# Chelsea Therapeutics Announces Positive DSMB Recommendation for CH-1504 Phase II Trial in Rheumatoid Arthritis

## DSMB Finds Sufficient Efficacy Signal and Acceptable Safety Profile to Recommend Continuation of Each Arm of the Trial

CHARLOTTE, N.C., Oct. 21, 2008 -- Chelsea Therapeutics International, Ltd. (Nasdaq:CHTP) announced that an independent Data Safety Monitoring Board (DSMB) recently met to review patient safety and efficacy data for Chelsea's Phase II trial of CH-1504 in rheumatoid arthritis (RA) and recommended that each arm of the study continue as planned.

"We are very encouraged that this DSMB review provided us with a recommendation to continue each arm of the study as planned," commented Dr. Simon Pedder, President and CEO of Chelsea Therapeutics. "We believe there is a significant market opportunity for a better tolerated, safer version of methotrexate and that our portfolio of metabolically inert antifolates offers a unique opportunity to provide an improved disease modifying therapeutic option for RA patients. We believe this trial will validate earlier clinical findings by demonstrating CH-1504 has at least comparable efficacy to methotrexate while maintaining superior safety and tolerability and are eagerly looking forward to the full results of this trial early next year."

This 12-week, 4-arm, parallel group Phase II clinical trial will enroll 200 patients and is designed to provide a head-to-head comparison of the efficacy and tolerability of 0.25 mg, 0.5 mg and 1.0 mg once daily oral doses of CH-1504 versus a 20 mg once weekly oral dose of methotrexate (MTX) in a MTX naive RA patient population. During their review of un-blinded data, the DSMB evaluated all the safety and efficacy data related to the first 100 patients in the study and found both a sufficient efficacy signal and acceptable safety profile to recommend continuation of each arm of the trial.

The primary efficacy endpoint of this study is to determine the percent of patients with ACR 20 response at the end of 12 weeks. An ACR 20 response is a standard efficacy measure that requires at least a 20% improvement in a number of different measures of disease activity. As the improved safety and tolerability of CH-1504 is expected to be a significant advantage over MTX, the trial will also compare a cluster of gastrointestinal system related adverse events, such as nausea, vomiting, and diarrhea, frequently seen with MTX use as well as closely monitor the results of standard liver function tests across dose groups.

In parallel to its development of CH-1504, Chelsea has also begun validating the potency of additional compounds in its library of metabolically inert antifolates. In March of 2008, the Company reported significant efficacy of CH-4051, the second compound from this portfolio, in the reduction of collagen-induced arthritis in an animal model. In light of the positive DSMB assessment of its Phase II trial of CH-1504, Chelsea intends to continue the current Phase II trial and to initiate its planned Phase I study of CH-4051 later this quarter.

About CH-1504

CH-1504 is the lead product candidate in Chelsea's portfolio of novel antifolate compounds developed by Dr. Gopal Nair and licensed by the company in 2004. An orally available and metabolically inert antifolate with potent anti-inflammatory and anti-tumor properties, CH-1504 potently inhibits several key enzymes that are required for cell proliferation. Preclinical and clinical data to date suggests superior safety and tolerability, as well as increased potency versus MTX, currently the leading antifolate treatment and standard of care for a broad range of abnormal cell proliferation diseases. Diseases that may potentially benefit from the compound include RA, psoriasis, inflammatory bowel disease, cancer and other immunological disorders.

About Chelsea Therapeutics

Chelsea Therapeutics is a biopharmaceutical development company that acquires and develops innovative products for the treatment of a variety of human diseases. The Company is currently developing a library of metabolically inert antifolate compounds engineered to have potent anti-inflammatory and anti-tumor activity to treat a range of immunological disorders. Early clinical data suggests that Chelsea's lead antifolate compound, CH-1504, is a safe and effective treatment alternative to methotrexate for RA and may have further applications for psoriasis, IBD and certain cancers. Chelsea's antifolate program is complemented by the development of the I-3D portfolio of therapeutics targeting immune-mediated inflammatory disorders and transplantation. In addition to its autoimmune pipeline, Chelsea is developing Droxidopa, an orally active synthetic precursor of norepinephrine, for the treatment of neurogenic orthostatic hypotension. Currently approved and marketed in Japan, Droxidopa has accumulated over 15 years of proven safety and efficacy, historically generating annual revenues of approximately $50 million in Japan.

This press release contains forward-looking statements regarding future events. These statements are just predictions and are subject to risks and uncertainties that could cause the actual events or results to differ materially. These risks and uncertainties include reliance on collaborations and licenses, risks and costs of drug development, regulatory approvals, intellectual property risks, our reliance on our lead drug candidate, our history of losses and need to raise more money, competition, market acceptance for our products if any are approved for marketing, reliance on key personnel including specifically Dr. Pedder, management of rapid growth, and the need to acquire or develop additional products.

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