



KEY FINANCIALS

Nasdaq:
CHTP

Shares Outstanding (07/31/09):
33.4 million

Recent Price:
\$5.35

Cash/Short Term Investments
\$24.3 M (06/31/09)
+\$12.4 M (Net Proceeds Raised 07/09)

RECENT NEWS

June 30 2009
Raised \$13.3 Million in Registered Direct Offering

June 30 2009
Added to the Russell 3000 and Russell 2000 Indexes

June 29 2009
Completes Enrollment in Droxidopa PIII Trial in Neurogenic Orthostatic Hypotension

April 27 2009
Reports Positive Results from Phase I Trial of CH-4051

March 18 2009
Reports Positive Results from Phase II Trial of CH-1504 in Rheumatoid Arthritis

March 2 2009
Reports Positive Preliminary Results of Phase II Trial of Droxidopa in Intradialytic Hypotension

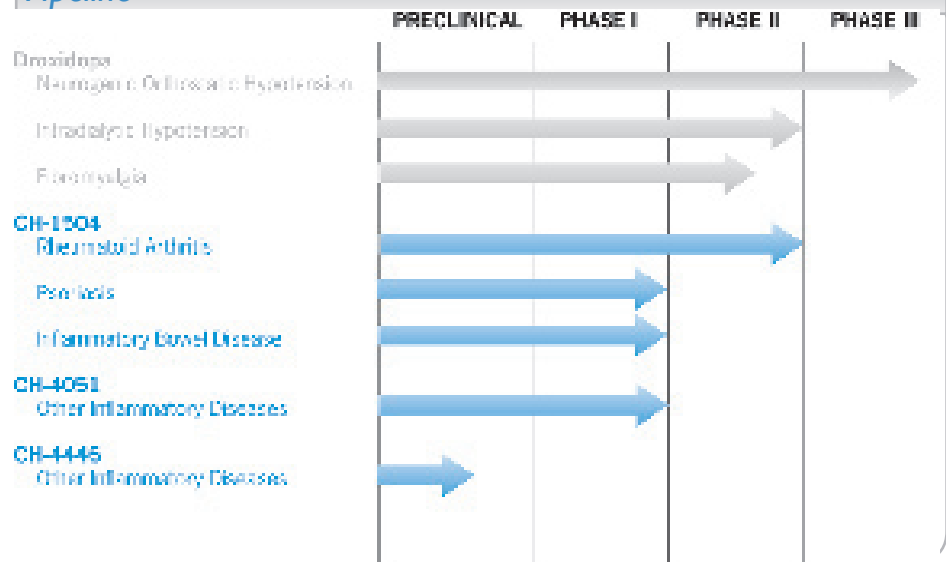
January 28 2009
Initiates Phase II Trial of Droxidopa in Fibromyalgia

November 3 2008
Reports Significant Reduction in Severity of Symptoms During Titration Phase of Pivotal Phase III Study of Droxidopa in Neurogenic Orthostatic Hypotension

Corporate Profile

Chelsea Therapeutics is an emerging biotechnology company focused on the development of small molecule-based therapeutics targeting known mechanisms of action for a variety of human diseases. Its most clinically advanced pipeline candidate, Droxidopa, is an orally active synthetic precursor of norepinephrine that is currently in Phase III study for neurogenic orthostatic hypotension. Chelsea is also developing a portfolio of metabolically inert methotrexate analogues engineered to treat a broad range of immunological disorders with fewer of the harmful and unpleasant side effects typically associated with classical antifolates.

Pipeline



Investment Highlights

- Diverse, Risk Sensitive Portfolio of Drug Candidates
 - Droxidopa, Neurogenic Orthostatic Hypotension (Phase III)
 - Droxidopa, Intradialytic Hypotension (Phase II)
 - CH-1504, Rheumatoid Arthritis (Phase II)
 - CH-4051, Multiple Autoimmune Diseases (Phase I)
- Maximizing Potential Value Through Progressive Label Expansion
 - Droxidopa: Fibromyalgia, Chronic Fatigue, Freezing Gait, and other Norepinephrine Related Indications
 - Metabolically Inert Antifolates (CH-1504/CH-4051/Others): Psoriasis, Inflammatory Bowel Disease, Other Inflammatory Disorders, and Oncology



INDICATIONS

Chelsea Therapeutics is seeking initial marketing approval of Droxidopa for the treatment of symptomatic neurogenic orthostatic hypotension (NOH) in patients with primary autonomic failure.

Neurogenic Orthostatic Hypotension arises from a failure of the autonomic nervous system. The mechanism of OH in neurogenic disorders is believed to be an inability to increase sympathetic nervous system release of norepinephrine upon rising from a supine position. This deficiency results in sudden, decreased blood pressure when a person assumes a standing position and is characterized by lightheadedness, dizziness, blurred vision and syncope.

The three idiopathic neurogenic diseases that involve primary autonomic failure are **pure autonomic failure**, **multiple system atrophy**, and **Parkinson's disease**.

An estimated **300,000 patients** suffer from symptomatic NOH associated with primary autonomic failure in the US and EU combined.

