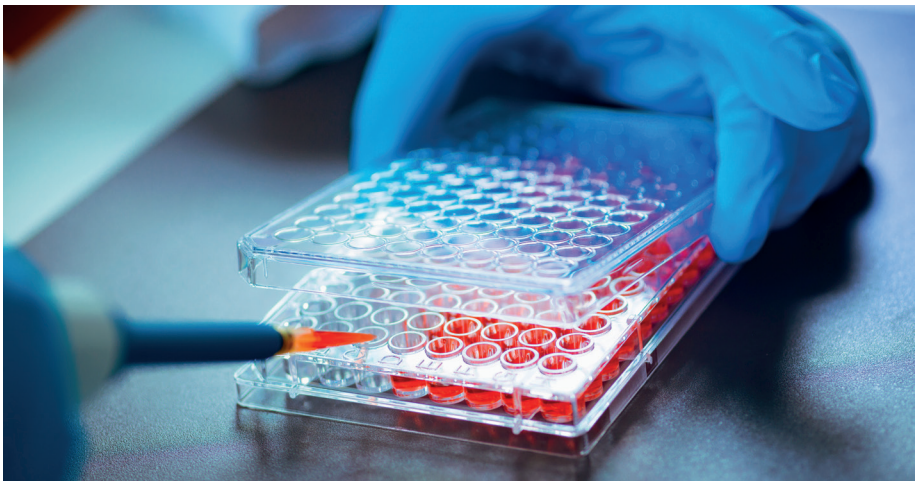
"A phenomenal breakthrough is taking shape"

An interview with Dr. Rainer Strohmenger, Managing Partner at Wellington Partners *(Original interview in German)*

Investors have long shied away from the fight against sepsis. Adrenomed, a company from Hennigsdorf in Germany, is currently developing a promising drug candidate for the treatment of septic shock. One of the capital investors is Wellington Partners.



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Plattform Life Sciences: Germany's life sciences sector is currently benefiting from high levels of investment. Is this simply a consequence of the pandemic or have investors actually realized the importance of the sector?

Dr. Strohmenger: I don't consider this to be a specific consequence of the pandemic. In recent years, we have seen investments in the biotechnology industry significantly outperform those in other sectors. This trend started in the United States and has now arrived in Europe. We have also seen several IPOs and acquisitions in Europe that proved to be highly lucrative for investors and have whetted their appetite for more. I am certain this would have happened even without a pandemic, possibly driven by other companies. After all, there is enough unmet medical need and no shortage of innovative products. The limiting factor is more on the financial side, as it determines what can be developed and whether it can be developed.

That said, last year we noticed that a number of companies – in a possibly overheated environment, especially in the United States – went public very early on and investors are now faced with losses. Overall, the last six to nine months have been painful for investors in publicly traded companies because even flagships like Moderna and BioNTech are now trading well below their peak levels. We have also observed that many listed companies in the USA are restructuring operations as a result: whereas in past years senior executives in Boston and other US hubs, for instance, were frequently head-hunted by competitors, which naturally led to a loss of expertise, trimming the workforce is now on the agenda. European companies tend to think longer term in HR policies and welfare.

We are currently in a correction phase. The clinical development and approval of new drugs with government support and at great speed, as we saw during the pandemic, was an exceptional situation. The life science industry has indeed garnered more attention over the past ten years – also in Europe – and the market has grown apace. Larger funds have been established that hold investments for longer and can be utilized to finance up to a later stage. However, the gap between Germany and the United States has also widened further in the last five to ten years. In Europe, there are still too few life science specialist investors, and generalists continue to eschew this market. This is a great pity seeing that here in Germany we have huge scientific excellence and many promising innovative projects that fail because they are unable to secure adequate financing, in contrast to the USA. And the future lies in biotechnology – also for Germany.

ABOUT THE INTERVIEW PARTNER

Dr. Rainer Strohmenger has a doctorate in medicine and a degree in economics. He has been a partner at **Wellington Partners** since 2000.

Biotechnology is currently classified as "systemically relevant". Will that really help to drum up more private equity?
Unfortunately, it's the exact opposite. The extension of the German Foreign Trade and Payments Regulation to the pharmaceutical and medical sectors was designed to prevent foreign companies from gaining more influence over local companies. Such influence tends to be created by equity investments.

Yet, most companies are happy to receive funding from a financially sound foreign investor. The tightening of the Foreign Trade and Payments Regulations means that every single investment involving a substantial share of foreign capital must now be approved by the Federal Ministry for Economic Affairs, in a process that is exceedingly bureaucratic. However, this ministry has very limited expertise, especially as regards the relevance of drug development for supplying medicines to the general public. So a consultation takes place with the Federal Ministry of Health, which relays its assessment back to the Ministry for Economic Affairs. In my experience, such approval processes take at least four weeks and discourage international investors.

