



Eugenia Sacerdote de Lustig
Argentina

“ During the polio epidemic, I set an example by vaccinating myself and my offspring, after which I set about vaccinating the other children in Buenos Aires ”

Compilation of texts and editing by Norma Nudelman*



Eugenia Sacerdote and Rita Levi-Montalcini



Doctor, chemist and biologist (1910-2011)

In the late 1930s, the Histology Department at the University of Turin in Italy was one of the most advanced research centers in Europe. It was then that its tenured professor Giuseppe Levi honored his four best students by making them internal assistants. Their names were Rita Levi Montalcini, Renato Dulbecco, Salvador Luria and Eugenia Sacerdote. The anti-Semitic laws introduced by Italian Fascism forced them to emigrate. Montalcini, Dulbecco and Luria fled to the United States, where each of them later received the Nobel Prize for Medicine. Eugenia Sacerdote, a scientist of

the same intellectual and professional caliber, moved to Argentina. There, with less support to develop her creative abilities, she did not earn the Nobel Prize but became a veritable scientific pioneer in the country.

She never forgot Italy, where she was born in 1910. But Argentina was the setting for her most productive years of research. Eugenia Sacerdote had married Maurizio Lustig just before arriving in the country, and was already a specialist in a technique then unknown in Argentina: *in vitro* living tissue culture.

On Sunday November 27, 2001, as the scientist was chatting affectionately with her daughter, she passed away suddenly but painlessly. A mother of three, Eugenia's life was marked by a passion that bravely defied contemporary standards.

The scientific results and successes that constitute her greatest source of pride

Her first job was Professor of Histology at the Faculty of Medicine. There, Eugenia Sacerdote de Lustig tenaciously overcame the adversity imposed on immigrants by the political situation and obtained a post in the national scientific plan, though sometimes her salary was merely the money leftover from the purchase of test tubes.

She then moved to the Malbrán Bacteriological Institute, where in 1956, as head of the Virology Department, the Government sent her to the United States to study the polio vaccine technique developed by Dr Jonas Salk. This coincided with a severe epidemic in Argentina, and Eugenia was the only person who could carry out the laboratory analysis. Upon returning from the United States, she became the first person in Argentina to receive the vaccine. To convince the population of the effectiveness of the vaccine, she carried out a public inoculation on herself and her three children.

Later, at the Oncology Institute, she employed histology in the fight against cancer, and her research there had a worldwide impact. She was also a teacher and member of the Biology Department in the Faculty of Exact and Natural Sciences.

Honors and prizes

- In 1992, Eugenia Sacerdote de Lustig won the Hippocrates Prize, the highest award in Argentinean medicine.
- She is a reference in the country's scientific research, having published over 180 works in national and international scientific journals and instilled her own professional caliber in dozens of disciples.
- Senior researcher at CONICET, President of the Albert Einstein Medical Research Institute and Research Director of the Angel Roffo Institute, she also produced work on Alzheimer's disease, genetics and experimental oncology, and worked tirelessly into her nineties.
- In 2011, at the age of 101, she received a Commemorative Medal for the Bicentenary of the May Revolution, awarded by the National Senate to distinguished Argentinean figures.

Who or what inspired you to work in science?

Giuseppe Kevi, a tenured Professor of Histology at the University of Turin (Italy), one of the most advanced research centers in Europe, made three other students and me internal assistants.

Dr Paredes, a Professor of Histology and Embryology in the Faculty of Medicine at the University of Buenos Aires, where I took my exams because I had already written a thesis and knew some new techniques: cells cultured in vitro. Professor Parpeto Brian, the director of the Roffo Institute, who was a pathologist and knew my professor back in Italy, introduced me to studies on cultured cancerous cells.

And lastly Doctor Parodi, head of the Virus Department at the Malbrán Institute, wanted to grow viruses in living cells. As a result of the polio epidemic in the 1950s I was able to develop techniques to detect cases. I was then sent to the United States to learn about the brand-new vaccination. I worked with monkeys from the north, as the virus multiplies in monkey as well as in human tissue. I saw that the vaccination worked well and protected the monkeys. So I launched a campaign here to convince the Public Health Minister to vaccinate the whole population. They were a little apprehensive in Argentina

because they did not yet know the result. They knew that it protected humans but they thought that other problems might arise.