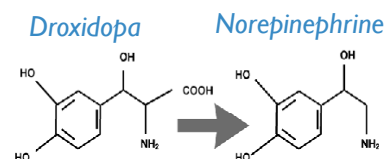
As development of Droxidopa for NOH progresses, Chelsea intends to evaluate other therapeutic indications for which Droxidopa either has previously shown or is believed to provide potential therapeutic benefit including Intradialytic Hypotension, Fibromyalgia, Adult Attention Deficit Disorder, Freezing of Gait and/or Chronic Fatigue Syndrome.

Product Profile

Droxidopa (L-Dops), currently approved and marketed in Japan, is an orally active synthetic precursor of norepinephrine for the treatment of orthostatic hypotension. By replenishing depleted norepinephrine via endogenous enzymatic pathway, Droxidopa allows for re-uptake of norepinephrine into peripheral nervous system neurons – stimulating receptors for vasoconstriction and providing physiological improvement in symptomatic neurogenic orthostatic hypotension.

Mechanism of Action

- Synthetic amino acid “prodrug” of norepinephrine (NE)
- Replenishes depleted NE by endogenous enzymatic pathway
- Directly decarboxylated by dopa decarboxylase to form NE
- Allows for re-uptake of NE into peripheral nervous system neurons
 - Stored NE available for release upon standing
 - Released NE stimulates receptors for vasoconstriction
 - Homeostasis mechanisms terminate NE activity
 - Metabolism
 - Neuronal uptake
- Provides physiological improvement in neurogenic OH patients
- Incidence of SAE has never exceed that reported for placebo



Development Plan

Chelsea acquired over 15 years of pre- and post-marketing safety and efficacy data. Chelsea intends to use this data as part of its regulatory approval process and currently conducting two pivotal Phase III trials and preparing to file for its first application for marketing approval with the FDA in neurogenic orthostatic hypotension. Chelsea is also developing Droxidopa for other indications in which NE is believed to play a role.

- Currently in Phase III trials in NOH, Data and NDA to be initiated in 2009
- Reported Positive Phase II proof-of-concept trial in Intradialytic Hypotension Q1 09
- Initiated Phase II proof-of-concept trial in Fibromyalgia in Q1 09



Current NOH Therapy

At present, there is no single drug for the treatment of symptomatic orthostatic hypotension (OH) that is both effective and has limited side effects. Midodrine is currently the only FDA approved therapeutic for the treatment of OH.

Midodrine (ProAmatine®) FDA and limited EU approval

- Sympathomimetic vasoconstrictor that acts directly on resistance vessels
- May cause severe supine hypotension, since it directly stimulates post-synaptic alpha 1-adrenergic receptors.
- Other side effects include: piloerection, scalp itchiness, and dysuria or urinary retention.
 - US Sales approximately \$60 million
 - Branded approx. \$16/day
 - Generic approx \$12/day

OH is also commonly treated by increasing intravascular volume through the off-label administration of fludrocortisone, a mineralocorticoid that retains sodium and expands plasma volume.

Fludrocortisone (Florinef®) Not FDA approved for OH

- Retains Na⁺ in bloodstream
- Simply adds volume
- Side effects include hypertension, water & sodium retention, K⁺ loss

Many patients with severe neurogenic OH do not respond to any available treatment and remain completely incapacitated despite appropriate doses of fludrocortisone and midodrine.

Compelling Commercial Opportunity for Droxidopa

At present, there is no single drug for the treatment of symptomatic orthostatic **Droxidopa** - Approved Japan

- Replenished depleted norepinephrine
- No significant side effects
- Japanese Sales historically approximately \$50 million
 - Avg. \$2-4/day

Compelling Commercial Opportunity

- U.S. Sales of \$300-\$375 million within 3-5 years of launch assuming:
 - Pricing: \$30/day (10mg branded midodrine=\$16/day)
 - Compliance: 70%

Scientific Advisory Board

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Dysautonomia Research,
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Legal Notes & Disclosures:

This document contains forward-looking statements that relate to future events or future business and financial performance. Such statements can be only predictions and the actual events or results may differ from those discussed due to, among other things, those risks described in Chelsea Therapeutics' Forms 10-Q and 10-K. This document is published solely for information purposes and is not to be construed as an offer to sell or the solicitation of an offer to buy any security in any state. Past performance does



INDICATIONS

Rheumatoid Arthritis

- Affects approximately 1-2% of the general population and is two to three times more prevalent in women than men.
- Develops most frequently between the ages of 30 and 50.
- MTX, the current standard of care and leading prescription in combination therapy, accounts for more than 46% of the prescriptions written for RA.

Psoriasis

- Chronic, immune-mediated skin disease of varying forms and degrees of severity
- Affects more than 4.5 million adults in the U.S.

IBD

- IBD is an umbrella term encompassing a number of chronic, relapsing inflammatory diseases involving the gastrointestinal tract affecting over a million people in the U.S. alone.
- Estimated direct and indirect costs to treat IBD amount to \$1.3 billion each year

Cancer, inflammatory bowel disease and asthma are other conditions that may be positively impacted by treatment with CH-1504.