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What approach is Wellington Partners taking in its investments? Which trends are you focusing on?
In the past, the number of therapeutic approaches for investment were very limited, but nowadays there are many modalities available, ranging from small molecules to proteins, antibodies and peptides to RNA- and DNA-based compounds. There are also many combined approaches, for example with viral-based delivery technologies, as well as cellular therapies up to (xeno-)organ transplants. I believe we are currently experiencing a paradigm shift in many sectors and are about to see fundamental breakthroughs in medicine. The trends are occurring in parallel and are very diverse.

Oncology is one example. Whereas in the past it was believed that the most toxic substance possible had to be developed to kill cancer cells, today we understand how the immune system works and how it can effectively attack and eliminate cancer cells. And we also understand how a tumor develops and adapts to the mechanisms of the immune system and outmaneuvers these.

The few available checkpoint inhibitors are already among the best-selling drugs. However, we now know that tumors use probably at least a three-digit number of different mechanisms to protect themselves from the immune system. Our portfolio company iOmx Therapeutics is researching this universe of checkpoint mechanisms to find new targets to address medicinally.

Here's another example: ITM is using short-lived radioisotopes in connection with highly specific antibodies. This helps to make therapy much more targeted, with fewer side effects, even in the case of scattered tumors.

Wellington Partners is currently investing in Adrenomed. The company aims to bring out a drug to treat sepsis. What is the current situation?
Due to past failures sepsis as a clinical indication is often referred to as a graveyard for clinical development projects. Years ago, Eli Lilly unsuccessfully conducted what we now know was an excessively broad clinical trial. To this date, no effective therapies for septic shock have made it to the market. And yet far more people around the world die from severe sepsis every day than from Covid.

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In sepsis, the underlying generalized infection combined with a dysregulated immune response leads to systemic vasodilatation and loss of endothelial barrier function, which in turn causes life-threatening disruption of cardiovascular and organ functions and possibly even multiple organ failure.

According to what we know today, in fully established septic shock significantly more than 400 inflammatory mediators contribute to the illness. The chances of success are therefore low if only one mediator is addressed. A much more promising approach is to develop therapies addressing the disease mechanisms that drive septic shock. Adrenomed, together with diagnostic company SphingoTec, has identified and validated the peptide hormone bio-ADM as an important target. bio-ADM is a key regulator of vascular integrity. Approximately one to two days before the patient goes into septic shock, an increased concentration of bio-ADM can be measured in the plasma – long before most other inflammatory markers could indicate this. If left untreated, this contributes to dilatation of the blood vessels and increased vascular permeability, which may cause a drop in blood pressure and a collapse of the circulation and organ functions.

Using a biomarker-guided therapeutic approach, the antibody developed by Adrenomed regulates the concentration of bio-ADM in the vessels and surrounding tissue to produce protective effects on the endothelial barrier. This improves the function of vital organs and reduces mortality. The company has already successfully completed a Phase II clinical trial in more than 300 patients with septic shock.

What are your other plans with Adrenomed?

Right now, we are preparing the next stages in the company's development. One step, for example, was appointing Dr. Richard Jones as the new CEO in March. With his help, the company plans to implement a pivotal clinical development program in early septic shock in Europe and the United States. This strictly biomarker-controlled program has already received positive scientific support from the EMA. We also expect to receive feedback from the FDA in the coming weeks.

It goes without saying that Adrenomed needs fresh capital to conduct the trial, produce the clinical trial material and ultimately obtain market approval and supply the market. We firmly believe that such developments can in fact be financed in Germany, with both domestic and foreign capital, and are currently in negotiations with major investors.

I personally have total confidence in the efficacy of this drug. In my view, a phenomenal breakthrough is taking shape here in an indication that is currently the most frequent cause of death in hospitals.

Why do investors consider the fight against sepsis to be a promising segment?

It will be similar to anticoagulant therapy, i.e. the prophylaxis of blood clotting. For decades there were very few development projects and no new drug approvals in this field until Boehringer and Bayer finally brought out new products in quick succession and created blockbusters.

Something similar is happening today with septic shock, although here the unmet medical need is even greater owing to the lack of a specifically effective therapy. So far, patients can only be treated with antibiotics and with non-specific support of the circulation and organ functions, but even with successful antibiotic therapy, the patient can fall into septic shock and die. Adrenomed's therapeutic approach has potential not only for sepsis, but also for other life-threatening conditions related to vascular integrity, tissue congestion and shock. Only a few – mostly small – biotech companies have development programs in these indications. The smaller companies are disruptive innovators, whereas the strength of the large corporations lies more in the subsequent commercialization of these innovations.

Dr. Strohmenger, thank you very much for this interesting discussion! ■

English version: original interview conducted in German by Holger Garbs