AiCuris Announces Publication of Phase 2 Clinical Trial Results of Investigational Anti-Herpes Simplex Virus Agent Pritelivir in JAMA

Study results clearly supported pritelivir to be more effective than valacyclovir for suppression of herpes simplex virus (HSV) genital shedding in patients with frequent recurrences

Wuppertal, January 17th, 2017 - AiCuris Anti-infective Cures GmbH, a leading company in the discovery and development of drugs against infectious diseases, today announced the publication of results from a phase 2 clinical study evaluating the safety and efficacy of pritelivir, an investigational antiviral agent for treatment and suppression of HSV infections, compared to valacyclovir. The results, published in an article titled 'Effect of Pritelivir Compared With Valacyclovir on Genital HSV-2 Shedding in Patients With Frequent Recurrences' in the latest issue of JAMA (Journal of the American Medical Association), clearly demonstrated that pritelivir met the primary endpoint by being more effective for suppression of viral shedding compared to the nucleoside analogue valacyclovir, the current standard treatment for genital herpes.

In the double-blind, randomized crossover study 91 participants with recurrent genital herpes but not with an active outbreak were randomized to receive daily oral doses of 100 mg pritelivir over 28 days followed by a 28-day wash-out period before taking 500 mg valacyclovir for 28 days (n=46) or to start the treatment cycle with valacyclovir first (n=45). Throughout treatment, participants collected genital swabs four times a day for testing by HSV PCR (polymerase chain reaction) assays. The primary endpoint of the study was within-participant genital HSV shedding, defined as number of HSV positive swabs relative to the total number of swabs per participant, while receiving pritelivir compared with valacyclovir. Secondary endpoints included clinical outcomes such as days with genital lesions and frequency of pain.

Of the 91 randomized participants, 56[1] completed both treatment periods. Analysis of a total of nearly 15,000 genital swabs showed HSV shedding of 2.4% during pritelivir treatment compared to 5.3% during valacyclovir treatment, meeting the primary endpoint with a p value of 0.012. Pritelivir also showed superior clinical characteristics with genital lesions of 1.9% of days versus 3.9% of days under valacyclovir treatment and pain of 4.0% of days versus 6.7% of days respectively. No differences in treatment-emergent adverse events were observed between the two treatments.

"We are very pleased to see these encouraging results demonstrating superior efficacy of pritelivir over the nucleoside analogue valacyclovir published in this prestigious journal," noted Dr. Holger Zimmermann, CEO of AiCuris. "The data indicate that pritelivir may hold potential as a serious alternative to current standard treatment. We are currently looking forward to bringing the clinical development to the next level and are planning to evaluate the efficacy and safety of pritelivir in severely ill immunocompromised patients with nucleoside analogue-resistant HSV infections. The start of this trial is expected to be announced shortly."

[1] The reduced number of patients was due to the termination of the study following the placement of a clinical hold by the US Food and Drug Administration based on findings in a concurrent nonclinical toxicity study. In 2016 the FDA partially lifted the clinical hold for the treatment of specific patient populations.

"We are particularly pleased with the results of this study as they support our strategy of taking a different approach to treating HSV infections than the current polymerases and nucleoside analogues. Targeting different potential vulnerabilities of the virus with a new class of compounds provides the opportunity to significantly increase efficacy. This new approach has also already led to very active substances for the treatment of cytomegalovirus," said Prof. H. Ruebsamen-Schaeff, founding CEO of AiCuris and senior author of the publication.

Pritelivir is a novel HSV helicase-primase inhibitor with a different mode of action (non-nucleosidic) that is being developed to treat herpes simplex virus type 1 (HSV-1) and type 2 (HSV-2) infections. Oral pritelivir has successfully completed a phase 2 clinical trial in 156 participants with genital HSV-2 infections showing reduced viral shedding and genital lesions. The peer-reviewed JAMA article reports the results of a second clinical phase 2 study to compare the efficacy of pritelivir with valacyclovir for suppression of HSV-2 infections.

About Pritelivir

Pritelivir is an innovative, highly active and specific inhibitor of herpes simplex virus (HSV). Derived from a novel chemical class (thiazolylamides), pritelivir is active against both types of herpes simplex virus (HSV-1 and HSV-2), causing labial and genital herpes, respectively, and retains activity against viruses which have become resistant to marketed drugs. Pritelivir has a mode of action that is distinct from other antiviral agents currently in use for treating HSV infections (i.e., the nucleoside analogs acyclovir and its prodrug valacyclovir as well as famciclovir, the prodrug of penciclovir). While nucleoside analogs terminate ongoing DNA chain elongation through inhibition of viral DNA polymerase, pritelivir prevents de novo synthesis of virus DNA through inhibition of the helicase-primase complex. In addition, it does not require activation within an HSV infected cell by viral thymidine kinase and is therefore also protective to uninfected cells.

Currently the company is running two clinical development programs with pritelivir. The most advanced program, pritelivir (oral), showed superiority against standard treatment valacyclovir in a clinical phase 2 trial in patients with genital HSV-2 infection. Pritelivir (topical), designed for the treatment of recurrent labial herpes (mainly HSV-1), has just started a clinical phase 2 trial after reporting successful phase 1 clinical results.

About HSV

Herpes simplex viruses (HSV) are widespread (seroprevalence up to 100%, depending on geographic area and subpopulation), and are divided into herpes simplex virus type 1 (HSV-1) and type 2 (HSV-2). Infections lead to lifelong persistence of the virus, with frequent and sometimes painful recurrences. While HSV-1 predominantly causes oral lesions (cold sores), HSV-2 manifests in the genital region and is mainly sexually transmitted. In immunocompromised patients, HSV can lead to serious complications. The negative stigma associated with genital herpes and visible facial lesions may cause psychological distress.

According to the WHO an estimated 417 million people aged 15-49 (11%) worldwide were living with genital herpes caused by HSV-2 in 2012. Prevalence of HSV-2 infection was estimated to be

highest in Africa (31.5%), followed by the Americas (14.4%). It was also shown to increase with age, though the highest numbers of people newly-infected were adolescents.

About AiCuris Anti-infective Cures GmbH

AiCuris was founded in 2006 as a spin-off from Bayer and focuses on the discovery and development of drugs against infectious diseases. The company's majority investor is SANTO Holding. The company is developing drugs for the treatment of viruses such as human cytomegalovirus (HCMV), herpes simplex virus (HSV), hepatitis B virus (HBV), and adenoviruses. In the field of antibacterials, AiCuris seeks to develop innovative treatment options for life-threatening, (multidrug)-resistant hospital-treated pathogens. In 2012, AiCuris signed a license agreement with Merck & Co (MSD), one of the largest agreements of its kind in the European biotech industry. The agreement covers the development and commercialization of novel drug candidates against HCMV. Letermovir, the most advanced compound under this agreement, met the primary endpoint in a pivotal phase 3 clinical trial in patients undergoing bone marrow transplantation.

Contacts:

	Media Relations
AiCuris Anti-infective Cures GmbH	MC Services AG
Katja Woestenhemke Friedrich-Ebert-Str. 475/Geb. 302 42117 Wuppertal	Anne Hennecke Kaiser-Friedrich-Ring 5 40545 Düsseldorf
Phone +49 202 317 63 0 Fax +49 202 317 63 1601 Email business@aicuris.com Web www.aicuris.com	Phone +49 211 529 252 22 Fax +49 211 529 252 29 Email anne.hennecke@mc-services.eu Web www.mc-services.eu