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Investing In Digital: Slow And Steady May Win This Race

by Barnaby Pickering

Getting out the gates early is usually the playbook for VC, however when it comes to new technologies with untested commercial pipelines, waiting and seeing may be a smarter approach.

A "slow and steady wins the race" mindset is not one usually seen in venture finance.

Typically, funds want to deploy cash quickly, see results and make an exit – oftentimes within five years.

Acting quickly can also secure the deal – start-ups with promising technology are likely to be snapped up by other funds.

But taking time to pause, consider the market, and deploy capital carefully can prove successful, especially when it comes to new, commercially untested technologies.

Paris-based Sofinnova Partners have embodied this steady mindset and, almost four years after the first 'peak' in the digital space, have raised their first digital medicine fund, worth \$200m.

Heading up the fund are partners Simon Turner and Edward Kliphuis and senior associate Javier Nunez-Vicandi.

Kliphuis and Nunez-Vicandi are both alumni of M Ventures, Merck's investment wing, and Turner brings experience from his own private consulting and external innovation at Baxter International, and prior to that at Kurma Partners, a venture capital firm focusing on healthcare and diagnostics.

Sofinnova Digital Medicine I has, so far, invested in five companies:

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- Betteromics, (\$20m series A) developers of a data management platform that uses advanced computation to allow researchers to quickly process and understand large amounts of complex clinical data covering genomics, proteomics and other "omic" disciplines.
- BioCortex, (\$5m seed joined by Hoxton Ventures) developers of a software platform that enables the simultaneous in-silico modelling of a patient's microbiome and the treatment they receive.
- deepc, (€12m series A) which has developed what is most easily described as an 'app store' for regulator-approved AI radiology software.
- Kiro, (€13.8m series A) a digital health platform that provides easily interpretable insights to both patients and clinicians based on laboratory results.
- L'école AI, (\$3m seed) a platform for "machine teaching." In effect, L'école AI is aiming to reduce the complexity of developing deep learning systems for computer vision applications.

From the outside, the five companies look wildly different, however Simon Turner spoke to *In Vivo* about how a similar investment thesis is behind each one.

Opening, Turner explained that the first challenge for the fund was defining 'digital medicine.' Recent years have seen the birth and resurgence of a plethora of phrases that, without careful consideration, either mean too much, or nothing at all.

"Digital medicine is a very nebulous area. At first, it was E-health, then it evolved into 'digital health, digital medicine, digital therapeutics, health tech, tech bio and so on - almost every wordplay under the sun," he said.

The reason for why Sofinnova settled on 'digital medicine,' according to Turner, is because they wanted the medicine component to be "front and center."

"Digital medicine is data and computation applied to the health sciences," he said. "We are not going to be doing wellbeing products, things that are consumer focused – things that are in the realm of technology investors."

There are "three core buckets" to Sofinnova's Digital Medicine strategy.

The first, which is upstream, is what they call enabling technologies. The focus is on the "picks and shovels that aid in the development and dissemination of AI into the health care system."

These can range from foundational models – AI models that are designed to produce a variety of

outputs (Stable Diffusion is one popular example) – to platforms like those developed by deepc, Turner explained, but fundamentally are centered around the "infrastructure layer."

The second bucket is patient-level analytics. Turner pointed out that, with the right technology, the future "should" be one where patients are segmented in a much more granular fashion than they are currently. "Ultimately, it's about personalized care," he said. "We want to be able to say 'This patient will benefit from this medication with these dosing requirements' because of their particularities – everything from the genome to their physiology, even their diet, which impacts their microbiome."

The final bucket is about delivering an impact through therapy. "Providing the digital means and methods to either support or engage the patient," Turner outlined. This could involve digital therapeutic approaches, or even remote cognitive behavioral therapy.

A Global Perspective

Regardless of which bucket the investment falls under, Turner stressed the importance of a global perspective.

"We are avoiding plays that are regional," he said. "We think of medicine as a global phenomenon. A medical need that holds true in the US should hold true in Latin America, Hong Kong and, of course, Paris."

This could prove a challenge for the fund as needs vary massively by geography.

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Turner said that Sofinnova's approach is to break down any potential investment into three factors for consideration: the technical capabilities of the team and the technology they have built, the clinical application and need, and the commercial potential and deployment.

