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CHIMERIX'S PIM CONJUGATE TECHNOLOGY REDUCES RISK OF NEPHROTOXICITY FOR CMX001 AND CMX157

Preclinical Data Presented At Pharmaceutical Sciences World Congress 2010

NEW ORLEANS, LA and RESEARCH TRIANGLE PARK, NC, November 16, 2010 – Scientists from Chimerix, Inc. today presented *in vitro* data demonstrating that the company's lipid-conjugated drugs, CMX001 and CMX157, are not substrates for the human Organic Anion Transporters (hOATs) and thus have significantly reduced potential to cause nephrotoxicity via this mechanism. These data, presented at the International Pharmaceutical Federation (FIP) Pharmaceutical Sciences World Congress (PSWC 2010) and American Association of Pharmaceutical Sciences (AAPS) Annual Meeting, provide a mechanistic explanation for the observed absence of nephrotoxicity in human clinical testing of both compounds to date. Nephrotoxicity is a significant dose-limiting factor for several comparable therapies.

Chimerix is applying its powerful PIM (Phospholipid Intramembrane Microfluidization) Conjugate Technology to existing antiviral compounds to create new chemical entities with improved pharmaceutical attributes. The PIM Conjugate Technology is used to modify a drug molecule so that it mimics a naturally occurring phospholipid. The lipid mimic can then utilize natural uptake pathways enabling oral bioavailability and altering drug distribution profiles. Chimerix's lead clinical candidate CMX001 applies Chimerix's PIM Conjugate Technology to the antiviral agent cidofovir, while the second clinical stage compound, CMX157, is the company's proprietary lipid conjugation of tenofovir. Both cidofovir and tenofovir are known to cause nephrotoxicities, and the severity of nephrotoxicities associated with cidofovir in particular have substantially limited its use. Chimerix has created CMX001 and CMX157 with the intent of minimizing this serious side effect while enhancing drug bioavailability and antiviral activity.

The study reported at the World Congress was designed to evaluate whether CMX001 and CMX157 are substrates of human Organic Anion Transporter 1 (hOAT1) and hOAT3, which are both linked to kidney excretion of endogenous substances and certain drugs. Researchers noted that net uptake of CMX001 and CMX157 was not enhanced in OAT-expressing cells. These data provide evidence that CMX001 and CMX157 are not substrates of human OAT1 and OAT3 and therefore have a low potential to cause OAT-mediated nephrotoxicity. In contrast, uptake of cidofovir and tenofovir was enhanced in *in vitro* cells expressing OAT1, consistent with previous literature reports.

"Nephrotoxicity is a serious and potentially life-threatening adverse effect associated with the antiviral agents cidofovir and tenofovir. Through the application of our proprietary PIM Conjugate Technology we are able to dramatically alter drug distribution and thereby potentially avoid nephrotoxicity," said George Painter, Ph.D., Chief Scientific Officer of Chimerix. "Our animal and clinical studies of CMX001 and CMX157, in which both compounds have demonstrated a positive safety profile, are consistent with our *in vitro* observations that CMX001 and CMX157 are not metabolized in the kidney. Furthermore, these data are consistent with, and provide a mechanistic explanation for, data presented at the recent ICAAC meeting that CMX001 was well tolerated in 46 patients with compromised renal function."

Chimerix is developing CMX001 for dual-use as a broad-spectrum antiviral for the treatment of life-threatening viruses in immunocompromised transplant and cancer patients and as a medical countermeasure in the event of a smallpox release. CMX001 is currently in Phase 2 clinical trials for the prophylaxis and treatment of human cytomegalovirus infection. CMX157 is currently in Phase 1 clinical testing for the treatment of HIV infections.

Cidofovir and tenofovir are polar, acyclic nucleoside phosphonates that are FDA-approved as Vistide® (cidofovir injection) for the treatment of cytomegalovirus retinitis, and as Viread® (tenofovir disoproxil fumarate) for the treatment of HIV.

These data were presented in a poster titled “Lipid Conjugates of Cidofovir and Tenofovir, CMX001 and CMX157, Are Not Substrates of Human Organic Anion Transporters hOAT1 and hOAT3” (Abstract T3396) at the FIP Pharmaceutical Sciences World Congress and AAPS Meeting being held in New Orleans, LA. A copy of the poster is available on Chimerix’s website at <http://www.chimerix.com>.

About Chimerix and CMX001

Chimerix is developing novel antiviral therapeutics with the potential to transform patient care in multiple settings, including transplant, oncology, acute care and global health.

The company’s lead candidate, CMX001, is in Phase 2 clinical studies in immunocompromised transplant and cancer patients for the treatment of life-threatening viruses, including cytomegalovirus and adenovirus. Over 300 people have received CMX001 to date. CMX001 has been well tolerated in all studies, with a growing body of evidence of the compound’s antiviral activity in humans. In Chimerix’s ongoing placebo-controlled studies, CMX001 has been administered to more than 200 patients and healthy volunteers. In addition, at the request of leading physicians at over 45 medical centers throughout the United States, Canada, Europe and Israel, CMX001 has been administered to more than 120 patients under investigator-held Emergency Investigational New Drug applications (EINDs) for the treatment of a wide range of infections caused by dsDNA viruses for which there are either no approved treatments or where patients have failed the available treatment. To date, CMX001 has been used to treat patients with 12 different dsDNA viral infections across all five families of dsDNA viruses that affect humans. CMX001 is also being developed as a medical countermeasure in the event of a smallpox release. Chimerix has received significant funding from the National Institutes of Allergy and Infectious Disease to develop CMX001 for smallpox.

Chimerix’s second clinical-stage antiviral compound, CMX157, has completed Phase 1 clinical studies. CMX157 is in development as a potent nucleoside analogue against multi-drug resistant HIV infections.

Led by a world-class antiviral drug development team, Chimerix is also leveraging the company’s extensive chemical library to pursue new treatments for hepatitis C virus, malaria and other global public health needs. For additional information on Chimerix, please visit <http://www.chimerix.com>.

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