HELIOS-A: Results from the Phase 3 Study of Vutrisiran in Patients with Hereditary Transthyretin-Mediated Amyloidosis with Polyneuropathy

Alejandra González-Duarte1, David Murphy2, Ivaldo L Toumay1, Mark S Taylor1, Teresa Coelho1, Violaine Planté-Bordeneuve1, John L Berk3, Julian D Gillmore4, Soon-Chai Law5, Yoshiki Sekijima6, Laura Obici7, Chongshun Chen8, Prajakta Batta1, Seth Arum1, John Vest1, Michael Polydoros9

1Instituto Hospital de São Julião da Barra, Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil; 2Department of Medicine, Boston University School of Medicine, Boston, Massachusetts, United States; 3Department of Neurology and Clinical Neurosciences, University of Toronto, Toronto, Ontario, Canada; 4Department of Neurology, University of Alberta, Edmonton, Alberta, Canada; 5Department of Neurology, University of Calgary, Calgary, Alberta, Canada; 6Department of Neurology, Osaka University Graduate School of Medicine, Osaka, Japan; 7Department of Neurology, University of Miami, Miami, Florida, United States; 8Division of Neurology, Department of Medicine, University of Melbourne, Royal Melbourne Hospital, Melbourne, Victoria, Australia; 9Akcea Therapeutics, Inc., Cambridge, Massachusetts, United States.

Background and Rationale

TTR Amyloidosis, also Known as ATTR Amyloidosis

Amyloidosis is a systemic disease that results from the deposition of insoluble, fibrillar protein aggregates (amyloid) within intracellular, extracellular, and vascular spaces, causing organ dysfunction and clinical sequelae. TTR amyloidosis is a type of hereditary amyloidosis where amyloid precursor protein TTR (hATTR) is deposited in the periphery and the heart. Vutrisiran treatment achieved a reduction in NT15 (35.7)

Methods

• Vutrisiran treatment led to improvements in exploratory cardiac endpoints compared with external placebo

Baseline Demographic and Disease Characteristics

Patients in HELIOS-A had characteristics that were similar to those of patients in the external placebo group and no major differences were observed in the overall population.

Conclusions

- Vutrisiran treatment led to improvements in exploratory cardiac measures compared with external placebo

Table 1. Baseline Characteristics

Table 2. Vutrisiran TTR Amyloidosis Population

Figure 1. Therapeutic Hypothesis

Figure 2. Study Design

Figure 3. Study Endpoints

Figure 4. Safety

Figure 5. Echocardiographic Parameters LS Mean Change from Baseline (NT-proBNP Population)

Figure 6. Scintigraphy Parameters LS Mean Change from Baseline

Figure 7. Percent Change from Baseline in Serum NT-proBNP Levels

Figure 8. Improvements in Cardiac Endpoints

Figure 9. Cardiac Scintigraphy (Tc-Heart) Images in a 75-year-old Male Patient with hATTR-NTA (top) and a 65-year-old Male Patient with ATTRv (bottom) at Baseline (left) and Month 18 (right) (Figure 9A)

Figure 10. Cardiac Scintigraphy (Tc-Heart) Images in a 75-year-old Male Patient with hATTR-NTA (top) and a 65-year-old Male Patient with ATTRv (bottom) at Baseline (left) and Month 18 (right) (Figure 9A)