2021 ANNA NATIONAL SYMPOSIUM

ILLUMINATE-B, a Phase 3 Open-Label Study to Evaluate Lumasiran, an RNAi Therapeutic, in Young Children with Primary Hyperoxaluria Type 1 (PH1)

*Debbie Barrera, BSN, Texas Children's Hospital/Baylor College of Medicine, Houston, TX
  Georges Deschenes, MD, Hôpital Robert-Debré, Paris, FR
  Pierre Cochat, MD, Hospices Civils de Lyon and Université de Lyon, Lyon, FR
  Daniella Magen, MD, Pediatric Nephrology Institute, Haifa, IL
  William van’t Hoff, MD, Great Ormond Street Hospital, London, UK
  Mini Michael, MD, Texas Children's Hospital/Baylor College of Medicine, Houston, TX
  David Sas, MD, Mayo Clinic, Rochester, MN, US
  Gesa Schalk, MD, University of Bonn, Bonn, DE
  Hadas Shasha-Lavsky, MD, Galilee Medical Center, Nahariya, IL
  Wesley Hayes, MD, Great Ormond Street Hospital, London, UK
  Kyounghwa Bae, PhD, Alnylam Pharmaceuticals, Cambridge, MA, US
  Ali Seddighzadeh, MD, Alnylam Pharmaceuticals, Cambridge, MA, US
  Pushkal Garg, MD, Alnylam Pharmaceuticals, Cambridge, MA, US
  Akshay Vaishnaw, MD, Alnylam Pharmaceuticals, Cambridge, MA, US
  Tracy McGregor, MD, Alnylam Pharmaceuticals, Cambridge, MA, US
  Kenji Fujita, MD, Alnylam Pharmaceuticals, Cambridge, MA, US
  Yaacov Frishberg, MD, Shaare Zedek Medical Center, Jerusalem, IL

*Presenting on behalf of the authors

PH1 is a rare genetic disorder characterized by hepatic oxalate overproduction, recurrent kidney stones, nephrocalcinosis, progressive kidney failure, and multiorgan damage from systemic oxalosis. Lumasiran, a subcutaneous investigational RNAi therapeutic, reduces hepatic oxalate production by targeting glycolate oxidase. Results from ILLUMINATE-B, an open-label, Phase 3 study of lumasiran in young children with PH1 are reported here.

Key inclusion criteria: <6 years, PH1 diagnosis, eGFR >45 mL/min/1.73m2 if ≥12m or normal serum creatinine if <12m. Lumasiran dosing: monthly for 3m, then monthly or quarterly. Primary endpoint: % change in UOx excretion from baseline to M6.

Eighteen patients enrolled; median age of 4.3yr (range: 0.3-6). Baseline mean urinary oxalate:creatinine was 0.63 mmol/mmol, which was equivalent to 5.8×ULN. There were no lumasiran-related serious adverse events and no deaths, severe adverse events, or treatment discontinuations. The most common adverse events related to lumasiran were mild, transient injection site reactions in 3/18 patients. Results from the complete primary analysis period will be presented.

The efficacy and safety results in ILLUMINATE B are consistent with those observed in ILLUMINATE-A, a phase 3 trial of lumasiran in older children and adults.

Abstract selected for presentation at 2021 ANNA National Symposium