Exploring HER-096: A novel approach to Parkinson's Disease

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Parkinson's disease, a progressive neurodegenerative disorder, poses significant challenges for both patients and researchers. In a recent interview with Henri Huttunen from Herantis Pharma Plc, we delved into the intricacies of their potential novel disease-modifying therapy, HER-096.

The discussion covered various aspects, from the mechanism of action to the potential impact on public health.

Mechanism of Action: Breaking the Vicious Cycle

<u>HER-096</u>, developed from the neurotrophic factor CDNF, represents a groundbreaking approach to Parkinson's disease. By targeting the unfolded protein response and brain inflammation that are triggered by alpha-synuclein aggregation, HER-096 aims to disrupt a vicious cycle in disease progression.

In our interview, Henri Huttunen shared insights into the mechanism of action, highlighting key aspects:

CDNF's Regenerative Power: Triumphs in Preclinical Studies

Preclinical studies demonstrated CDNF's exceptional regenerative power, protecting dopamine neurons and aiding struggling neurons in regeneration within an aged monkey model of Parkinson's disease. This success underscores CDNF's regenerative potential and sets the stage for HER-096's therapeutic approach.

A pivotal moment in HER-096's development was overcoming the challenging blood-brain barrier. This achievement not only enhances HER- 096's administration feasibility but also expands the potential impact of CDNF-based therapies to early stage patients suffering from Parkinson's disease and related diseases. Overcoming this obstacle marks a crucial advancement.

Identification of a biomarker responsive to both CDNF and HER-096 is a significant stride in advancing these therapies. This biomarker streamlines patient response monitoring during clinical trials, enhancing trial efficiency and providing a robust foundation for demonstrating disease-modifying responses.

Differentiation from Existing Therapies: A Holistic Approach

HER-096 distinguishes itself by prioritizing disease modification over symptomatic relief, deviating significantly from conventional treatments like immunotherapies. In our interview, Huttunen underscored two key differentiators:

Natural Power of Neurotrophic Factors: Regenerative Potential Unleashed

HER-096 harnesses the regenerative capabilities of neurotrophic factors, specifically CDNF, tapping into the natural mechanisms that promote neuron health and functionality. This approach introduces a potent strategy for slowing down degeneration in Parkinson's disease by leveraging the innate regenerative power of the brain.

Wide Applicability: Beyond Narrow Patient Populations

Unlike treatments targeting specific subtypes of disease, HER-096 takes a more inclusive approach. Its focus on the unfolded protein response pathway suggests potential effectiveness across diverse subtypes of Parkinson's disease and possible also other neurodegenerative diseases. HER-096's broad applicability stems from its commitment to enhancing neural survival under stress, positioning it as a versatile candidate for the complex mechanisms at play in Parkinson's disease.

In summary, HER-096's differentiation lies not only in its disease-modifying emphasis but also in its holistic strategy. This approach aligns with the evolving understanding that comprehensive solutions are essential in the complex landscape of neurodegenerative diseases.

Challenges in Developing Disease-Modifying Therapies: A Financial and Clinical Odyssey

The pursuit of disease-modifying therapies for neurodegenerative diseases presents a multifaceted journey, with Huttunen highlighting both past triumphs and enduring challenges.

Financial Risk: Strategic Resource Management

Small companies, like Herantis Pharma, grapple with significant financial risks in conducting extensive clinical trials. Securing resources becomes pivotal for the success of these trials, emphasizing the need for strategic resource management and partnering in the complex landscape of clinical development.

Patient Heterogeneity: Precision in the Face of Diversity

The mechanistic diversity within Parkinson's disease poses a substantial challenge. Patient heterogeneity requires precise considerations in clinical trial design, emphasizing the need for a nuanced approach to address varied mechanisms within different patient subgroups.

In summary, according to Huttunen the development of disease-modifying therapies involves navigating financial intricacies and addressing the mechanistic diversity of Parkinson's disease.

Patient Stratification and Biomarkers: Embracing Digital Biomarkers

The use of digital biomarkers, including wearable devices and mobile phones, presents exciting opportunities for monitoring patient responses in clinical trials. Huttunen emphasized the potential of these tools in providing both passive and active monitoring capabilities.

Wearable devices emerge as powerful tools for comprehensive movement monitoring. They enable the tracking of crucial aspects such as movement, balance, and gait. Additionally, these devices facilitate active tests for fine motor coordination, offering a nuanced perspective on patient responses during clinical trials. Although promising, utilizing digital biomarkers fully requires collaborative efforts to overcome challenges and establish these tools as integral components of regulatory endpoints in clinical trials.

Public Health Impact: Changing Lives and Reducing Burden

Addressing the enormous public health need for effective Parkinson's treatments, Huttunen discussed how HER-096 could significantly impact the lives of millions of patients. Slowing down or stopping the progression of the disease could lead to a reduced overall disease burden and increased quality-adjusted life years.

Holistic Disease Modification

HER-096 stands out for its commitment to holistic disease modification. Unlike treatments solely focused on symptomatic relief, HER-096 aspires to comprehensively impact the entire disease process. This ambitious approach seeks to address not just symptoms but the fundamental progression of Parkinson's disease.

In essence, the public health impact of HER-096 extends beyond individual patients, aiming for a transformative effect on the entire landscape of Parkinson's disease. By embracing a holistic disease modification approach, HER-096 envisions a future where patients experience improved quality of life, contributing to a more resilient and thriving society.

Broader Implications: Shaping the Future of Parkinson's Treatment

Looking beyond the immediate goals of the phase 1a trial, the successful development of disease-modifying treatments like HER-096 could have far- reaching implications for both patients and the healthcare system. Huttunen highlighted potential benefits such as prolonged work life, reduced healthcare costs, and improved quality of life.

HER-096 and the future of Parkinson's research and innovation

In conclusion, Henri Huttunen provided Open Access Government with a comprehensive overview of the promising developments in Parkinson's disease treatment and the potential impact of HER-096.

As the journey continues, the hope is that such innovative therapies will not only transform the lives of individuals with Parkinson's disease but also reshape the landscape of neurodegenerative disease treatment as a whole.

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