organovo announced in May 2019 that it had run into a speed bump, it cited that it needed to:

“optimize our manufacturing processes, and most importantly to generate decisive scientific data regarding the prolonged functionality and therapeutic benefits of our liver tissue patch... The most recent data we've generated from a much larger group of animal studies provides differing results from what we observed in our earlier pilot studies... We'll continue to examine all aspects of our manufacturing process, with the goal of improving the durability and optimizing the functionality of our tissues.”

In summary, Organovo's research team delivered a solid result in the initial stage, but Organovo's process development and manufacturing teams were not producing material that would yield an equivalent result.

This kind of issue regularly happens in early development programs. Organovo's liver therapeutic tissue was *pre-clinical*, while I've dealt with such issues as late as the transition from Phase 2 to Phase 3 clinical. It's not unexpected and in fact with a program as early as Organovo's liver, a technical hurdle of equal or greater magnitude would not only be expected, it would be planned for and anticipated. Organovo's IND timeline was assuming that everything went as smoothly as possible – as a small company would naturally do. Having an aggressive early timeline is common, but being surprised at having to adjust it and to in fact shut down the company as a result, is extremely troubling and suggests that the Board itself had very poor planning, oversight, and judgment.

I have significant experience in these specific types of development matters, and they wouldn't have surprised me in the least. Why did they surprise Organovo's Board? The answer may be that, as seems to be the case, Organovo didn't hire experts in this area to run the company's efforts. It is my understanding from former employees that that this area of effort was being managed by a repurposed commercial sales and marketing leader and a lawyer. Obviously, these would not be qualified individuals for the task at hand, and as it turned out the aspect of the main program that ultimately caused the failure of the company. In fact, it's quite shocking that the Board would allow such a lack of qualifications to exist, and it suggests that very poor risk assessment, review and planning processes were in place at the Board level, if indeed they existed at all. Worse still, two senior leaders with relevant experience were let go by the company towards the end of 2017 in its layoffs, a VP of Operations and a Head of Manufacturing, both with long manufacturing experience. Organovo's leadership was obviously being penny wise and pound foolish, and placing far too much confidence in leaders without direct domain experience. This program was core to Organovo, highlighted by the fact that an interruption caused the shutdown of the company. And yet, in this instance once again, the Board's failures, lack of careful thought, and lack of oversight processes in line with its fiduciary duties are evident.

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There was another deficiency in the Board's planning that is even more obvious to shareholders and others outside the company. It greatly magnified the timeline issue with the therapeutic liver. Biotech 101 teaches that a company needs to have a pipeline of products in order to be stable to timeline disruptions or outright product failures, which happen regularly. About one in three drug programs at that early stage later make it to clinical trials, so a company needs to have a pipeline rather than a single asset. For a company with a more risky play such as a therapeutic tissue, which could be expected to have an even lower success rate, a pipeline is even more imperative. Yet that is not the strategy Organovo's Board elected to follow, with devastating consequences. Having no fallback option or closely following program to elevate to top status, Organovo's Board chose to shutter operations. They probably thought of this as a responsible decision made for shareholders, but we shareholders should recognize that this result was the fruit of the outright dereliction of the Organovo Board failing to have backup programs in place to weather such storms. The fact that the company failed with \$30 million in the bank makes this even more problematic, as there was plenty of capital to have put another program in place. The absence of a multi-product pipeline for Organovo in 2019 is evidence of a near total lack of innovative, entrepreneurial, and strategic thinking. The results of not having one are a stain on the Board's performance, and yet another indictment of their judgment and likely violation of fiduciary duties.

Organovo's Board is asking shareholders to support its proposal to merge with Tarveda, a company with uninspiring science and few other financial options. However, a simple review of this Board's performance and decisions after mid-2017 reveals a track record that suggest that the Board's business judgment and recommendations should not be trusted at all. Rather than blindly supporting the Board's recommendations, shareholders need to vote AGAINST the Tarveda merger, and push the Board to engage with active shareholders on an option that will lead to a better outcome.

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