



# Jonas Salk, Officier: Recalling a Medical Hero

## By Caitlin M. Hawke, Chevalier

In 1955, a young mother of two with another soon to come, the artist Françoise Gilot was living in France when news broke about Dr. Jonas Salk's successful vaccine against polio. Françoise recalled that her father Émile, an agronomist and chemical manufacturer in Neuilly-sur-Seine, strongly recommended she go at once to have her children vaccinated. Françoise heeded his advice, becoming among the first mothers abroad to see her children receive the Salk vaccine. Little did she know that she and Jonas Salk would wed fifteen years later and share their lives until the scientist's death in 1995.

The year 2014 marks two important anniversaries. April 26th will be the 60th anniversary of the start of the mammoth and legendary polio vaccine field trial. It involved 1.8 million school children and was led by an early mentor of Salk's, Dr. Thomas Francis, Jr., of the University of Michigan. October 28th will be the date upon which Jonas Salk would have turned 100. To commemorate this American scientist's enduring legacy, major symposia, as well as panels and lectures open to the public, will be held in New York, Pittsburgh, and San Diego, key American cities in the progression of Salk's career.

Says Peter Salk, M.D., the eldest of Salk's three sons from his first marriage to Donna Lindsay, "These centenary events will provide an opportunity to focus attention on themes of importance to my father, including vaccination, global health and international cooperation. He devoted his life to improving human health, beginning with his work on the first influenza and polio vaccines and continuing with the founding of the Salk Institute and his research on cancer, multiple sclerosis and a vaccine for HIV/AIDS." Peter is president of the Jonas Salk Legacy Foundation ([www.jslf.org](http://www.jslf.org)), which is serving as the catalyst for centennial plans involving major American institutions such as Salk's alma maters: The City College of New York and New York University School of Medicine, where he received his undergraduate and medical degrees respectively. Commemoration plans are also afoot at the University of Pittsburgh where Salk conducted his polio research as well as at The Salk Institute for Biological Studies in La Jolla, California, founded by the scientist in 1960.

To put Salk's legacy in public health truly into perspective one must recall the terror of infantile poliomyelitis before his vaccine's introduction in 1955. Polio was the most dreaded childhood disease of the prior half century. It struck fear in parents, who dutifully kept their children indoors in the warm summer months favorable to the spread of the infection. Abandoned, drained swimming pools. Once vibrant children now stricken with paralysis. The dreaded but life-prolonging iron lung. These were all images that seared the public's consciousness.

In *Nemesis*, his last work of fiction, author Philip Roth captured the feeling of collective grief and helplessness:

"It was impossible to believe that [the child] was lying in that pale, plain pine box merely from having caught a summertime disease. That box from which you cannot force your way out. That box in which a twelve-year-old was twelve years old forever. The rest of us live and grow older by the day, but he remains twelve. Millions of years go by, and he is still twelve."

