

OBITUARY



Salome Gluecksohn-Waelsch 1907–2007

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Salome Waelsch, university professor emerita at Albert Einstein College of Medicine in the Bronx, New York, died on November 7, 2007, just a month after her 100th birthday. She was a remarkable woman who persevered against Nazi anti-Semitism and Ivy League sexism to establish the new scientific field of developmental genetics. Her career was driven by an early insight into the fundamental connection between genes and development—a connection that eluded the leading geneticists and embryologists of her time, who seem not to have ventured intellectually beyond their narrow spheres of research.

Salome was born on October 6, 1907, in the town of Danzig, Germany (now Gdansk, Poland). She studied zoology as an undergraduate and, beginning in 1928, worked as a graduate student with the embryologist Hans Spemann, who would later win the Nobel Prize for his elucidation of embryonic induction in amphibian embryos. Spemann and his colleagues were adamant in their belief that genetics was of no relevance to the process of embryonic development. However, Salome began to think otherwise, on the basis of discussions with leading geneticists of the day and a thorough reading of the genetics literature. But she knew it was unwise for a student to contradict the Herr Professor, so she waited patiently for the day when she would have her own lab to freely pursue her scientific ideas.

After receiving her doctorate in 1932 from the University of Freiburg, Salome began what should have been a dream job as an independent faculty member at the University of Berlin. Unfortunately, the timing couldn't have been worse. Less than a year later, Adolf Hitler consolidated his power as chancellor of Germany, and he immediately ordered the firing of all Jewish faculty members at universities across the country. Unlike most German Jewish intellectuals, Salome was convinced that the Nazi situation would only become progressively worse, and that same year, she fled to New York City with her first husband Rudolf Schoenheimer, a Jewish biochemist who had been offered a professorship at Columbia University.

Salome, on the other hand, was mostly unemployed over the next three years, with a few stints working as a lab technician. Then, one evening, serendipity struck at a cocktail party where she met the Columbia professor and mouse geneticist L.C. Dunn. Dunn had recently begun breeding mice with a 'T locus' mutation with a dominant tail phenotype and a recessive prenatal lethality. Dunn was looking for someone with training in embryology to investigate the cause of embryonic lethality, and Salome jumped at the chance to work with one of the founders of genetics.

Salome was hired as a 'research associate' and given a great degree of freedom by Dunn to pursue her own scientific interests, using the mouse as a model system. Her career flourished as she combined

her embryological expertise with newfound genetic knowledge from her Columbia colleagues. In a series of papers published from 1938 onward, Salome presented a model for the action of the T-locus product as an inducer of mesoderm and axial development. Her work effectively repudiated Spemann's claim of the irrelevancy of genes to embryonic induction (which gave her great pleasure). Half a century later, Salome's ideas would be validated at the molecular level when Bernhard Herrmann and Hans Lehrach characterized the T-locus product as a DNA binding protein that has a central role in the regulation of transcription during the development of mesoderm and notochord.

Salome experienced anti-Semitism firsthand in Nazi Germany, and then she experienced sexism firsthand in Ivy League America. After 19 years at Columbia, and the publication of numerous breakthrough articles in genetics, she still held the same Research Associate position that Dunn had given her at the outset of her tenure there. The Columbia administration made it clear, in no uncertain terms, that women simply would not be considered for faculty positions in science departments at their university. In 1955, the newly formed Albert Einstein College of Medicine righted this wrong by providing Salome with a full faculty position in their new Department of Genetics. She remained at Einstein for the remainder of her career, serving as departmental chair of Genetics from 1963 to 1976.

Until the end of her life, Salome lived in a magnificent Columbia-owned apartment just off campus, where she frequently held dinner parties for young scientists and colleagues. The apartment was given to her by Dwight Eisenhower, who was president of Columbia before becoming president of the country. Salome told the story that Eisenhower had read an article in the *New York Times* about one of her freakish mutant mice, and asked her to speak to him about her research. Salome said she had different canned talks about genetics for primary school students, high school students, undergraduates and graduate students, and she decided that Eisenhower would get the most out of a primary school lesson in genetics, which she proceeded to give him. He was so impressed that he decided that Salome and her family deserved to live in a better apartment than the tiny tenement to which they had been confined since their arrival in the country.

It wasn't until late in her career (when most people her age were already retired) that Salome was finally recognized for her scientific contributions and for her role in nurturing and encouraging women to pursue scientific careers. At the age of 72, in 1979, she was elected to the National Academy of Sciences and made an Honorary Life Member of the New York Academy of Sciences. Over the next two decades, she was elected to the Royal Society of the United Kingdom, and received honorary awards from the American Academy of Arts and Sciences and the American Association for the Advancement of Science, as well as the Thomas Hunt Morgan Medal of the Genetics Society of America. Salome was particularly radiant in 1993 when she personally received the National Medal of Science from President Clinton and Vice President Gore. ■

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