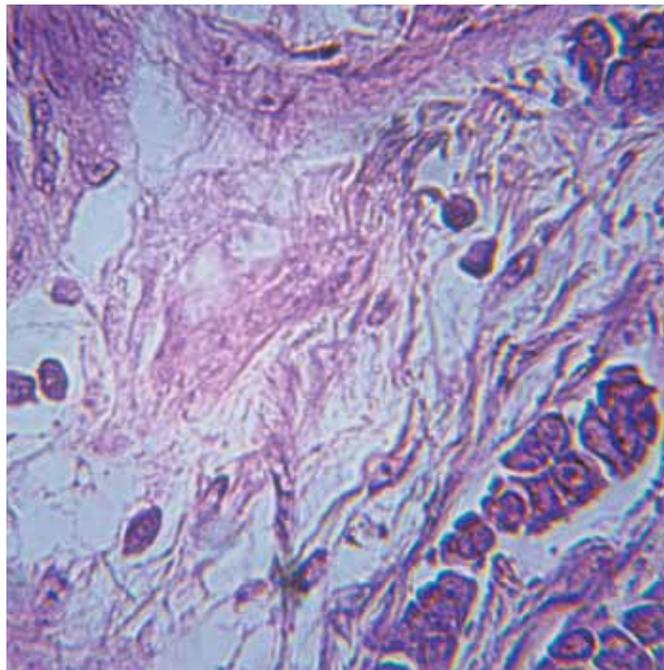
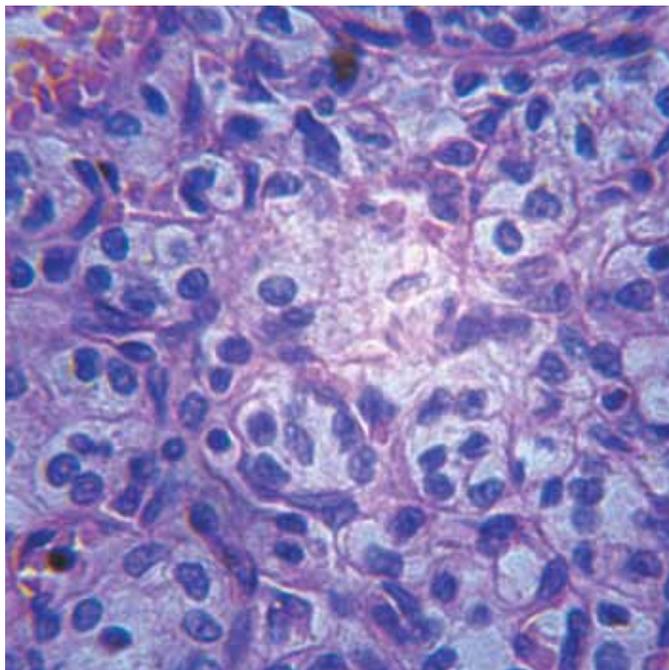
So I set the example by vaccinating myself and my children, then I began to vaccinate the children of Buenos Aires. However I personally had to make that decision to launch a campaign.

What are the main obstacles that you have come across and how have you overcome them?

When I decided to go to university my family reacted very negatively, because it was almost unheard of for women to study medicine. In the end my cousin and I were accepted at Turin University, where there were only four women alongside 500 men. We finally graduated, but in 1938 Mussolini introduced his social laws. As my family is Jewish they immediately took away my medical license, so I never worked as a doctor in Italy.

Eugenia Lustig became the first woman to test the polio vaccination in Argentina. In order to convince the population of the effectiveness of the vaccination, she innoculated herself in public and did the same with her three children.





Eugenia Sacerdote specialized in in vitro tissue culture, a technique that was unheard of at the time

I had to start all over again. I worked in the Histology Department until 1947, the year when Perón expelled Professor Houssay for not supporting him. So my professor in the Embryology and Histology Department resigned from his post in 1946 out of solidarity with Professor Houssay. I remained there until the director of the Roffo Institute, Professor Parpeto Brian rescued me.

In 1966, when Onganía came to power, I was in the Cell Biology Department in the Faculty of

Exact and Natural Sciences and many people were expelled. I was immensely fortunate to avoid being imprisoned, as several professors were. The following day I cannot recall whether I resigned or was expelled, but I found myself again with nothing. It had happened to me so many times that I simply had to start again from scratch. Luckily I still had my laboratory at the Roffo Institute. In recent years we have thankfully worked well, and have survived despite our many difficulties. I have also studied Alzheimer's disease, with

groups of neurologists that I have worked with for several years, and biochemists who have helped me with the final stages of cells.

Do you have any family?

My family is composed of my husband, three children, nine grandchildren, four great-grandchildren and my nephews, nieces and cousins.

What do you like to do in your spare time?

I lost my sight when I was 80, so I cannot read. It is important for people to come to read to me, and apart from that I listen to cassettes all day. I am a member of a library for the blind and have already finished all the books there. I have also become a member of a library for the blind in Italy, and they send me cassettes

from Italy once a month. That is how I spend my days. People from the Faculty and the Department also visit me.

What advice would you give to female scientists?

Do not let anything hold you back. ■

*Norma Nudelman is a distinguished chemist and member of the National Academy of Exact, Natural and Physical Sciences of Argentina, and a promoter of the inclusion of young women in sciences, Co-Chair of the IANAS Science Education Program and focal point of the IANAS Women for Science Program.