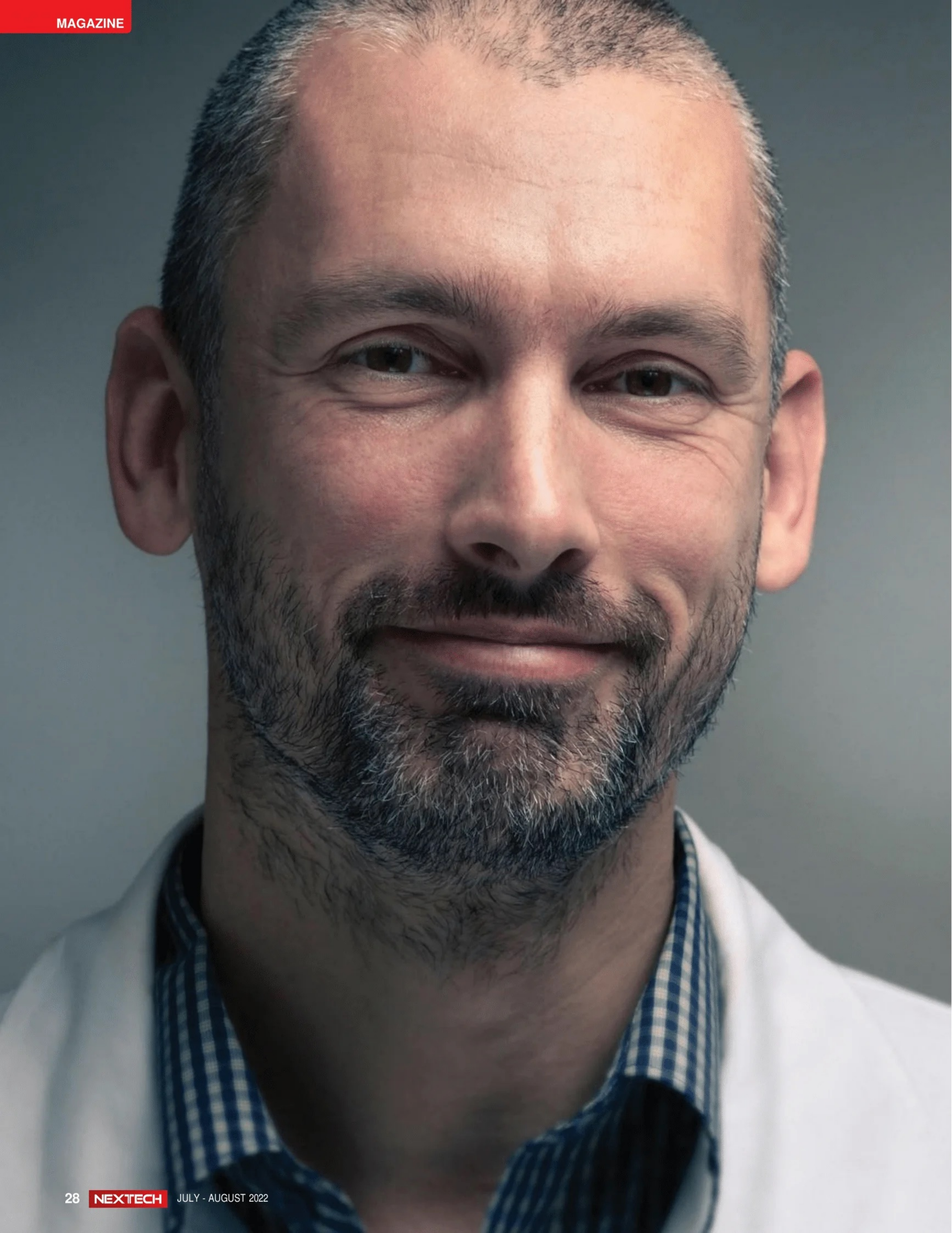

INTERVIEW: Ing. FILIP RÁZGA, PhD., MPH / CEO SELECTA BIOTECH

THE SLOVAK MEDICINE FOR COVID-19 IS HEADING TO THE MEDICINES AGENCY. IT ELIMINATES UP TO 98% OF VIRAL LOAD WITHIN 24 HOURS

Biotechnologists from the Slovak company Selecta Biotech have published initial preclinical data of their own drug for COVID-19. Test results demonstrated the drug's ability to reduce coronavirus levels in samples from patients hospitalized with COVID-19 by up to 98% following a single application. This is undoubtedly one of the most promising outcomes of the Slovak biomedical segment in recent times, as it provides hope for effective and highly specific treatment of patients with a severe course of the disease.

The antiviral developed by Selecta Biotech is purposefully designed to target the conserved regions of the coronavirus that are directly responsible for its reproduction, thus effectively preventing its spread throughout the body. Such an approach allows not only highly effective suppression of viral replication, but also initiates its disintegration thereby neutralizing the virus.

This original Slovak drug now begins its journey into the regulatory process of the Medicines Agency with the aim to enter the first phase of clinical trials. According to Head of Therapeutics Division Mgr. Veronika Némethová, PhD., MPH, "the milestone we have successfully reached hides something more than just a tailor-made antiviral for the treatment of COVID-19. It paves the way for the purposeful development of analogue drugs for other diagnoses, in which a specific RNA plays a causative role in their pathophysiology."

