Advancing Global Public Health
Presentation of the Thomas Francis, Jr. Medal

Celebrating the 50th Anniversary of the Polio Vaccine Announcement

April 12, 2005

University of Michigan
In Ann Arbor, on April 12, 1955, a gathering of prominent scientists and a swarm of reporters anxiously awaited the announcement of the results of the largest vaccine field trial in history. When Thomas Francis, Jr. announced that the Salk vaccine was "safe, effective, and potent," a new era in the long campaign against polio had begun.
April 12 marks a stellar moment in the University of Michigan's history and a landmark achievement in global public health. Fifty years ago, from this campus, a relieved world first learned of the effectiveness of the Salk polio vaccine, based on the extraordinary national field trials conducted by Thomas Francis, Jr.

As a university, we are dedicated to improving public health and welfare throughout the world. Today, as this planet becomes one large community, we face new global challenges and old enemies, including polio, that require our continued vigilance and innovation.

We created the Thomas Francis, Jr. Medal in Global Public Health as a means to symbolize our University’s commitment to advancing the health and well-being of the world’s peoples. The medal is intended to recognize the extraordinary achievements and heroic efforts of people like William Foege, who have done so much to improve public health. The medal will also represent the steadfast commitment of the University of Michigan to improving global public health as it is conferred on other leaders in public health for their contributions to scientific discovery, public policy, effective action, or health promotion.

We would also hope this award will draw public attention to the many needs that still exist. Around the world, people still suffer needlessly from diseases that could be brought under control by vaccines, treatments, or better living conditions. The Thomas Francis, Jr. Medal represents our dedication to addressing the pressing needs of global public health, now and in the future.

Mary Sue Coleman
President, University of Michigan
It's no coincidence that one of the major buildings housing the University of Michigan School of Public Health bears the name of Thomas Francis, Jr. Dr. Francis was a true public health hero, and his achievement is an inspiration to us all.

The challenge that Dr. Francis undertook in 1954, when he agreed to direct the trial for the polio vaccine developed by Dr. Jonas Salk, was truly herculean. Unprecedented in scope and magnitude, the trial involved approximately 1.8 million children from 217 areas of the United States, Canada, and Finland.

A man of exacting standards, Dr. Francis brought his characteristic rigor to the trial design. He demanded a double-blind, controlled observation trial.

As a result of the elegance and integrity of its design, Dr. Francis's polio vaccine research withstood the scrutiny of scientists in its day and went on to become a classic of our discipline.

Tuesday morning, April 12, 1955, was an unforgettable day for public health. There is an old adage that says when public health works best, it is invisible—it's the disease you didn't get, the accident you didn't have, the disaster that didn't happen. Fifty years ago today, however, public health was highly visible and indeed triumphant. As we commemorate that morning's dramatic announcement, we should also reflect on the countless invisible ways in which public health works every day to improve the health and well-being of people worldwide.

We must remember, too, that our work is not done. Although polio has largely disappeared—and can be conquered where it has not—it continues to threaten the lives of children in the developing world. As we celebrate Dr. Francis's achievement, then, let us rededicate ourselves to fulfilling his vision by committing our energies, talents, and resources to eradicating polio as well as tuberculosis, malaria, diarrheal disease, HIV/AIDS, and other plagues. We owe it to our children—and to Dr. Francis.

Noreen M. Clark
Dean, School of Public Health
Advancing Global Public Health

IN CELEBRATION OF THE 50TH ANNIVERSARY
OF THE POLIO VACCINE ANNOUNCEMENT

Tuesday, April 12, 2005

9:30 a.m.–12:15 p.m. Rackham Auditorium

Musical Prelude
String quartet performance by students from the Outreach in the Performing Arts Program, School of Music

Welcome
Regent Rebecca McGowan
Noreen Clark, Dean, School of Public Health

Thomas Francis, Jr. and the Historical Context of Today's Celebration
Howard Markel, George E. Wantz Professor of the History of Medicine, School of Medicine