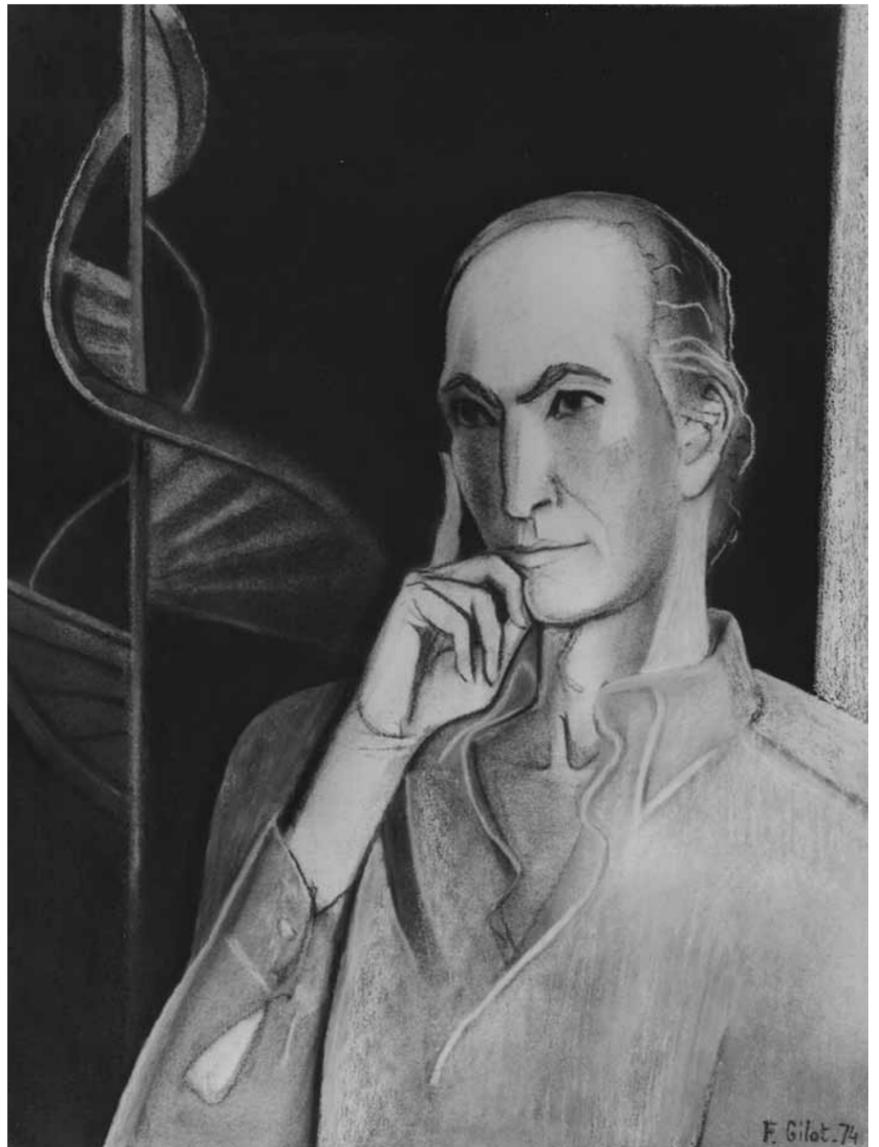
But the dread was not to last, thanks to the

triumph of science. In his Pulitzer-winning account, *Polio: An American Story*, David Oshinsky tells of a uniquely American confluence of forces that brought about the means and will to fund research for the polio vaccine. The desire to prevail came from a combination of post-war optimism and belief in technology; of a corps of mothers — fearing for the well-being of their baby-boom children — willing to go door to door collecting funds for research; and of a private foundation known as the March of Dimes begun by polio's most visible victim, President Franklin Delano Roosevelt, and run by FDR's confidant, Basil O'Connor.

It was O'Connor, known as Doc, and his colleagues at the March of Dimes who determined which scientists to fund in the frantic quest for a vaccine. Doc O'Connor invested heavily in two men with very different approaches: Jonas Salk's inactivated-virus, injected vaccine and Albert Sabin's live-virus, oral vaccine. Both scientists ultimately prevailed and their vaccines continue to be in use today in global eradication efforts.

However, Salk's vaccine was ready first. On April 12, 1955, to a rapt American public and room full of media, Dr. Francis announced the results of his field trial: "The vaccine works. It is safe, effective and potent." Jonas Salk was instantly catapulted onto the front page of every U.S. newspaper and into every American living room with a television set. The press was rhapsodic; the country was exhilarated. Demand for the vaccine soared: from a peak of over 21,000 U.S. cases of paralytic polio, the disease was sidelined by the Salk vaccine resulting in just 988 cases of paralysis by 1961. This notable success gave millions faith in the power of preventing disease through vaccination.

Among many honors, Jonas Salk received the Albert Lasker Award, this nation's most highly regarded medical science prize. He received a citation and a Congressional Gold Medal from President Dwight D. Eisenhower. And in 1977, President Jimmy Carter honored Martin Luther King, Jr., posthumously along with Jonas Salk with the nation's highest civilian award, the Presidential Medal of Freedom. President Carter remarked: "There are many Americans who do great things, who make us proud of them and their achievements, and who inspire us to do better ourselves. But there are some among those noble achievers who are exemplary in every way [and] who reach a higher plateau of achievement....I have chosen to honor two great men, one who has alleviated suffering and despair in the field of health and one who has chosen to alleviate suffering and despair in the field of human freedom."