We spoke about the achieved success as well as the future of the biotechnology industry in Slovakia with the company's CEO, Ing. Filip Rázga, PhD., MPH.

NXT: First of all, congratulations on the achieved milestone and secondly, I'd like to ask how is it possible that a young company such as Selecta can succeed in the competition of large pharmaceutical companies?

FILIP RÁZGA: Selecta Biotech owns a proprietary platform covering a unique structural design of oligonucleotide-based inhibitors which we implement in the development of new therapeutic modalities for several diseases, including oncological, infectious, cardiovascular and nephrological ones. In early 2020 when COVID-19 became a global problem, we decided to use our know-how to develop a tailor-made inhibitor against SARS-CoV-2 with the ultimate goal of preventing the replication of this virus. From our perspective it was the purposeful adaptation of our existing R&D pipeline to a then new molecular target. And since the platform is original, there is no competition for prophylactics, experimental vaccines, or drugs with secondary indication.

NXT: How long will the testing and approval process take? When will the inhibitor make it into clinical practice?

FILIP RÁZGA: Basically, we are one step ahead of clinical trials. Everything depends on the assessment of our data by the authorized institutions, which is why entering the clinic can be really fast. However, we cannot rule out possible requests for additional results. We're ready for both scenarios.

NXT: Will it be possible to use it in experimental treatment even before the end of the approval process?

FILIP RÁZGA: We're definitely heading towards this goal, because we are aware that there is a considerable number of patients directly dependent on therapeutic intervention due to the clinical course of COVID-19 and who could benefit from the virostatic effect of our inhibitor. Making this therapeutic solution available for patients who need it most is our core mission.

NXT: How long did the R&D process take and what financial sources did you have?

FILIP RÁZGA: Since we built on our processes optimized over the years, the development of the SARS-CoV-2-specific inhibitor including its design, synthesis, characterization, and functional validation took approximately 15 months. We used our private sources to fund the R&D while part of the costs was covered by the Slovak Research and Development Agency (project No. PP-COVID-20-0007).

NXT: Did the state help you in this process in any way?

FILIP RÁZGA: Yes, as mentioned above, through a successful project application, we managed to secure funds to cover part of the costs.

NXT: Do you plan to manufacture, eventually distribute this product, or rather license it?

FILIP RÁZGA: Our honest intent is to get this treatment option to the patients as quickly as possible so they can benefit from it, and we will be seeking ways to accomplish this most effectively. We are open to both strategic partnerships, or IP licensing. We believe that every patient deserves the highest standard of health care and therefore we will certainly look for ways to provide it to them.

NXT: Is it possible to estimate how much expertise, perseverance, creativity, talent, or possibly even a bit of luck contributed to this success?

FILIP RÁZGA: Given the over 12 years of experience in this field, we acquired considerable know-how and skills that enabled us to propose a functional virostatic agent in such a relatively short time. I clearly attribute our success to the expertise and outstanding commitment, which the team embodied in this therapeutic solution. And luck? Luck is always needed, but I would like to note here that luck doesn't equal coincidence. We see luck as the fact that our health has allowed us to work intensively and that things have fallen into place at the right time without having to take steps back, and that we are surrounded by great people who believe in our mission and who helped us with logistics, etc. We consider this to be genuine luck – when you can realize your intention with support from people around you. For this, big thanks go to everyone who has actively or passively participated in this "adventure".

NXT: Will this antiviral of yours be effective against future mutations of the coronavirus?

FILIP RÁZGA: Yes. We designed it in such a way that its functionality does not depend on the mutations within the region encoding the spike protein at all. In other words, the mutations which de facto render many prophylactic strategies ineffective, have no effect on the functionality of this antiviral agent. The inhibitor purposefully binds to the highly conserved region of SARS-CoV-2, which is rarely subject to mutations as it essential for viral survival. In such a "smart" way, on the one hand, we targeted the "engine" of the virus, and on the other hand, we a priori eliminated the problems stemming from spike protein mutations.

NXT: How do you think a possible next wave of the pandemic should be managed? Is it reasonable to place emphasis on widespread vaccination of the population? Wouldn't it be better to give antivirals to immunocompromised individuals after they first develop symptoms?

FILIP RÁZGA: We believe that in case of a similar pandemic, supporting immunity is crucial, while it is rational to focus on people with symptoms of the disease. However, regardless of prevention, there will always be a group of patients, who will not be able to help themselves and will be dependent on medical intervention. They are the ones who could benefit the most from the specific antiviral which effectively reduces viral load, as early therapeutic intervention can fundamentally change the course of disease. We also consider supportive treatment to be important, as it helps the body to defend itself against infection and subsequently regenerate.

NXT: How do you see the future of the biotechnology industry in Slovakia? Do we have the potential to be successful in global competition?

FILIP RÁZGA: The Slovak biotechnology industry is relatively immature and so we can see the nearest future in the translation of Slovak innovations through larger strategic partnerships. Only then can a solid foundation pillar be created for autonomous applied research with original and accessible solutions. We can definitively build on unique technologies which this segment already offers on a national scale. We know how to identify the gaps in the current knowledge, and we have the courage and determination to provide progress beyond the state of the art. We believe that when something is truly beneficial for society, we can even bend the universe for a good cause.

NXT: Thank you for this interview.