Video Presentation

Presentation of the Thomas Francis, Jr. Medal in Global Public Health and Introduction of the Keynote Speaker
President Mary Sue Coleman

Keynote Lecture
William Poege, Senior Fellow, Bill and Melinda Gates Foundation
Panel Discussion: Global Public Health
Harvey Fineberg, Institute of Medicine (moderator)
Jon Andrus, World Health Organization
Richard Goodman, Centers for Disease Control and Prevention
Sunny Roller, University of Michigan
Mark Wilson, University of Michigan

12:15–12:45 p.m. Rackham Lobby
Public Reception

3:00–4:00 p.m. Rackham Auditorium
Panel Discussion: the History of Polio
Howard Markel, University of Michigan (moderator)
Jeffrey Baker, Duke University
Jeffrey Kluger, Time Magazine
David Oshinsky, University of Texas at Austin
Naomi Rogers, Yale University
Daniel J. Wilson, Muhlenberg College

Almost two million youngsters participated in the Salk polio vaccine field trial directed by Professor Thomas Francis, Jr. at the University of Michigan in 1954 and 1955.
April 12, 2005 marks the 50th anniversary of the announcement of the first effective polio vaccine. This major event in the history of American medicine and public health took place on the campus of the University of Michigan.

Although Dr. Jonas Salk of the University of Pittsburgh had developed his formalin-killed vaccine by 1953, it required a large-scale field trial to test its efficacy and safety before being administered to millions of children around the world.

That job fell to Dr. Thomas Francis, Jr., an epidemiologist at the University of Michigan School of Public Health, and the U-M Vaccine Evaluation Center. Funded by a $7.5 million grant from the National Foundation for Infantile Paralysis, or as it later came to be known, the March of Dimes, the national field trial involved more than 1.8 million children; 150,000 volunteer teachers, nurses, physicians and health workers; 15,000 public schools; and 44 state departments of health.

Dr. Francis’s field trial officially began on April 26, 1954, when the first study participant, or “Polio Pioneer,” Randy Kerr, a six-year-old boy from McLean, Virginia, received his initial injection of the vaccine.

The first polio epidemic in the United States occurred during the summer of 1916. There were 27,000 cases and 6,000 deaths across the nation. During subsequent epidemics, summer camps, movie theaters, and swimming pools were often closed as, what turned out to be, ineffective means of protecting children
against infection. Between 1917 and 1954, roughly 4,000 to 30,000 Americans per year contracted polio, although the 1952 epidemic numbered more than 57,000 victims.

Perhaps the most famous polio patient was Franklin Delano Roosevelt, who contracted the virus in 1921 at age 39. Undaunted by disabilities that required him to use either steel braces or a wheelchair to ambulate, Roosevelt went on to become the governor of New York (1928–1932) and the 32nd president of the United States (1932–1945).

In 1937, President Roosevelt and his former law partner, Basil O'Connor, announced the creation of the National Foundation for Infantile Paralysis as a philanthropic vehicle dedicated to the conquest of polio and the treatment of those who had contracted it.

Eighteen years later, Dr. Thomas Francis, Jr., announced the results of his meticulous study of the Salk vaccine. His opening statement, presented to a jam-packed audience in Rackham Auditorium on the morning of April 12, 1955, perfectly summarized the news the entire world eagerly awaited: “The vaccine works. It is safe, effective, and potent.”

—Howard Markel, M.D., Ph.D.
Center for the History of Medicine
University of Michigan Medical School
The Thomas Francis, Jr. Medal in Global Public Health honors individuals whose contributions have led to significant advancements within the field of public health.

Dr. Thomas Francis, Jr., University of Michigan director of the Poliomyelitis Vaccine Evaluation Center and the founding chair of epidemiology in the School of Public Health, directed the field studies of the Salk polio vaccine, developed by Dr. Jonas Salk and his team at the University of Pittsburgh. Salk studied under Francis as a graduate student at the University of Michigan.

