Tafamidis Meglumine
Potential Disease Modifying Treatment for TTR Amyloidosis

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Tafamidis

- Tafamidis, previously known as Fx-1006A, a selective and potent stabilizer of transthyretin (TTR)
  - Binds to the TTR protein and stabilizes the correctly folded protein
  - Inhibits amyloid formation in the test tube
  - No “off-target” pharmacology (e.g. no NSAID activity)
  - Oral, once daily, first in class compound
- Being evaluated as a disease modifying treatment for TTR amyloidosis (ATTR)
- Being developed by FoldRx Pharmaceuticals, Inc., Cambridge MA
Cause of TTR Amyloidosis

Mutations (80+)
Aging

Native Protein
Misfolded Monomer
Amyloid Fibrils
Halting TTR Amyloidosis

Tafamidis, an oral, potent and selective stabilizer of TTR, inhibits tetramer dissociation.
Tafamidis Development Program

- Dedicated to understanding of the natural history of TTR amyloidosis
  - Conducted natural history study in patient with TTR amyloid cardiomyopathy (TRACS)
    - Support the design of subsequent treatment studies
  - Conducted study evaluating appropriateness of clinical endpoints in assessing disease severity in patients with TTR amyloid polyneuropathy
    - Support the endpoints chosen in the treatment studies
  - Supporting a number of academic run research efforts (for example – improving early diagnosis)
Tafamidis Development Program

- Dedicated to understanding of the effects of tafamidis on disease progression in patients with TTR amyloidosis
  - Recently completed Phase II/III trial in patients with V30M TTR amyloidosis
- Ongoing clinical trials in patients with:
  - V30M TTR amyloidosis
  - Non-V30M TTR amyloidosis
  - V122I or wild-type TTR amyloid cardiomyopathy
Fx-005
Safety and Efficacy of Orally Administered Tafamidis in Patients with Transthyretin Familial Amyloid Polyneuropathy

A Phase II/III, Randomized, Double-blind, Placebo-Controlled Study

Key Results
Fx-005 Study Design

- Randomized, Placebo-controlled, Multi-center Study
  - 8 international sites
- 128 patients with V30M TTR amyloidosis (1:1 randomization)
  - 20 mg soft gelatin capsule once daily; placebo
- Key inclusion criteria:
  - V30M mutation
  - Positive amyloid biopsy
  - Documented peripheral and/or autonomic neuropathy (stage 1 and early stage 2)
- Key exclusion criteria:
  - Prior liver transplant
- Treatment duration – 18 months
Fx-005 Assessments

- **Main Assessments**
  - NIS-LL – Neuropathy Impairment Score – Lower Limb
    - Scores the neurological exam of the legs, according to muscle weakness, sensory abnormalities and loss of reflexes
  - Norfolk QOL-DN – Quality of Life
    - Patient questionnaire that assesses the impact of the various aspects of the neurologic disease on his/her quality of life

- **Other Assessments**
  - Objective measures of nerve function, including nerve conduction studies and quantitative sensory testing
  - Modified Body Mass Index (mBMI) – a measure of the wasting aspect of this disease
Fx-005 Results

- Of the 128 patients enrolled, 91 (71%) completed the study
  - Majority of the patients who discontinued from the study (26/37, 70%) did so to undergo liver transplantation - 13 patients in each treatment group
  - Tafamidis was well tolerated – only 3 patients in each treatment group discontinued the study due to a side effect
- Of the 91 patients completing the study, 86 are participating in the open label extension study (Fx-006)
Fx-005 Results – *NIS-LL Responders*

- Tafamidis maintained neurologic function:
  - 60% of tafamidis patients completing the study per protocol had no disease progression – that is, no worsening of their neurologic function compared with 38% of patients on placebo.

![Graph](chart.png)

- **P = 0.041**
Fx-005 Results

Quality of Life and Nutritional Status

- Tafamidis reduced burden of disease:
  - Those patients receiving tafamidis maintained their quality of life, and experienced an improvement in nutritional status,
  - Those patients not on active treatment (placebo) had a worsening of their quality of life, and a deterioration of their nutritional status

Norfolk QOL-DN

- Total Quality of Life Score
  - P=0.045

- mBMI
  - P<0.001

18 mths

Tafamidis  
Placebo  
18 mths
Fx-005 Results

- Other measures of nerve function demonstrated that tafamidis treatment resulted in less deterioration
  - 50 - 80% less worsening of nerve function
- The side effects reported in the tafamidis group were similar to those reported in the placebo group
Fx-005

Conclusions and Next Steps

- Patients with V30M TTR amyloidosis who received 18 months treatment with tafamidis experienced
  - Significantly less disease progression
  - Maintained quality of life
  - Side effects similar to placebo
- A US New Drug Application for tafamidis is being planned for second half of 2010
Tafamidis

Additional Treatment Studies

Fx1A-201:
- Open label, tafamidis 20 mg once daily, 12 months
- Patients with TTR amyloidosis due to mutations other than V30M
- 21 patients enrolled (enrollment is complete)

Fx1B-201:
- Open label, tafamidis 20 mg once daily, 12 months
- Patients with TTR amyloid cardiomyopathy due to V122I or wild-type TTR
- 35 patients enrolled (enrollment complete)

Data Expected first half 2010
Thank You for your Attention