Jonas Salk posed only once for his wife, the artist Françoise Gilot, who painted five portraits of the scientist in one day. Here, she references Rembrandt's print of Faust with the spiral staircase transformed into the double helix of life, DNA. Reproduced with the artist's permission.

Among the first foreign countries to celebrate him, France named Salk Chevalier in the Legion of Honor in 1955. He was later promoted to Officier. On December 7, 1982, he received the American Society of the French Legion of Honor Medal for Distinguished Achievement in the presence of his wife, ASFLH member Françoise Gilot, who herself in 2009 was promoted by President Nicolas Sarkozy to the rank of Officier.

The French-American couple met in La Jolla, California, in the fall of 1969. She initially resisted his attention, thinking they had nothing in common. The day after they met, Jonas took her on a tour of the Salk Institute, designed by Louis I. Kahn. She said, "He was showing me the child of his heart so to speak, his institute. I was very receptive because apart from painting, I love architecture. It was a moment of mutual discovery." Through the years, Françoise has continued to play an active role as a champion of the Institute, one of Jonas's greatest legacies. And her art still may be found within the iconic Kahn buildings on the dramatic Torrey Pines bluff overlooking the Pacific Ocean.

A little known fact: France played a role in the formation of the Salk Institute. In her enthralling, newly-published history entitled "Genesis of the Salk Institute: The Epic of Its Founders," Suzanne Bourgeois recounts the story of what she calls the Pasteur connection and the Spirit of Paris. It was there at the Institut Pasteur, she says, that "a nucleus of the founding faculty of the future Salk Institute [including French Nobel laureate Jacques Monod] was constituted."

On a more personal level, France was a sustaining force in Jonas's life, in great part thanks to Françoise. She encouraged him to



spend time there so he could clear his head of the politics that swirled around him and the glare often cast by what can only be called his celebrity. No stranger to such a glare, Françoise herself had found peace in New York and knew the value of changing one's surroundings. She says, "Jonas learned French not a little, but very well! Learning the language made him interested in French culture. So that was a great link for us."

So 100 years after his birth, why is Salk's legacy as relevant as ever? In part, because he still stands out as a great American achiever. From a modest immigrant background, he grew up in Jewish neighborhoods of New York and was a singular product of a public education. His determination led him to achieve many a goal. His name is synonymous with the power of prevention through vaccination. This spirit is embodied in the great quest to eradicate polio from the planet, which cannot be achieved without his vaccine. Tantalizingly close to its goal, global eradication is a massive effort funded and led by a public-private partnership involving the World Health Organization, the Bill & Melinda Gates Foundation, Rotary International, the U.S. Centers for Disease Control and Prevention, and UNICEF.

If the effort succeeds, it will be only the second time in public health history that an infectious

disease of humans has been eradicated. In 1980, the World Health Organization announced that smallpox was a disease of the past, and indeed most people under 50 in the United States are totally unfamiliar with either disease, thanks to successful childhood immunizations. However, polio remains endemic in three countries: Afghanistan, Nigeria and Pakistan, where entrenched geopolitical obstacles continue to hinder progress; militant Islamists have obstructed vaccinators, sometimes with deadly force. Their motivation is in part dogma, in part the politics of power and in part a reaction to U.S. diplomatic tactics. Such geopolitics have caused costly setbacks to eradication efforts and left children vulnerable to infection.

In light of this, Jonas Salk's words seem never more apt: "Life is an error-making and an error-correcting process, and nature in marking man's papers will grade him for wisdom as measured both by survival and by the quality of life of those who survive."

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**Jonas Salk and Françoise Gilot: an artistic scientist and a scientific artist, as they called each other. Used with permission of Françoise Gilot.**

#### **FURTHER READING**

- Suzanne Bourgeois, *Genesis of the Salk Institute: The Epic of Its Founders* (University of California Press, 2013).
- Bert Hansen, *Picturing Medical Progress from Pasteur to Polio: A History of Mass Media Images and Popular Attitudes in America* (Rutgers University Press, 2009).
- David M. Oshinsky, *Polio: An American Story* (Oxford University Press, 2005).