Francis designed and led the nationwide field trial to test the vaccine, conducted by a staff of more than 100 people from the University of Michigan and an enormous network of community volunteers. The results of the study were announced in Rackham Auditorium of the University of Michigan on April 12, 1955, and signaled an era of hope and success in combating infectious diseases and, more broadly, in the development of large-scale efforts for the good of society.

Francis is also remembered as an international expert on influenza and developed the first effective killed-virus flu vaccine—the basic technology still used in flu shots. Salk's polio vaccine employs the same approach as Francis's flu shot to develop immunity. Francis also mentored John Maassab, who, as a U-M epidemiology professor, developed the technology behind the nasal spray flu vaccine, employing live attenuated flu virus.

The University presents the Thomas Francis, Jr. Medal in Global Public Health for the first time on April 12, 2005, on the 50th anniversary of Francis's historic announcement. The medal will be given periodically to a recipient whose contributions have advanced global public health by way of contributions to scientific discovery, public policy, effective action, or health promotion. For more information about the medal, visit www.polio.umich.edu.
William Foege, the recipient of the first-ever Thomas Francis, Jr. Medal in Global Public Health, pioneered a successful strategy to eradicate smallpox in the 1970s. Foege is the former director of the Carter Center and now senior advisor to the Bill and Melinda Gates Foundation.

Foege is an epidemiologist who became chief of the U.S. Centers for Disease Control (CDC) Smallpox Eradication Program; he was appointed director of the CDC in 1977. He joined the Carter Center as executive director in 1986 and became a senior adviser to the Bill and Melinda Gates Foundation in 1999, where he is now emeritus as a fellow.

As a medical missionary in Nigeria in 1966, Foege faced a fast-moving outbreak of smallpox without enough vaccine to protect the population in the traditional manner of inoculating as many members of a population as one can reach. Instead, he and his colleagues invented a new approach that modeled the most likely routes of transmission by geography, travel patterns, and familial relationships, and then contained the outbreak by focusing the limited amount of vaccine on just three “hot spots.”

During another smallpox outbreak in India in 1973, Foege, then chief of the Centers for Disease Control’s Smallpox Eradication Program, again proved that targeted containment vaccination worked better than mass vaccination. “In a year, India went from a country with the highest rate of smallpox to zero cases,” Foege recalls. Since then, his approach has become the standard of care for controlling outbreaks of emerging disease. In 1979, the World Health Organization declared smallpox eradicated.
**Jon Kim Andrus**

Dr. Andrus has spent more than 20 years in primary care and immunization programs, including the Pan American Health Organization’s (PAHO) successful polio eradication initiative, the World Health Organization’s polio eradication activities in Southeast Asia, and at the Institute for Global Health of the University of California–San Francisco and the University of California–Berkeley. In 2003, Dr. Andrus returned to PAHO to coordinate activities of the immunization unit, whose priorities include eliminating rubella and congenital rubella syndrome, maintaining the success of the polio eradication initiative, sustaining the elimination of measles, improving information management, and introducing new vaccines that are affordable to those who need them most. A graduate of Stanford and the University of California–Davis medical school, Dr. Andrus has published numerous scientific articles on immunization, remains board-certified in family practice, and holds a faculty appointment at the University of California–San Francisco School of Medicine.

**Jeffrey P. Baker**

Dr. Baker is associate clinical professor of Pediatrics and a faculty member of the Center for the Study of Medical Ethics and Humanities at Duke University. His main research interests have centered upon the social ramifications of medical technology. Dr. Baker is currently engaged in a project examining childhood vaccine controversies in the United States and Britain since 1950, beginning with the Salk and Sabin vaccines against poliomyelitis. The main thrust of his work is to understand how social and cultural attitudes shape and sometimes complicate the application of vaccines to promote public health.
Harvey V. Fineberg

Harvey Fineberg is president of the Institute of Medicine. He served as provost of Harvard University from 1997 to 2001, following thirteen years as dean of the Harvard School of Public Health. He has devoted most of his academic career to the fields of health policy and medical decision making. Dr. Fineberg helped found and served as president of the Society for Medical Decision Making and also served as advisor and consultant to the U.S. Centers for Disease Control and the World Health Organization. At the Institute of Medicine, he has chaired and served on a number of panels dealing with health policy issues, ranging from AIDS to vaccine safety. He is the author, co-author, and co-editor of numerous books and articles on such diverse topics as AIDS prevention, tuberculosis control, assessment of new medical technology, clinical and public health decision making, and understanding risk in society.

