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NEWSRELEASE

NephroGenex Announces Initiation of New Pyridorin™ Clinical Trial

PYR-210 multi-national Phase 2b trial includes 300 diabetic kidney disease patients

Princeton, N.J. – September 9, 2008 – NephroGenex, Inc, a privately held drug development company focusing on kidney disease, today announced the initiation of a new Phase 2b clinical trial (PYR-210) examining the safety and efficacy of its lead drug candidate Pyridorin™ (pyridoxamine dihydrochloride) in patients with overt diabetic nephropathy. The trial is being conducted in multiple sites in the United States, Australia and Israel. The Company is further pleased to announce the recruitment of the first patient into this double blind, placebo controlled trial.

In previous Phase 2 trials, Pyridorin™ treatment demonstrated a significant slowing of diabetic nephropathy progression, as measured by slowing the rate of increase in serum creatinine over six months. Mark A. Klausner, Chief Medical Officer of NephroGenex, stated that "this was indicative of a promising therapeutic effect, since the level of serum creatinine in a patient reflects the glomerular filtration rate, and is the most widely accepted marker of kidney function." He added that "in the new PYR-210 study, the duration of treatment will be doubled to 12 months, a greater number of patients will be treated, and two active doses (150 mg and 300 mg) will be compared to placebo."

Diabetic kidney disease afflicts about 20% of all diabetics and is the major cause of end-stage renal disease (ESRD) which is an enormous drain on healthcare expenditures. Furthermore, mortality rates of ESRD patients can reach 20% annually. Pyridorin™ has been awarded Fast Track status by the FDA due to the unmet medical need of this life-threatening disease that continues to increase in incidence and prevalence.

The new clinical trial will be conducted by the Collaborative Study Group, a site management organization of nephrologists that has conducted notable world-

wide trials in diabetic nephropathy that led to the first approval of drugs against this condition. “We are extremely pleased to have such a distinguished and experienced group conduct this study”, said Dr. Wesley Fox, President and CEO of NephroGenex. “They bring unmatched experience in pioneering treatments for this extremely serious disease for which few drugs have proven effective in slowing its progression.”

Patients recruited into this trial are those with Type II diabetes and elevated serum creatinine with significant macroalbuminuria. Details of the PYR-210 trial can be examined at ClinicalTrials.gov.

About NephroGenex, Inc.

NephroGenex is a drug development company with a focus on kidney disease. More than 20 million Americans have some form of chronic kidney disease, and over 400,000 in the US have end stage renal disease requiring dialysis, making renal disease one of the costliest illnesses to treat. The Company is developing Pyridorin™ (pyridoxamine dihydrochloride) as a treatment to slow the progression of diabetic kidney disease. Pyridorin™ has demonstrated a significant treatment effect in slowing the progression of diabetic nephropathy in two Phase II clinical trials, and has been awarded Fast Track status by the FDA. Pyridorin is currently a leading drug candidate in advanced clinical trials for diabetic kidney disease. NephroGenex has initiated a new Phase IIb clinical trial (PYR-210) that is evaluating the safety and efficacy of Pyridorin in slowing the progression of overt nephropathy in patients with type 2 diabetes. NephroGenex will seek a partner for Phase III development and commercialization.