CONTACT: Lisa Rossi
+1- 412- 916-3315 (mobile)
rossil@upmc.edu

FOR IMMEDIATE RELEASE

Trial shows ARVs can prevent HIV in men who have sex with men, making VOICE Study in women more important than ever

PITTSBURGH, Nov. 23, 2010 – In a significant advance for HIV prevention research, a clinical trial confirms that the same drugs used for treating HIV can also help prevent HIV infection in the first place.

The study, known as iPrEx, is important because it gives credence to an HIV prevention approach called oral pre-exposure prophylaxis (PrEP), which involves the use of antiretrovirals (ARVs) by people who are HIV-negative and at high risk of infection. It is the first of five large-scale effectiveness trials testing oral PrEP to report results, which were published online in the *New England Journal of Medicine* today.

The results represent a major boost in efforts to combat HIV worldwide, say researchers from the Microbicide Trials Network (MTN), which is conducting VOICE, an ongoing study of both oral PrEP and a vaginal microbicide. Yet, as a trial involving one particular high-risk group – men who have sex with men – the iPrEx findings cannot be viewed as wholesale endorsement for the widespread use of PrEP at this time, they caution. Until other studies are completed, definitive conclusions cannot be made about how PrEP should or should not be used and in whom it would be safe and effective.

The iPrEx study showed that daily use of an ARV tablet called Truvada® – together with comprehensive HIV prevention services and counseling – can help reduce the risk of HIV infection among men who have sex with men, who bear the burden of the epidemic in many parts of the world. Overall, there were nearly 44 percent fewer HIV infections among participants who were assigned to take Truvada every day than among those who took a placebo tablet.

"iPrEx has proved the concept of oral PrEP, and now it's up to the field to build on this success and work toward realizing the full potential of this promising approach in different at-risk populations, such as injection drug users and women in places like sub-Saharan Africa. None of us can do this alone. But collectively, I am convinced that we can, and that there will be the day when we have several safe and effective methods for preventing HIV," commented Sharon Hillier, Ph.D., professor and vice chair for faculty affairs, and director of reproductive infectious disease research in the department of obstetrics, gynecology and reproductive sciences at the University of Pittsburgh School of Medicine, and principal investigator of the MTN.

The iPrEx study involved 2,499 participants from Peru, Ecuador, Brazil, the United States, South Africa and Thailand who were randomly assigned to one of two study groups: Truvada (a combination of tenofovir and emtricitabine) or placebo. All participants received safer sex counseling and free condoms, and were tested for HIV and other sexually transmitted infections (STIs) at each monthly visit throughout the time they were in the study. Of the 1,248 participants assigned to the placebo tablet group, 64 acquired HIV during the study, compared to 36 out of the 1,251 in the Truvada group.

iPrEx was conducted by an international team led by researchers from the Gladstone Institute of Virology and Immunology and affiliated with the University of California, San Francisco. It was funded by the National Institute of Allergy and Infectious Diseases (NIAID) Division of AIDS (DAIDS), a component of the U.S. National Institutes of Health, with co-funding from the Bill & Melinda Gates Foundation. U.S.-based Gilead Sciences, Inc., donated the study product.

- more -

"The findings of this study have immense implications for the entire HIV prevention field, but most notably for global efforts focused on the population of men who have sex with men engaging in unprotected receptive anal intercourse. We clearly must find ways to prevent HIV infection via this route of transmission, whether through oral PrEP or with a rectal microbicide, or a combination of approaches, which must also include condoms. Condoms are still the most effective prevention method we have for preventing sexual transmission of HIV, both rectally and vaginally," noted MTN Co-Principal Investigator Ian McGowan, M.D., Ph.D., FRCP, professor of medicine in the division of gastroenterology, hepatology and nutrition with a joint appointment in the department of obstetrics, gynecology and reproductive sciences at the University of Pittsburgh School of Medicine.

Among those who took the drug more than 90 percent of the time, there were nearly 73 percent fewer HIV infections, according to pill and bottle counts and self-reports. There were 50 percent fewer HIV infections among participants who took the drug at least half of the time. In a subset of participants in the Truvada group, blood tests measuring levels of activated drug indicated that only half had taken the study drug as directed. However, in those participants whose blood levels suggested that they were compliant with pill taking, HIV risk was reduced by more than 90 percent compared to those who were not.