Richard A. Goodman

Richard Goodman is co-director of the Public Health Law Program, Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia. In 1978, he joined CDC’s Epidemic Intelligence Service Program and has remained on that agency's staff in assignments to the Georgia Department of Human Resources and to the UCLA School of Public Health. Dr. Goodman served as editor of CDC's Morbidity and Mortality Weekly Report series from 1988 to 1998. A commissioned officer in the U.S. Public Health Service, Dr. Goodman holds the grade of medical director and has appointments as professor (adjunct) at the Rollins School of Public Health, Emory University, and the College of Law at Georgia State University. Dr. Goodman has published on a broad range of topics in applied epidemiology and also is the lead editor of Law in Public Health Practice, published by Oxford University Press. He received his medical degree at the University of Michigan and earned a law degree at Emory University.
Jeffrey Kluger

Jeffrey Kluger is a senior writer at *Time*, and a former contributing editor and columnist for *Discover* magazine. He is the co-author with Jim Lovell of *Lost Moon: The Perilous Voyage of Apollo 13*, which was the basis for the movie *Apollo 13*. His newest book, *Splendid Solution: Jonas Salk and the Conquest of Polio*, blends biography, science, and history as he recounts the enthralling story of one of the major medical triumphs of the twentieth century. Its release will coincide with the fiftieth anniversary of the polio vaccine announcement. Kluger is also the sole author of *Moon Hunters: NASA’s Remarkable Expeditions to the Ends of the Solar System*, and has contributed to a number of other publications, including *The New York Times Magazine*, *Newsday*, *New York* magazine, and *Science Digest*.

Howard Markel

Howard Markel is a physician, medical educator, and internationally known scholar in pediatrics and the history of medicine. He earned his undergraduate and medical degrees at the University of Michigan and his Ph.D. from The Johns Hopkins University School of Medicine. He joined the faculty at the University of Michigan in 1993.

Dr. Markel is the author or co-author of seven books including his most recent book, *When Germs Travel: Six Major Epidemics That Have Invaded America and the Fears They Have Unleashed*; has written over 100 peer reviewed papers, reviews, or chapters in academic journals; is a frequent contributing writer for *The New York Times* and several other major newspapers and magazines; and appears frequently as an expert on national radio and television broadcasts. He sits, or has sat, on editorial boards of many scholarly and lay publications and has lectured widely at public institutions, museums, and universities throughout the United States and Great Britain. Dr. Markel is the recipient of numerous awards, fellowships, and honors, including Centennial Historian of the City of New York for his scholarly study of the city and its history of public health and immigration.
David M. Oshinsky

Dr. Oshinsky is the author of *Polio: An American Story*, a book by Oxford University Press. Drawing on newly available papers of Jonas Salk, Albert Sabin, and other key players, Dr. Oshinsky chronicles the nation’s campaign against polio and the race for a cure in the early 1950s when it seemed that all Americans were taking a personal interest in the outcome. Dr. Oshinsky, who specializes in 20th century U.S. political and cultural history, taught for nearly 30 years at Rutgers University before moving to the University of Texas at Austin. He is also the author of *A Conspiracy So Immense: The World of Joe McCarthy* (1983) and *Worse Than Slavery: Parchman Farm and the Ordeal of Jim Crow Justice* (1996), both of which won major prizes and were *New York Times* notable books.