Making sure this strategy is "baked in from the beginning," was the key to success, Turner noted, and made seeing globally relatively easy.

"Challenges become an opportunity," he said. "Take Betteromics as an example. They are

focused on enabling companies to deal with complex data sets. It could be everything from whole genome sequencing to proteomics to transcriptomics, all lumped together... This would otherwise have been something very difficult to do – regardless of geography."

Taking this idea further, Turner explained that there were both push and pull incentives for wellcrafted digital technologies.

At a higher level, there is the "maturity" of modern technology – powerful computing techniques that have "generated new actionability" for health care.

Meanwhile, at the bottom end of things, there is an "incredible mismatched need" in systems worldwide. "It's like a vacuum pulling these new technologies in – otherwise, we would not be able to sustain the current quality of health care," Turner said.

And both of these push-pull factors are the same, no matter where you are.

"I'm sure that, if you went to a particular trust in the UK, or a single hospital here in Paris, you would find things that they complain about that are hospital-specific," Turner said.

"But I'm also sure that if you start looking at it with an infrastructure, or even patient-level perspective and ask 'How can you as a physician make better decisions?' or, 'What are the biggest unknowns when you are deciding on treatment?' or even asking pharma 'What are your biggest headaches with patient recruitment?' you'll find that the answers are global, in terms of need."

He added, "That's where Sofinnova spend a lot of time sifting through and therefore being able to separate out the very localized, regional plays, versus the global potential we are investing in."

Avoiding Issues

In a previous interview with *In Vivo*, Turner pointed out that the fund's targets should be "new technology, new channel" investments – those which combine a new product with a new method of selling it. (Also see "*Sofinnova Partners Are Redefining And Disobeying The Venture Investment* <u>*Commandments*</u>" - In Vivo, 12 Jul, 2023.)

Naturally, an untested technology combined with an untested commercial strategy can lead to problems.

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Turner said that while this does "create new freedoms" for companies to "develop in multiple ways," it can become "difficult to see how technology fits with pharma, insurance... actual clinical workflows."

He gave an example of some due diligence he was involved in looking at radiology. A clinician was asked whether, in return for a slightly more "burdensome" technology, would they consider improved outcomes?

The answer, according to Turner, was "blunt."

"The response was 'If you add one more click to my workflow for a single patient, I will throw your system out'... A lot of people who try to come into health sciences, in particular investments, don't realize that it is a very particular area," Turner said.

"Changing things can be very difficult. It's not a question of installing a solution, it's a question of installing a solution that works in the current clinical situation. You must consider all implications," he continued.

Avoiding Firefighting

It can be hard sometimes to assess whether a therapy or initiative is solving a problem, or merely 'firefighting.' One example could be GLP-1 inhibitors for obesity – data published by Prime Therapeutics found that, while popular with patients in the short-term, the long-term benefits of the drugs may be sparse due to low rates of adherence. (Also see "*Can New Generation GLP-1s Overcome The Adherence Hurdle?*" - In Vivo, 31 Jul, 2023.)

Avoiding technologies that merely fight fires is central to Sofinnova's strategy, according to Turner. He pointed back to the importance of speaking to stakeholders, which gives his team "both granularity and insight."

This insight concerns the potential "repercussions" of any treatment – the "bottlenecks" that could arise in the future. Turner noted that, prior to spotting Betteromics, the whole discipline of multiomics – which is an integrated approach to biology that considers the genome, proteome, transcriptome, epigenome etc. – looked to be too difficult and costly for companies to implement themselves.

But thanks to stakeholder discussions, Sofinnova learnt that a multiomics approach would solve a plethora of core health care problems, it was just a question of finding the correct technology to surmount pre-existing challenges.

Deepc is another example. "We had a thesis about AI in radiology – there were great technologies, but the new channels needed had not been built yet," he said.

"It's not about fighting fires – it's about working out what caused the fire in the first place and trying to see how we can solve it within the scope of our fund," continued Turner. "We can't solve it over 30 years – those aren't the timelines we operate in – but we can find ways to help the health care system move from a reactive approach to a more personalized, proactive approach."

"The long-term goal is to get more into preventative medicine, but I don't want to get too optimistic. It's a hard nut to crack. Right now, all health systems are under pressure. What we need to do at Sofinnova is make sure we can help by providing the technologies needed to augment care and impact as many patients as possible."