Deana Mohr-Haralampieva – CEO & Co-Founder, MUVON Therapeutics

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Founded in 2020 with a focus on diseases related to skeletal muscle damage, MUVON Therapeutics is currently targeting a significant unmet need in women's health, Female Stress Urinary Incontinence (SUI). CEO & co-founder Deana Mohr-Haralampieva, outlines MUVON's progress into phase II clinical trials and its plans to raise EUR 65 million to support upcoming pivotal trials and the company's commercialization efforts. She also explains its further pipeline development with five other indications and the benefits of Switzerland's vibrant biotech and pharma ecosystem for driving partnerships.

What inspired the founding of MUVON Therapeutics?

The journey of MUVON began over a decade ago, stemming from my passion for regenerative medicine and the potential of tissue engineering. Although MUVON was officially founded four years ago, my involvement started during my PhD at ETH Zurich, where I focused on developing a method to rebuild skeletal muscles using patients' own cells. Initially, this was an R&D project in animal models, and my goal was to demonstrate its safety and efficacy. We succeeded, and shortly before my PhD defence, we received approval from Swissmedic to begin human trials, which became a turning point for me. This opportunity led me to continue pursuing this research and see its potential in clinical settings.

After completing my PhD, I established an international consortium and secured EUR 6.5 million in funding from the European Union's Horizon 2020 program for the MUSIC project. This enabled us to take the therapy from an R&D phase to a GMP-compliant process, preparing it for future scalability. In 2016, we made our first hire, and my co-founder, Jenny Prange, helped translate the research into a GMP-validated project. Together with Steve Kappenthuler, Jenny Prange, and Professor Daniel Eberli, whose lab at the University of Zurich I worked in, we officially founded MUVON in 2020, amidst the challenges of the COVID-19 pandemic. As we moved forward, it became clear that further financial support was needed to progress beyond phase I clinical trials, so we continued seeking additional funding.

Throughout this journey, we relied heavily on non-dilutive funding and grants, which financed the preclinical research and early clinical trials, allowing us to focus on generating value and positioning the company for future success. The name "MUVON" reflects our mission: "MU" stands for muscle, "V" represents stimulation (like voltage), and "ON" signifies activation—together symbolizing our commitment to helping patients regain muscle function and move forward with their lives.

What is the core technology behind MUVON Therapeutics, and why did you decide to focus on Female Stress Urinary Incontinence (SUI) as your primary area of treatment?

MUVON's technology is rooted in tissue engineering, utilizing the patient's own muscle precursor cells to regenerate skeletal muscle tissue. As we age, we lose about 1 percent of muscle mass per year, beginning in middle age. This loss is due to a decline in the quality and quantity of specific cell populations that are vital for muscle regeneration. Our approach focuses on replenishing this pool of muscle precursor cells, which act as a natural booster, allowing weakened or damaged muscle fibres to regenerate and restore function. By combining these cells with biomaterials, we can help muscles regain strength and functionality.

Tissue engineering is still an emerging field, with the first products receiving market approval only about 10-15 years ago. However, many early products faced challenges in scaling up production, despite being both safe and effective. The market infrastructure and manufacturing processes were not ready for wide-scale deployment at that time. Today, advancements in both regulatory frameworks and technology have opened new possibilities. At MUVON, we began focusing on scalability from the start. Our process allows for personalized treatments—each batch is tailored to an individual patient—and we have optimized it to keep costs low. Unlike gene therapies, which

require genetic modification and viral production, our technology does not require immune system suppression, as it uses the patient's own cells. This significantly reduces complexity and risk while maintaining a high level of safety and efficacy.

We chose to focus on Female Stress Urinary Incontinence (SUI) because it represents a significant unmet need in women's health, affecting millions of women globally, particularly after childbirth. Current treatments, such as the implantation of medical devices to support the urethra, only address the symptoms of the condition without targeting the underlying muscle damage. Our goal is to regenerate the damaged muscle itself, offering a solution that not only provides long-term relief but also addresses the root cause of the condition. While tissue engineering has many potential applications, we prioritized SUI because it involves smaller muscles with a major impact on quality of life, where our technology can make the most immediate and meaningful difference.