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Product Profile

Chelsea's portfolios of orally available and metabolically inert antifolates are engineered to have potent anti-inflammatory and anti-tumor properties, inhibiting several key enzymes that are required for cell proliferation. Preclinical and pilot clinical data suggest increased potency versus Methotrexate (MTX), currently the leading antifolate treatment and standard of care for a broad range of abnormal cell proliferation diseases.

Clinical Highlights

CH-1504: Pilot Clinical Study, RA - British American Hospital, Lima, Peru

- Independent six-month, open-label study in 20 RA patients
- Improved response rate – 90% reached an ACR20 and 40% reached an ACR50 in the CH-1504 treated patients, compared to 40% and 10% respectively in the MTX treated patients.
- Efficacy in treatment resistant patients – 3 out of 4 patients who previously failed MTX treatment responded with CH-1504.
- Superior tolerability compared with MTX – no abnormal lab values, no liver enzyme elevation or abnormalities, and fewer side effects.

CH-1504: Phase II Trials, RA - Multi-national, Multi-Center

- Double-blind, 4-arm trial comparing CH-1504 to MTX in 200 MTX naive patients
- 0.25, 0.5 and 1.0 mg daily dose of CH-1504 vs 20mg weekly dose MTX
- CH-1504 Demonstrated Comparable Efficacy to MTX
- All doses of CH-1504 demonstrated almost two-fold or greater reduction in liver enzyme elevations
- Fewer GI related adverse events

CH-4051: Preclinical Highlights

- Superior efficacy to MTX in delaying onset of RA, significantly decreased severity, and, at some doses, completely blocked development of RA

CH-4051: Phase I Trials - Netherlands

- Single and Multiple Ascending Dose evaluation to assess the safety, tolerability and pharmacokinetics of CH-4051, the fast follower to CH-1504, in healthy male volunteers
- Safe and well-tolerated up to and including 7.5mg
- No serious adverse events, GI and reversible liver enzyme elevations at highest doses
- Dose proportionate response



Simon Pedder, Ph.D. - President and CEO



Dr. Pedder joined Chelsea from Hoffmann-La Roche Inc. where he was VP of Pharmaceutical Business, Oncology and an Officer for the company. Prior to that he was in charge of the hepatitis franchise at Roche where he was in charge of the development of Pegasys and Copegus, which have combined annual worldwide sales of over \$1 billion. He has been a Director in Pharmaceutical Business, Pharmaceutical Development and Project Management. During his time at Roche he oversaw a number of successful NDAs. Dr. Pedder has his Ph.D. in Pharmacology from the College of Medicine at the University of Saskatchewan in Canada.

L.Arthur Hewitt, Ph.D. - Vice President of Drug Development



Dr. Hewitt has over 25 years of pharmaceutical industry experience working for Abbott Laboratories, Parke-Davis, Janssen Pharmaceuticals and Amgen. While at Amgen he was the Head of Clinical Research and Regulatory Affairs in Canada. During his years at Amgen, Dr. Hewitt oversaw the approval of Neupogen, Stemgen and Infergen. Dr. Hewitt obtained his Ph.D. in Pharmacology from the Medical School at the University of Montreal.

J. Nick Riehle, MBA - Vice President, Administration and CFO



Mr. Riehle has over 25 years of business and management experience with both large fortune 500 companies and start-up ventures. He has held senior positions at HAHT Commerce, Nortel Networks and IBM. In addition he has had significant success with regards to venture financing, growing business volume and improving profitability. Mr. Riehle earned his Bachelor of Commerce from McGill University, his MBA from York University and a Certified Management Accountant (CMA) designation in Ontario, Canada.

Keith Schmidt - Vice President, Marketing and Sales



Mr. Schmidt brings to Chelsea over 25 years of experience and a proven track record in domestic and international pharmaceutical sales and strategic marketing for launching industry leading drugs including Pegasys™, Naprosyn™, Anaprox™, Cialis™, Cymbalta™, and Strattera™. Over the course of his career, Mr. Schmidt has worked for companies such as Hoffmann-La Roche and Syntex Laboratories and served as the Vice President assigned to Eli Lilly marketing for Thomson Advanced Therapeutics Communications. During his tenure at Hoffmann-La Roche, Mr. Schmidt served as International Business Leader responsible for global pre-launch marketing preparation, launch market plans, and life cycle planning for Pegasys™ in Hepatitis. Mr. Schmidt has a BS in Experimental Psychology and an MBA in International Marketing from the University of San Francisco.

Joseph G. Oliveto - Vice President, Operations



Mr. Oliveto joined Chelsea following a two-year assignment as Executive in Residence at Pappas Ventures, a life sciences venture capital firm. Prior to Pappas Ventures, he served in a number of progressively senior positions at Hoffmann-La Roche, most recently as the Global Alliance Director for Roche's licensing organization. Previous experience at Roche includes clinical development, project management, manufacturing process improvement and global business. During his tenure, he played an integral part in the success of multiple NDA filings, developed comprehensive launch programs, including those for both Pegasys and CoPegus, and closed multiple licensing deals.