Newsweek

INVESTMENT REPORTS

Martin Tolar
CEO
Alzheon

21 February 2023

Alzheon is celebrating a decade of activity. As its founder, where does your focus on Alzheimer's come from and what is the story behind the company?

Alzheimer's disease is one of the biggest threats to humanity from a health perspective, especially due to the aging of population. We always knew that a large part of population runs the risk of being affected, but recent research estimated that as many as 416 million people are already suffering from the disease. The clinical stage of Alzheimer's is the point where the brain is so damaged that you can no longer compensate for it – and this stage is reached during the last few years of life. However, most of the damage is accumulated during the previous 20-25 years, and this is also where we can most effectively intervene to stop the disease progression and prevent debilitating clinical symptoms.

We founded Alzheon to understand the underlying biology of Alzheimer's disease and we have accomplished this task and described it in our publications. In addition, it is now very clear that many neurodegenerative disorders are caused by an impaired clearance of the brain caused by aging of our vessels, and our technology can target this problem. The human brain is about 2% of the body weight but burns 20% of our energy. Such a high metabolic rate leads to an enormous number of toxic byproducts that need to be cleared out. In Alzheimer's disease, a protein called beta amyloid can begin to accumulate, misfold into prion-like structures, and form soluble aggregates called oligomers. These oligomers are highly neurotoxic and over decades lead to brain destruction and dementia.

Our goal has been to find a treatment, which can block this process, to treat patients in the early stages of the disease, and ultimately to prevent patients from ever suffering clinical symptoms of Alzheimer's disease.

"In 2025 we plan to bring to patients the first oral Alzheimer's drug, ALZ-801 tablet, that can potentially accomplish this task."

How far are you with the development of ALZ-801, and how do you expect the drug to affect patients and the broader life science sector?

It is important to note that up until last year, all Alzheimer's research has been unsuccessful, with the cost of failures over the past decade reaching tens of billions of dollars. This is the reason why big Pharmas decided to abandon the field, leaving only a handful of companies working on Alzheimer's therapeutics.

Our approach has been to initially focus on the high-risk patients due to a genetic risk factor, and for the first five years we have been delving into research, to understand the best ways to tackle the problem. Once we uncovered the underlying science and causes, we have decided to pursue an oral therapeutic approach. Most other companies still active in the field are developing injectable anti-amyloid antibodies, which need to be infused and carry a number of potential side effects including brain edema and hemorrhage.

We are now completing the APOLLOE4 Phase 3 clinical trial evaluating ALZ-801 tablet and last December we announced completion of patient enrollment. In addition, we have a broad therapeutic pipeline, which is targeting similar pathologies, such as age-related macular degeneration, the leading cause of blindness that affects 60 million people worldwide.

Finding the right patients for clinical trials has been highlighted as a challenge by your peers. What has been your experience from this perspective?

Alzheimer's disease is devastating not only for the patients, but also for their families and since there is no treatment available, they would do anything to get access to a therapy. As a result, we were met with highly enthusiastic response from patients, their families, and clinical investigators. The APOLLOE4 trial is conducted in U.S., Canada, and Europe at almost 100 clinical sites. Although only half of the patients will get the treatment (the other half will receive placebo), the eagerness to get an access to treatment still in development surprised us.

We have a large amount of data supporting this program, including previous studies, which involved over 2000 patients. These were patients with mild impairments (e.g., losing their keys or misplacing things), but what we found is that they can progress to

a stage, where they do not recognize their families in a timeframe as short as 18 months. Our goal is to stop this deterioration and even improve their condition. Anti-amyloid antibodies have shown some efficacy in the sense that patients do not decline as much and slowed disease progression by about one third. The clinical meaningfulness of this benefit has been considered modest. We believe ALZ-801 tablet could potentially provide an attractive alternative with more robust efficacy, less safety risk, and more convenient administration.

COVID-19 has influenced public perception about life sciences, with vaccination taking place at an unprecedented pace. How have you seen this impacting the work of the industry, particularly the R&D side?

In the past few years, it has become very clear that the biopharma industry can bring solutions that are essential for solving these kinds of threats to our very existence. Secondly, if you have pandemic running through the world, other medical conditions may also be affected and accelerated. For instance, when we get infected with a virus, the brain forms a strong response to defend the body, and all this extreme strain may also increase the risk of Alzheimer's. This scenario is not new, and we have seen it 100 years ago when the Spanish flu caused flurry of post-infectious Parkinson's disease cases.

What are your key objectives for the coming three to five years?

Our key goal is to bring ALZ-801 tablet to patients as quickly as we possibly can. We are going to have the confirmatory Phase 3 data in the middle of 2024, and plan to apply for NDA and EMA approvals immediately afterwards. We are preparing for both a U.S. and a European launch to make our product as broadly available as possible. Neurodegenerative diseases have been incredibly devastating and intractable for a very long time, but now we can offer real hope for patients and their families. We are excited to lead the understanding of these devastating disorders and also be part of the solution.

https://www.investmentreports.co/article/martin-tolar-ceo-alzheon-578/