

Concert Pharmaceuticals Initiates CTP-347 Phase I Clinical Trial; Potential Best-in-Class Non-Hormonal Treatment for Vasomotor Symptoms

Potential Best-in-Class Non-Hormonal Treatment for Vasomotor Symptoms

Lexington, MA – Concert Pharmaceuticals, Inc. announced today that it has initiated a Phase I study in healthy volunteers to evaluate the safety, tolerability and pharmacokinetics of CTP-347, a novel deuterium-containing serotonin modulator created by Concert researchers. Concert intends to evaluate CTP-347 as a non-hormonal treatment for vasomotor symptoms (VMS or hot flashes) in patients with increased risk of adverse effects due to, or contraindicated to using, hormone therapy, as well as in the larger menopausal population. Results of this Phase I study are expected to be available in the first half of 2009.

“We are pleased to have advanced our first compound from concept to clinical testing in less than two years. We believe our deuterium chemistry platform holds great promise in creating novel compounds with superior safety and efficacy as compared to existing therapies. We look forward to advancing and introducing a number of first-in-class agents for unmet medical needs, of which CTP-347 is our first to enter the clinic,” said Roger Tung, Ph.D., President and Chief Executive Officer of Concert Pharmaceuticals.

CTP-347 is Concert's first compound to advance into clinical trials. CTP-347 is a new chemical entity developed from Concert's deuterium chemistry platform by replacing key hydrogen atoms of paroxetine with deuterium. Paroxetine has been shown to be an effective treatment for VMS. However, it is a potent and irreversible inactivator of CYP2D6 (cytochrome P450 2D6), a key liver enzyme responsible for the metabolism of many commonly-prescribed drugs. In preclinical testing, CTP-347 demonstrated improved metabolic properties, significantly reducing CYP2D6 inhibition while preserving paroxetine's pharmacological activity. Based on these results, Concert believes CTP-347 may avoid adverse interactions with many drugs, including tamoxifen and certain antiarrhythmics, beta-blockers, analgesics, and antipsychotics. The Company expects to investigate CTP-347's drug-drug interaction profile as part of the Phase I study.

Currently, there is no FDA-approved non-hormonal treatment for VMS, a serious and sometimes long-term condition associated with a range of undesirable effects including depression, insomnia and lost productivity. Hormone replacement therapy can effectively treat VMS. However, patients who currently or previously have been treated for cancers of the breast or ovary, or who have a familial history of these cancers, are often advised to avoid hormonal treatment. A non-hormonal therapy may also be preferred by women who experience VMS following menopause in whom hormone therapy is contraindicated or who have concerns about long-term health risks posed by hormone replacement therapy.

About Deuterium

Concert Pharmaceuticals has created a broad pipeline by replacing specific hydrogen atoms in existing, clinically-validated drugs with deuterium atoms, resulting in highly differentiated new chemical entities with potential as best-in-class and first-in-class therapeutic agents. Deuterium is a safe, non-radioactive relative of hydrogen that can be isolated from sea water and has been used extensively in human metabolic and clinical studies. Since deuterium resembles hydrogen, deuterium-modified compounds are expected to fully preserve the pharmacological activity of their hydrogen analogs. An important difference is that deuterium has greater mass than hydrogen and therefore forms stronger chemical bonds. The stronger chemical bond obtained by selective deuterium modification may improve the drug's metabolic properties, resulting in better safety, tolerability, and efficacy.

About Concert

Concert Pharmaceuticals, Inc. is a clinical stage biotechnology company dedicated to creating new medicines through a novel scientific approach utilizing the naturally-occurring element deuterium. Concert applies its innovative platform to create highly differentiated compounds starting from validated drug molecules, yielding a rich pipeline of new chemical entities (NCEs). Concert leverages decades of pharmaceutical experience to create drug candidates with potential for best-in-class efficacy and safety, while reducing R&D risk, time, and expense. The Company has over 100 patent applications for new drug candidates addressing a broad range of therapeutic areas, including vasomotor symptoms, HIV/AIDS and fibrotic diseases, among others. Since its inception in 2006, Concert has raised more than \$96 million and has been financed by leading venture capitalists and institutional investors. A complete listing of Concert's shareholders and additional corporate information is available online at <http://www.concertpharma.com>.