Malmö 29 November 2022 **NEWSLETTER**

CEO comments

We have now, after hard work and a great team work, taken our lead candidate Apta-1 into clinical phase. It feels well deserved considering everyone's fantastic contribution, especially from Aptahem's CSO, Dr Luiza Jedlina, who managed to argue and explain the unique mechanism of action which facilitates this study design. The competent authorities and the ethical committee approved our application, and the few questions we received were minor and we replied swiftly which wee see as a confirmation that our study design for the clinical phase 1 study is well thought through and well elaborated, especially the design of part 1 b. We are now looking forward to the first dosing of Apta-1 in the first healthy volunteers and to receiving preliminary results of the first part, phase 1a, some time during late summer next year, if everything follows the set timeline and there are no unforeseen events.

In parallel with the preparation work to be able to initiate the first study in human, there are several activities going on in the company. With this newsletter we want to provide an update on what is happening now, and what we expect in the near future.

I would also like to promote our new website. Please visit www.aptahem.com to take part of the latest news!

Innovative study design for clinical phase 1

The clinical phase 1 study consists of two parts: phase 1a and phase 1b. Phase 1a is the mandatory part which all drug candidates has to go through, which means to be tested for safety and tolerability within the selected dose window to know if it is safe to administer to human. The recruitment of healthy volunteers to this first part is currently ongoing, and we hope to be able to dose the first subject in December 2022.

As soon as phase 1a has been performed, which hopefully will be some time in the second quarter next year, phase 1b will be initiated. This part of the study is disruptive as noone has had a similar study design previously, to our knowledge. We will test Apta-1 therapeutically instead of prophylactically. This part is not mandatory, but something we have chosen to do to get an idea about the effect of Apta-1 in an early sepsis-like inflammatory model. As our preclinical studies consistently have shown promising results and a high safety profile for Apta-1, the authorities and the ethical committee approved the study design.

The phase 1b is a provocation model where the effect of Apta-1 will be evaluated on the stimulated symptoms (systemic inflammation) in the participants who have been injected with LPS (bacterial toxin lipopolysaccharide). This provocation model is used to induce measurable symptoms for characterizing the early stages of septic inflammation and Apta-1's ability to regulate these symptoms. In our study the drug candidate will be administered after LPS stimulation aiming at imitating an as sharp clinical situation as possible. Commonly, the design for provocation studies is to administer the drug candidate prophylactically, i.e. before administration of LPS.

To conclude, the study design is a randomized, placebo-controlled phase 1 study to evaluate the safety, tolerability and pharmacodynamic effects of intravenous Apta-1 in healthy volunteers. The results will support the design for the upcoming phase 2 study to evaluate Apta-1 in patients with sepsis and its sub-indications.

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The consortium with Örebro University

We have previously announced that our collaboration with Örebro University, lead by Professor Magnus Grenegård, will continue. Before the summer we had the pleasure to announce that we have entered into a new consortium with, amongst others, Örebro University. The joint research project, titled *Drug discovery targeting inflammation – novel therapeutic aspects on vascular inflammation, thrombosis and breast cancer*, has obtained financing from the Swedish KK-foundation.

In mid November the first meeting took place with all parties involved to initiate the project. Aptahem will, as in the previous consortium, primarily provide the project with its drug candidate Apta-1 and contribute with expertise competence with Dr. Luiza Jedlina as scientific advisor on aptamer-based therapies and specifically of Apta-1's inhibition of inflammation and thrombosis. We are eagerly looking forward to the new project and will communicate preliminary results along the way, if possible. The project will run for a four-year period.

Business Development

We continue to meet potential collaboration or licensing partners, and in connection with that we update our data room on a regular basis to prepare for more in-depth discussions.

Aptahem's ambition is also to develop its portfolio and pipeline. We now have three aptamers, Apta-1, Apta-2 and Apta-3, with patent protection for the substances' chemical structure. In addition, our lead candidate, Apta-1, has an extensive therapeutic patent protection. The patents are public and can be found on the internet (search for Aptahem and aptamers). For the other two, Apta-2 and Apta-3, Apta-2 has been produced in a small pilot batch and initial studies have been performed indicating a promising profile within the inflammation area. Apta-3 has not yet been neither produced nor studied.

The company's aim is to develop its pipeline within new indications and to strenghthen the patent protection for all the aptamers in the portfolio and in parallel investigate new manufacturing methods to extend the protection of the structures.

Closing words

We have achieved several important milestones so far during the year, where the most important one is that we now have become a company in clinical phase. For the manufacturing and formulation activities we have also been successful in achieving innovative results with cost improvements in a scalable substance production and a finished formulation for infusion to be used in our clinical studies. These accomplishments are important for the discussions we are in with potential partners as pharmaceutical companies like to see cost effectiveness and risk minimation to be able to estimate costs in relation to expected future revenue.

As previously mentioned, we have also updated our website which we hope you will find more informative and easier to navigate than our previous one.

We are currently performing a rights issue aiming at capitalizing and securing complete performance of our clinical phase 1 program and also for the planning phase of the phase 2. The cashier is good at

present, but global factors have, and can in the future, affect us financially and also performing clinical studies can imply insecurities and we therefore need to raise more capital.

In connection with the rights issue, we perform various activities to communicate our offer. For those of you that want to understand more about our estimated market value, please have a look at the latest analysis by Analyst Group which is available on our website (only in Swedish).

We look to the future with confidence and hope that you will support us in developing a treatment to save more lives and to relieve the damages that often occur in patients affected by sepsis.

Continue to follow us at aptahem.com or in our social media, LinkedIn and Facebook.

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Mikael Lindstam
CEO, Aptahem AB