"This is a hugely significant finding that gives us great hope in the promise of ARV-based prevention if used as directed. It's now even more important that studies like VOICE provide the best information they can, so that we can know just how effective different ARV approaches are in diverse at-risk populations. To do this, we need to work especially hard to ensure that people who participate in the PrEP trials are using their study product as directed," stated Jeanne Marrazzo, M.D., M.P.H., VOICE Study co-chair, and professor of medicine in the division of allergy and infectious diseases at the University of Washington in Seattle. "No product or method will ever be effective if it's not used consistently."

VOICE – Vaginal and Oral Interventions to Control the Epidemic – is a Phase IIb trial designed to evaluate both the safety and effectiveness of oral PrEP, with either Truvada or tenofovir tablets, and also of a vaginal microbicide with tenofovir in gel form. It is the only trial evaluating both a tablet and a gel in the same study, which is important for measuring how each product works compared to its control (placebo gel or placebo tablet) and determining the approach women prefer. VOICE will involve approximately 5,000 women in Uganda, South Africa and Zimbabwe, who will use their assigned study product every day. The study began in September 2009. Results are expected in early 2013.

VOICE is MTN's flagship study and funded by NIAID/DAIDS, with co-funding from the National Institute of Mental Health and the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, all components of the U.S. National Institutes of Health (NIH).

"We are very excited about the results of iPrEx, especially after the good news we received from the CAPRISA 004 study of tenofovir gel. We are now more hopeful than ever that in VOICE we will be able to confirm that ARVs taken daily, as either a tablet or a vaginal gel, are safe and effective for women, who desperately need ways they can protect themselves from HIV infection," added Mike Chirenje, M.D., FRCOG, associate professor and consultant gynecologist in the department of obstetrics and gynecology at the University of Zimbabwe in Harare and co-chair of the VOICE Study.

Indeed, the results of iPrEx come on the heels of CAPRISA 004 that in July of this year reported tenofovir gel reduced the risk of HIV by 39 percent among women in South Africa who used it before and after sex. The U.S. Food and Drug Administration has since indicated that it would consider approving tenofovir gel as an HIV prevention method for women depending on the results of VOICE.

Both Truvada and tenofovir (also known as Viread®) are already approved drugs for the treatment of HIV when used in combination with other ARVs and are the only ARVs being tested as oral PrEP in HIV prevention trials. One of these trials, the Bangkok Tenofovir Study, involves 2,400 injection drug users in Thailand, whereas another study called FEM-PrEP is testing Truvada among 3,900 high-risk heterosexual women in Kenya, South Africa, Tanzania and Zimbabwe. Like VOICE, both ARVs are being evaluated in the Partners PrEP Study, a trial that involves 4,700 serodiscordant couples – in which one partner is HIV infected and the other is not – in Kenya and Uganda.

# # #

More information about iPrEx can be found at http://www.iprexnews.com and http://www.niaid.nih.gov/news/newsreleases/2010/Pages/iPrEx.aspx . Information about the VOICE Study can be found at http://www.mtnstopshiv.org/news/studies/mtn003.

About the MTN

The Microbicide Trials Network (MTN) is an HIV/AIDS clinical trials network established in 2006 by the National Institute of Allergy and Infectious Diseases (NIAID), part of the U.S. National Institutes of Health (NIH). The MTN brings together international investigators and community and industry partners who are devoted to reducing the sexual transmission of HIV through the development and evaluation of products applied topically or administered orally, working within a unique infrastructure specifically designed to facilitate the research required to support licensure of these products for widespread use.

Based at the University of Pittsburgh and Magee-Womens Research Institute in Pittsburgh, Pennsylvania, USA, MTN's core operations are supported by a network laboratory at the University of Pittsburgh, a statistical and data management center housed within the Statistical Center for HIV/AIDS Research & Prevention (SCHARP) at the Fred Hutchinson Cancer Research Center, and Family Health International, a global organization with expertise conducting clinical protocols. MTN conducts its trials at clinical research sites located in seven countries and spanning three continents. MTN receives its funding from three NIH institutes: NIAID, the National Institute of Mental Health and the Eunice Kennedy Shriver National Institute of Child Health and Human Development. Among the groups developing and evaluating microbicides for HIV prevention globally, the MTN is the only one funded by NIH.

23-November-10