In Memoriam

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HIV Vaccines and Prevention in a World Without Mary Lou Clements-Mann and Jonathan Mann

As we enter 1999, the global need to arrest the AIDS pandemic looms more urgent than ever. Increasingly, public health authorities recognize the potential impact that a vaccine might have as a tool to help control HIV by preventing and reducing transmission of disease. However, henceforth, HIV vaccine development and prevention must progress without two beloved and world-renowned leaders, Mary Lou Clements-Mann and her husband, Jonathan Mann, who, along with all other passengers and crew, were lost on September 2, 1998 when Swissair Flight 111 crashed off the coast of Nova Scotia. Now that several months and the immediate shock have passed, it is an appropriate moment to consider in a more analytical
way the void that has been left by the deaths of these two extraordinary individuals.

Mary Lou Clements, the daughter of Mary and Bill Clements, was born and raised in Longview, Texas. Influences of the family's ranch led Mary Lou to enter Texas Tech University in 1964 as a first step toward an intended career in veterinary medicine. However, in her first year of college she changed her interest and goals toward human medicine, and on graduating Texas Tech in 1968, Mary Lou entered the University of Texas Southwestern Medical Center in Dallas, from which she graduated in 1972. After completing an internship and residency in internal medicine at Temple University Hospital in 1975, Mary Lou's interests turned to international health and tropical medicine. She completed the Diploma in Tropical Medicine course at the London School of Tropical Medicine and Hygiene in 1975 and worked as an epidemiologist with the Smallpox Eradication Program in India from 1975 to 1977. She moved to Baltimore in 1978 and earned an M.P.H. from The Johns Hopkins University School of Hygiene and Public Health in 1979.

Mary Lou's career in research vaccinology began in 1979 when she joined the Center for Vaccine Development (CVD) of the University of Maryland School of Medicine as an Assistant Professor of Medicine. It was here that she learned the art and science of vaccine development, including clinical vaccine testing through phased clinical trials. In her 7 years at the CVD, Mary Lou was put in charge of testing vaccines against influenza and other respiratory pathogens, a responsibility that led her to work closely with Dr. Brian Murphy at the National Institute of Allergy and Infectious Diseases (NIAID). By the time she left the CVD in 1985, Mary Lou had become Chief of the Adult Clinical Studies Section and had earned a national and international reputation for her research on influenza vaccines, vaccine-elicited correlates of protection, and clinical vaccinology in general.

In 1985 Mary Lou moved to The Johns Hopkins School of Hygiene and Public Health where she founded and directed the Center for Immunization Research, which in the ensuing years gained international recognition. This was early in the AIDS pandemic. Nevertheless, with foresight, Mary Lou made AIDS a major focus of the Center. She successfully competed in two successive funding cycles for an National Institutes of Health (NIH) research contract that supported an AIDS Vaccine Evaluation Unit to perform phase 1 and 2 vaccine trials. This Johns Hopkins unit constituted one of the components of the NIAID AIDS Vaccine Evaluation Group (AVEG), and in the decade from 1985 through 1995, Mary Lou was one of the dominant figures in AVEG. Her experience in other areas of vaccinology and with vaccines against other infectious diseases provided Mary Lou with a broad perspective and vision that could be achieved by few others working in the HIV vaccine arena. Even as she worked tirelessly to design and carry out clinical trials of vaccine candidates in Baltimore, she assisted the World Health Organization (WHO) Global Programme on AIDS and UNAIDS to prepare field areas in developing countries for possible phase 3 efficacy trials of AIDS vaccines. Mary Lou contributed significantly in the epidemiologic design of these trials.

In recent years, Mary Lou had become increasingly frustrated with the obstacles and barriers that impeded the logical step-wise testing of HIV vaccines, the likes of which did not exist with other vaccines. Accordingly, in 1998, she resolved to try to remove or bypass some of the impediments. In particular, she hoped to accomplish this by sensitizing leaders in various U.S. government and international agencies to the need to take action and to provide more active leadership. Mary Lou's burgeoning crusade had been underway in earnest for only a few months when her tragic death occurred. At the first National Vaccine Research Conference, which took
place in May 1998, Mary Lou gave a talk on the issues involved in HIV vaccine testing and development. In a rational and analytical manner, she elucidated the unreasonable expectations and burdens that had been placed on HIV vaccine development and testing and convincingly argued for elimination of the impediments. It is in spearheading and bringing leadership to this endeavor that Mary Lou will be particularly and sorely missed in the ensuing years.

Jonathan Mann was born and raised in Boston, the son of Dr. James and Mrs. Ida Mann. He graduated from Harvard College magna cum laude, received his M.D. from the Washington University School of Medicine, and returned to Harvard for his Masters in public health. In 1975, he joined the Centers for Disease Control and Prevention (CDC) as an epidemic intelligence service officer assigned to the State of New Mexico. He and his family remained there, where he served first as State Epidemiologist and later as Chief Medical Officer from 1977 to 1984. As a state health official, he made important contributions to the science and practice of public health, most notably through his studies of plague.

In 1984, Jon was recruited back to the CDC to initiate and lead a multinational AIDS research program in Kinshasa, Zaire. Project SIDA, a collaboration between investigators in Zaire, Belgium (Institute of Tropical Medicine), and the United States (initially the CDC and NIH), soon grew to be the largest HIV research program on the continent. With incredible courage and passion, Jon led Project SIDA to succeed. During the mid-1980s, he and his colleagues rapidly conducted and published scientifically rigorous studies that greatly improved our understanding of the epidemiology of HIV/AIDS in the developing world. In 1986, he was recruited to WHO and was given an initial commitment for AIDS funding of less than $1 million. From 1986 until his resignation in 1990, Jon built the Global Programme on AIDS into the largest at WHO, with an annual budget exceeding $100 million. Through his leadership, the Global Programme on AIDS alerted the minds and consciences of the world to the global HIV pandemic.

In 1990, Jon joined the Harvard University faculty as Professor of Epidemiology and International Health in the School of Public Health. He founded and served as Director of the Francois-Xavier Bagnoud Center for Health and Human Rights at Harvard through 1997. Through his lectures and writings, he defined HIV and other public health threats in the context of human rights. The solutions as well as the causes lay in understanding and correcting discrimination and inequity.

In early 1998, Jon became Dean of the Allegheny University School of Public Health, where he served until his death. His scientific and programmatic contributions to AIDS and public health are many, but he is best remembered for his inspirational leadership and the hope he engendered. During the International Conference on AIDS in Geneva in 1998 and on the 50th Anniversary of the Universal Declaration of Human Rights, he spoke regarding AIDS:

Our responsibility is historic. For when the history of AIDS and the global response is written, our most precious contribution may well be that at a time of plague, we did not flee, we did not hide, we did not separate ourselves.

Following an intense courtship that began in 1996, Mary Lou and Jon wed in December 1996. Mary Lou exuded love and devotion to Jonathan, which was reciprocated in fashion.

As the global community attempts to expedite HIV vaccine development in 1999, we cannot help but note with sadness how much more difficult this task is without the inspiration, moral courage, and commitment of Mary Lou Clements-Mann and Jonathan Mann.