

# Carl Djerassi, 91, a Creator of the Birth Control Pill, Dies

 [www.nytimes.com/2015/02/01/us/carl-djerassi-dies-at-91-forever-altered-reproductive-practices-as-a-creator-of-the-pill.html](https://www.nytimes.com/2015/02/01/us/carl-djerassi-dies-at-91-forever-altered-reproductive-practices-as-a-creator-of-the-pill.html)

By ROBERT D. McFADDEN

And even on the day of the breakthrough, he was one of two chemists working with a student assistant at a small pharmaceutical laboratory in Mexico City who first synthesized a progestin called norethindrone, which became the key ingredient of the pill. It was on Oct. 15, 1951 — one of those dates recorded for posterity — a year before others created similar compounds.

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Scientists had long known that high levels of estrogen and progesterone inhibited ovulation. But synthesizing them from animal or plant extracts had proved expensive and ineffective for use as oral contraceptives.

The synthesis by Dr. Djerassi and his colleagues, Dr. George Rosenkranz and the student, Luis E. Miramontes, was economical and effective for oral use. All three names went on the patent.

At first, the team deemed it a breakthrough for fertility, not birth control. While its significance as a pregnancy inhibitor was soon recognized, five years of trials were needed to demonstrate its relative safety and effectiveness. Even then, drug companies were reluctant to market the pill, fearing boycotts of their products by religious groups and others opposed to birth control.

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In the 1960s, however, the pill — based also on pioneering work by M. C. Chang, Gregory G. Pincus, John Rock and others, and technically known as the combined oral contraceptive pill — was developed and marketed by various drug companies. They included Syntex, where Dr. Djerassi and his colleagues had worked.

Use of the pill spread rapidly, producing vast economic and social effects. It gave women unprecedented control over fertility, separating sex from procreation. It let couples plan pregnancies and regulate family size, and women plan educations and careers. It also generated debates over promiscuity and the morality of birth control. The Roman Catholic Church, in particular, emphasized its bans on artificial contraception.

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Over the years, Dr. Djerassi lectured widely to promote the pill and faced controversies over possible side effects, including increased risks of blood clots, cancer and excessive bleeding during menstruation. He dismissed such claims, but estrogen and progestin doses in the pill were later reduced to cut the risk of side effects.

The pill made Dr. Djerassi wealthy and something of a celebrity as he moved through a series of careers as a professor of chemistry, an insect-control entrepreneur, an art collector, a rancher, an author of science novels and nonfiction books, a poet, a playwright and the founder of an artists' colony.

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“Yes, I am proud to be called the father of the pill,” he [told Nicholas Wroe of The Guardian](#) in 2000. “But identifying scientists is really only a surrogate for identifying the inventions or discoveries. Maybe it is true that Shakespeare’s plays would never have been written if it wasn’t for Shakespeare. But I’m certain that if we didn’t do our work, then someone else would have come along shortly afterwards and done it.”

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Carl Djerassi was born in Vienna on Oct. 29, 1923, to Samuel and Alice Friedmann Djerassi. His parents were physicians who divorced when he was 6. A brilliant student, he attended schools in Vienna and summered in Sofia, Bulgaria, where his father specialized in treating venereal diseases before penicillin.

In 1938, when Nazi Germany annexed Austria and 70,000 Austrian Jews and Communists were quickly rounded up, the elder Dr. Djerassi returned to Vienna and remarried his wife in order to take her and Carl out of the country. The marriage was soon annulled, and Carl and his mother made their way to America in 1939, settling in upstate New York, where his mother worked in a group medical practice. His father emigrated to the United States in 1949.

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With a scholarship arranged through Mrs. Roosevelt's intercession, Carl briefly attended Tarkio College in Missouri, then earned a bachelor's degree with honors in chemistry at Kenyon College in Ohio in 1942, when he was not quite 19. In 1945, he earned a doctorate at the University of Wisconsin and became a naturalized American citizen.

Over the next four years, Dr. Djerassi was a chemist for Ciba, a Swiss pharmaceutical company in New Jersey, where he received a patent for developing Pyribenzamine (tripelennamine), the first commercial antihistamine.

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His marriage to Virginia Jeremiah ended in divorce in 1950. He and Norma Lundholm were married that same year and had a son, Dale, and a daughter, Pamela, who committed suicide in 1978. That marriage ended in divorce in 1976.

Diane Middlebrook, whom he married in 1985, died in 2007. Besides his son, he is survived by a stepdaughter, Leah Middlebrook, and a grandson, Alexander Djerassi.

In 1949, Dr. Djerassi became associate director of research at Syntex in Mexico City, where he studied the uses of cortisone, as well as menstrual disorders and cancer.

After his breakthrough work on the first synthetic oral contraceptive, he became a professor of chemistry at Wayne State University in Detroit in 1952. In 1959, he joined the faculty at Stanford University, where he taught until retiring in 2002.

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In 1959, he also became president of Syntex Laboratories in Mexico City and Palo Alto, Calif., a connection that made him wealthy. In Woodside, Calif., near Palo Alto, he bought 1,200 acres, started a cattle ranch and began collecting art, particularly paintings by Paul Klee, the German-Swiss Expressionist.

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In 1968, Dr. Djerassi founded Zoecon, a company that developed insect controls using modified insect growth hormones to prevent metamorphoses from larval to pupal and adult stages.

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In 1979, after the death of his daughter, who was an artist, Dr. Djerassi turned half of his cattle ranch into an artists' colony with housing and studios for scores of visual and performing artists, writers, playwrights, choreographers and composers.

Dr. Djerassi wrote many books on scientific subjects, including optics, steroids and the pill; a book on the politics of

contraception; and several memoirs, including one published last year, “In Retrospect: From the Pill to the Pen.” Starting in the late 1980s, he also wrote novels, including what he called “science-in-fiction,” which focused on the ethics of modern scientific research and the conflicts that scientists face in their quest for knowledge and recognition.

He also wrote a number of plays that were produced in Europe, Asia and America, including Off Broadway productions of “An Immaculate Misconception: Sex in an Age of Mechanical Reproduction,” “Taboos,” “Three on a Couch” and “Phallacy.”

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Dr. Djerassi, who also had homes in Vienna and London, received 34 honorary doctorates and a score of professional and government awards, including the National Medal of Science (chemistry), the nation’s highest science honor, presented by President Richard M. Nixon in 1973, and the National Medal of Technology and Innovation, the nation’s highest technology award, presented by President George Bush in 1991.

**Correction: January 31, 2015**

An earlier version of this obituary misstated the relationship to Dr. Djerassi of one of his survivors, Leah Middlebrook. She is his stepdaughter, not his stepsister.

**Correction: February 3, 2015**

Because of an editing error, an obituary in some editions on Sunday about the chemist Carl Djerassi, a developer of the birth control pill, misstated the year that his memoir “In Retrospect: From the Pill to the Pen” was published. It was last year, not this year.

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