Naomi Rogers

Naomi Rogers is the author of *Dirt and Disease: Polio before FDR* (1992) and *An Alternative Path: The Making and Remaking of Hahnemann Medical College and Hospital of Philadelphia* (1998). She also published on women and medicine; Sister Elizabeth Kenny, a nurse who challenged the AMA; and radical medical students of the 1960s. She is currently associate professor in the Section of the History of Medicine and in the Women’s, Gender, and Sexuality Studies Program of Yale University.
Sunny Roller

Sunny Roller, a polio survivor, is a recognized post-polio educator and researcher at the University of Michigan, where she has been for more than twenty years. She serves as a peer reviewer for the National Institute on Disability and Rehabilitation Research, and on the board of directors for Post-Polio Health International (PHI). Ms. Roller has authored a variety of articles on the late effects of polio, including “To Reap the Rewards of Post-Polio Exercise,” which has become PHI’s position paper on exercise for polio survivors, and has co-authored PHI’s Handbook on the Late Effects of Poliomyelitis for Physicians and Survivors. She has written a variety of published professional articles, personal essays, and book chapters; edited an instructor’s manual for a holistic wellness program for people who had polio; and presented at national and international post-polio conferences. In 1997, the regents of Central Michigan University awarded Ms. Roller an honorary M.D. degree for her pioneering work in the field of post-polio disability and wellness.

Daniel J. Wilson

Dr. Wilson is a professor of history at Muhlenberg College. His research and scholarship focus on the history of American philosophy and the culture of the U.S. polio epidemic. An author of several books and articles, Dr. Wilson’s newest book, Living with Polio: The Epidemic and Its Survivors, follows the physical and emotional stages of the disease based on narratives from more than one hundred polio victims. Writing from personal experience, he traces the entire life experience of the survivors—from the alarming diagnosis to the development of post-polio syndrome, a condition in which the symptoms of the disease may return decades after they originally surfaced. Dr. Wilson earned his M.A. and Ph.D. from The Johns Hopkins University.
Mark L. Wilson

Dr. Wilson is an epidemiologist and ecologist with broad research interests in infectious diseases, including the analysis of transmission dynamics, the evolution of vector-host-parasite systems, and the determinants of human risk. After completing his doctoral degree at Harvard in 1985, he worked at the Pasteur Institute in Senegal for four years, then joined the faculty at Yale University before moving to Michigan in 1996. Today, most of his research addresses environmental and social variation in time and space as it affects vector and reservoir populations and pathogen transmission risk. Dr. Wilson is especially interested in various “emerging” diseases, including malaria and schistosomiasis in Africa, leishmaniasis in the Middle East, and dengue fever in South America. In addition to standard field, lab, and statistical techniques, he uses satellite image data and GIS to undertake spatial analyses of environmental change and the ecology of disease patterns. He also uses spatial analytic tools to study non-infectious disease processes. In other projects, Dr. Wilson is working to find ways to anticipate and prepare for intentional introductions of biological disease agents.
Acknowledgements

We are grateful for the support of several University of Michigan units in the planning and development of this historic event:

Office of the President
School of Public Health
Office of the Provost and Executive Vice President for Academic Affairs
Office of the Executive Vice President for Medical Affairs
Office of the Vice President for Communications
Center for the History of Medicine, Medical School
Department of Physical Medicine and Rehabilitation, Medical School
Bentley Historical Library

Bentley Historical Library Exhibit:
"Safe, Effective, and Potent:" The 50th Anniversary of the Salk Polio Vaccine.

Using original documents, letters, and photographs from the Thomas Francis papers and other related collections in the Bentley Historical Library, the story of that dramatic day is recounted. Additional material illustrates the scourge of polio, the massive evaluation and testing, and Salk’s relationship with Francis.

Illustrations and guide to polio-related holdings: www.umich.edu/~bhl/bhl/digpubs/polio/

Burton Tower carillon performance by Joseph Daniel, School of Music

Photos courtesy of:
March of Dimes Birth Defects Foundation
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Thank you for attending this program. The University of Michigan
strives to create a truly open forum, one in which diverse opinions
can be expressed and heard.

It is the right of members of the University community,
speakers, artists, and other invited guests to express their views
and opinions at the University. We will protect the right of individuals
to speak or perform, and the rights of those members of the
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