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IDENIX PHARMACEUTICALS SUCCESSFULLY COMPLETES PROOF-OF-CONCEPT STUDY OF IDX184 FOR THE TREATMENT OF HEPATITIS C VIRUS (HCV)

Cambridge, MA, July 20, 2009 – Idenix Pharmaceuticals, Inc. (NASDAQ: IDIX), a biopharmaceutical company engaged in the discovery and development of drugs for the treatment of human viral diseases, today announced that it has successfully completed a three-day proof-of-concept study of IDX184. Idenix is developing IDX184, a novel liver-targeted prodrug of 2'-methyl guanosine nucleotide, for the treatment of HCV.

This double-blind, placebo-controlled, monotherapy, dose-escalation study evaluated the safety and antiviral activity of IDX184. In this study, 41 treatment-naïve HCV genotype-1-infected patients were randomized to receive either IDX184 or placebo once-daily for three days. Four dosing cohorts (25 mg, 50 mg, 75 mg and 100 mg) of IDX184 were evaluated. IDX184 was well tolerated in this study with no serious adverse events reported and no discontinuations from the study. Patterns of adverse events were similar between IDX184- and placebo-treated patients. Viral load declines were observed in 30 of the 31 IDX184-treated patients, with no response in one patient in the 25 mg cohort. Significant viral load reductions were observed in the three higher dose cohorts (50, 75 and 100 mg/day). Post-treatment viral load data suggest no evidence of drug accumulation. The table below summarizes mean HCV RNA reductions observed in this study per cohort:

Cohort	Dose	End of Treatment Mean Change in HCV RNA (log_{10})	Patients with 1 log_{10} or Greater Reduction in HCV RNA at End of Treatment
A (n=6*)	25 mg/day	-0.47	1
B (n=8)	50 mg/day	-0.69	1
C (n=8)	75 mg/day	-0.70	2
D (n=9)	100 mg/day	-0.74	4
Control (n=8)	Placebo	+0.01	0

*Eight subjects were randomized to this cohort, two of whom were excluded from the viral load evaluation due to an error in dosing.

"We are pleased with the results of this study, which support the potential for IDX184 to be a best-in-class nucleoside/tide polymerase inhibitor with demonstrated antiviral activity and tolerability, coupled with a low once-daily dose," said Douglas Mayers, M.D., chief medical officer of Idenix. "Now that we have successfully completed the proof-of-concept study in HCV-infected patients, we plan to advance IDX184 into a 14-day dose-ranging study in combination with the current standard-of-care, pegylated interferon and ribavirin, to determine the optimal IDX184 doses to advance into broader clinical trials."

In the 75 and 100 mg/day cohorts, patients receiving IDX184 experienced improvements in two key markers of liver injury, with mean AST and ALT levels decreasing to below the upper limit of normal. These improvements were sustained for up to 6 days post-dosing, and most levels returned to baseline 14 days post-treatment.

“We have made great progress in our HCV discovery and development programs this year,” said Jean-Pierre Sommadossi, Ph.D., chairman and chief executive officer of Idenix. “With the successful completion of the proof-of-concept study for IDX184 and plans to file investigational new drug applications in the coming months from our non-nucleoside polymerase inhibitor and protease inhibitor programs, we are closer to achieving our ultimate goal of developing novel combinations of direct-acting antivirals for the treatment of hepatitis C.”

The company plans to report the full data set from this study at a scientific meeting later this year.

About IDX184
IDX184 is a novel, liver-targeted 2’-methyl guanosine nucleotide prodrug, which includes Idenix’s proprietary liver-targeting technology. This technology enables the delivery of nucleoside monophosphate to the liver, leading to the formation of high levels of nucleoside triphosphate, potentially maximizing drug efficacy and limiting systemic side effects with low, once-daily dosing of drug.

Conference Call Information
Idenix will hold a conference call and webcast today at 4:30 p.m. ET. To access the call please dial 800-774-5358 U.S./Canada or 706-758-9475 International and enter passcode 20088902 or to listen to a live webcast and view accompanying slides, go to "Calendar of Events" in the Idenix Investor Center at www.idenix.com. A replay of the call will also be available from 6:30 p.m. ET on July 20, 2009 until August 3, 2009 12:00 a.m. ET. To access the replay, please dial 800-642-1687 U.S./Canada or 706-645-9291 International and enter passcode 20088902. An archived webcast will also be available for two weeks after the call on the Idenix website.

About Idenix
Idenix Pharmaceuticals, Inc., headquartered in Cambridge, Massachusetts, is a biopharmaceutical company engaged in the discovery and development of drugs for the treatment of human viral diseases. Idenix's current focus is on the treatment of infections caused by hepatitis C virus. For further information about Idenix, please refer to www.idenix.com.

Forward-looking Statements
This press release contains “forward-looking statements” within the meaning of The Private Securities Litigation Reform Act of 1995. Such forward-looking statements can be identified by the use of forward-looking terminology such as “expect,” “plans,” “anticipates,” “will,” “expects,” “goal” or similar expressions, or by express or implied statements with respect to the company’s clinical development programs or commercialization activities in hepatitis C, or any potential pipeline candidates, including any expressed or implied statements regarding the efficacy and safety of IDX184, the likelihood and success of any future clinical trials involving IDX184 or successful development of novel combinations of direct-acting antivirals for the treatment of hepatitis C. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from any future results, performance or achievements expressed or implied by such statements. There can be no guarantees that the company will advance any clinical product candidate or other component of its potential pipeline to the clinic, to the regulatory process or to commercialization. In particular, management’s expectations could be affected by unexpected regulatory actions or delays; uncertainties relating to, or unsuccessful results of, clinical trials, including additional data relating to the ongoing clinical trials evaluating its product candidates; the company’s ability to obtain additional funding required to conduct its research, development and commercialization activities; the company’s

dependence on its collaboration with Novartis Pharma AG and GlaxoSmithKline, respectively; changes in the company's business plan or objectives; the ability of the company to attract and retain qualified personnel; competition in general; and the company's ability to obtain, maintain and enforce patent and other intellectual property protection for its product candidates and its discoveries. These and other risks which may impact management's expectations are described in greater detail under the caption "Risk Factors" in the company's annual report on Form 10-K for the year ended December 31, 2008 and the Quarterly Report on Form 10-Q for the quarter ended March 31, 2009, as filed with the Securities and Exchange Commission (SEC) and other filings that the company makes with the SEC.

All forward-looking statements reflect the company's expectations only as of the date of this release and should not be relied upon as reflecting the company's views, expectations or beliefs at any date subsequent to the date of this release. Idenix anticipates that subsequent events and developments may cause these views, expectations and beliefs to change. However, while Idenix may elect to update these forward-looking statements at some point in the future, it specifically disclaims any obligation to do so.

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