Where does MUVON Therapeutics currently stand in terms of clinical progress, funding, and future milestones?

MUVON has made considerable progress over the past few years. We have successfully completed what is considered a phase 1/2 clinical trial, which was conducted with patients rather than healthy volunteers. This trial primarily focused on ensuring the safety of our therapy, and the results have been extremely promising. Not only was safety confirmed, but we also saw encouraging early signs of efficacy, such as increased muscle volume, strength, and significant improvements in the patients' quality of life. We took these learnings to refine our approach, better defining the target patient population. We are now conducting a phase II clinical trial at University Hospital Zurich, where the earlier trial was placed, with support from the Wyss Zurich Translational Centre. We anticipate interim results in the next few months, with the final readout expected by next summer. These results will be critical as they will guide our path towards pivotal trials in both Europe and the US.

On the financial side, we are currently engaged in an intensive fundraising effort. Up until now, we have been able to operate in a lean and efficient manner, with preclinical work and the phase 1 trial being funded primarily through non-dilutive grants. Our first seed round was supported by foundations, banks, and high-net-worth individuals. However, as we prepare for the next phase, we are looking to raise EUR 65 million to support pivotal trials and commercialization efforts. We are actively seeking institutional investors and exploring strategic partnerships with pharmaceutical companies to collaborate on development and commercialization. The next phase is pivotal for us,

and securing the necessary funding is essential to bringing our vision to fruition.

What key collaborations are you involved in, and how do they contribute to the development of MUVON's therapies?

We have several critical partnerships that are instrumental to our progress. One of the most significant is our collaboration with the University Hospital Zurich and Wyss Zurich, where we focus primarily on our clinical trials and GMP (Good Manufacturing Practices) production. In addition, we have built a strong network of Key Opinion Leaders (KOLs) across Switzerland, Europe, and the US, whose expertise is invaluable in guiding us through the regulatory landscape. Their support ensures that we are making informed decisions based on the highest standards, especially when it comes to navigating complex regulatory requirements. They help us determine the most realistic and effective paths forward.

Equally important are our partnerships with patient organizations, both locally and internationally. These collaborations give us deeper insights into the unmet needs of patients, which are especially critical for our lead indication, SUI. This condition has both physiological and psychological dimensions, and the patient voice is essential in shaping our approach. These organizations also play a key role in raising awareness and advocating for patients, which helps us better understand the broader impact of the disease and the importance of our work.

Additionally, our early-stage discussions with pharmaceutical companies have provided us with valuable industry insights. Although these partnerships are still in the exploratory phase, their feedback has been crucial in shaping our development strategy. They have given us specific guidance on what they expect from us as we progress through phase 2 trials, helping us prepare for future collaboration opportunities. These discussions are also essential for understanding manufacturing scale-up strategies and global distribution models, which will be critical as we plan for long-term commercialization. Aligning with industry trends and expectations ensures we are positioned for success, without needing to reinvent established processes.

How have venture capitalists responded to MUVON's technology, particularly given the more cautious investment landscape in recent years?

This year, we have seen a notable improvement in receptiveness. Over the past two and a half years, securing VC funding felt like navigating a barren landscape. Many investors, especially in

regenerative medicine, were focused on supporting their existing portfolios rather than making new investments. We often received the same response: “Fantastic work, but we are not investing in new companies at the moment.” Regenerative medicine, being a newer and more complex field, does not easily compare to more established areas like monoclonal antibodies (i.e., anti- CD19) and traditional therapies, which made it even harder to attract funding.

That said, the landscape has shifted recently, and I believe this is due to a combination of factors. Our clinical progress has made us a more attractive and less risky proposition. Preclinical assets still face challenges in securing investment, but with our advancements and the strong network we’ve built over the years, we are now in a much better position. We’re no longer starting from scratch, and our experienced team and well-established connections have certainly made us more appealing to investors.

Looking ahead, you mentioned having a broader vision beyond your current focus. Can you share more about your plans for expanding MUVON’s pipeline?

We currently have six indications in our pipeline, and once we achieve success in our lead indication, we expect to accelerate the clinical translation of these additional treatments. A key strategic advantage is that by proving safety and efficacy in female patients, we set a strong foundation for expanding into male indications, where safety profiles are typically assumed to be similar. Traditionally, clinical trials start with male patients and then include women later. By reversing this approach, we have positioned to expedite future developments.

While I cannot disclose all the details due to intellectual property protections, I can share that two of the logical next steps include male incontinence and faecal incontinence. These are chronic, highly debilitating conditions, and they align perfectly with our mission. The other indications in our pipeline are similarly focused on chronic conditions with a profound impact on patients’ lives, and we will reveal more about them in the coming years.

Your team has grown to about 20 people in just four years, which is quite impressive for a company at your stage. Is there a specific reason you’ve chosen to keep much of the work in-house rather than outsourcing it?

It was not a deliberate decision from the outset, but it is how things have evolved. For example, during our phase II trials, my team has been directly handling production in the clean rooms at the

Wyss Zurich Accelerator, a task that would typically be outsourced to a Contract Development and Manufacturing Organization (CDMO). Having this process in-house allows us to retain control over critical aspects, such as trade secrets and intellectual property. Similarly, for our upcoming multi-centre clinical trial in Europe, while we plan to partner with a specialized Contract Research Organization (CRO), at this stage, my team is managing everything—from manufacturing to running the clinical trials. So, while 20 people might seem like a lot, considering the scope of what we're handling, we're still operating quite efficiently with a lean team.

As we move forward, we plan to expand by bringing in external expertise through partnerships with CROs, CDMOs, and potentially larger pharmaceutical companies for co-development. This will help us scale efficiently by leveraging their experience and infrastructure as we transition into more complex phases of growth.

Assembling such a dedicated and skilled team is no small task, and Switzerland seems to have played a key role in MUVON's development. Can you share your approach to building the right team and how Switzerland's ecosystem has supported your growth?

Building the right team has been central to our success, and I rely heavily on my instincts when interviewing candidates. It is crucial to assess whether a person's energy and mindset align with the fast-paced, dynamic environment of a start-up. Our team is incredibly diverse, with members from various nationalities, and this diversity brings a wealth of experience and cultural perspectives, which has been invaluable to our growth.

We have also established strong core values that foster a healthy company culture. One of our key principles is transparency—we believe in addressing issues immediately rather than letting them build up. Honesty and collaboration are central to how we work. When challenges arise, we support each other and ensure that tasks are distributed effectively. This approach has helped us maintain a motivated and cohesive team, even with the demands of operating as a small, multidisciplinary group.

Switzerland has been an ideal base for us. Being a spin out of the University of Zurich has provided us with a strong foundation and a respected reputation. The proximity to top institutions like ETH Zurich, the University Hospital Zurich, and the University of Zurich gives us access to highly skilled talent and fosters collaboration. Moreover, Switzerland's vibrant biotech and pharma ecosystem allows for easy networking and partnerships, with many key players just a conversation away. Organizations like the Swiss Biotech Association and Innosuisse have also been pivotal in

supporting our development by providing essential resources and infrastructure to help us grow.

Looking ahead, what are MUVON’s key priorities for the next two to three years, and how do you envision the company’s progress both clinically and commercially?

Our vision for the next few years is built on three fundamental pillars. First, we are dedicated to advancing our clinical programs, with a focus on expanding into the European and US markets. This is a critical step in ensuring that our therapies reach a broader patient population. Second, we are preparing for commercial readiness, whether through strategic partnerships or other pathways, to ensure we are well-positioned for the final stages of bringing our therapies to market. Lastly, we aim to expand our therapeutic applications by exploring additional indications beyond our current focus. These three pillars are central to our growth and will drive MUVON’s success in the years to come.

At the same time, it is crucial that we, as an industry, maintain an open-minded approach to innovation. Bringing transformative therapies to patients requires collaboration from many stakeholders—investors, healthcare professionals, and decision-makers—working together with a shared vision. It’s this collective effort that will truly move the needle in healthcare.

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