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Preface

PROFESSOR CARL DJERASSI

This issue of *Tetrahedron* honors Carl Djerassi on the occasion of his seventieth birthday. Reflecting Carl's wide interests in chemistry, it features a broad range of topics covered in articles from former students, postdoctorals and collaborators. Yet the contributors represent only a few of Carl's many colleagues and friends. A single issue could not possibly hold articles from all; we apologize to those not included due to space limitations. Some had planned to contribute but could not; for example, Al Moscowitz couldn't for reasons of health. As Carl has been a member of the editorial boards of both *Tetrahedron* and *Tetrahedron Letters* since their establishment in 1958, it is especially appropriate to pay tribute to him in this fashion. Join us in saluting one of the world's most productive and creative scientists and "father" of the birth control pill.

Any biography of Carl Djerassi would be hard pressed to describe his multifaceted career, his profound influence on science and humanity, and his enormous energy. It is far better to see the man in action, experience his intellect, humor and zest, and then perhaps glimpse how one individual could have accomplished so much in so short a time.

Born in Vienna in 1923, Carl spent his early years in Austria and Bulgaria. In 1939, two months after the start of World War II, he emigrated to the United States with his mother. Not yet 19, he received his A.B. degree *summa cum laude* from Kenyon College in 1942. He then spent a year with Ciba Pharmaceutical Company where he helped develop one of the first antihistamine drugs, Pyribenzamine, which became the drug of choice for millions of allergy sufferers. Next, he began graduate study at the University of Wisconsin, where within two years and before his 22nd birthday, he obtained his Ph.D. He then embarked on what he now calls a career of "intellectual polygamy," his spectacularly successful dual career in industrial and academic chemistry. He has now begun yet a third career - in literature.

Foremost in Djerassi's mind following graduate school was to get a tenured academic position before turning 30. To avoid crawling up the low-paying rungs of the academic ladder, he set out to establish a research reputation in chemical industry, a decision he has called "naive because at that time moving from industry to academia was a one-way street going in the wrong direction." His dramatic successes as associate director of chemical research for the then-obscure Mexican

company, Syntex, led to a tenured Associate Professor position at Wayne State University. In 1959, the renowned Wisconsin chemist, William S. Johnson, agreed to become the executive head of Stanford's chemistry department provided "the human dynamo from Wayne State" agreed to move there with him. The move by the two organic chemists catalyzed establishment of a world-class chemistry department at Stanford.

Djerassi has published over 1,200 articles and seven books dealing with the chemistry of natural products (steroids, alkaloids, antibiotics, lipids, and terpenoids) and with the applications of physical measurements (notably optical rotatory dispersion, natural and magnetic circular dichroism as well as mass spectrometry) and computer artificial intelligence techniques to organic chemical problems. Of the top 300 scientists publishing in the scientific literature between 1961 and 1976, his work was cited more often than that of any other organic chemist.

For the synthesis of the first oral contraceptive, Carl received the National Medal of Science (1973), the first Wolf Prize in Chemistry (1978), and was inducted into the National Inventors Hall of Fame (1978). In 1991, he received the National Medal of Technology for developing new methods of insect population control. He has frequently been honored by the American Chemical Society beginning with the Award in Pure Chemistry (1958), continuing with the Baekeland Medal (1959), Fritzsche Award (1960), Award for Creative Invention (1973), and the Gustavus John Esselen Award for Chemistry in the Public interest (1989), and culminating with the Society's highest honor, the Priestley Medal (1992). He has also received the Bard Award in Medicine and Science (1983), the Roussel Prize (1988), the Discoverers Award of the Pharmaceutical Manufacturers Association (1988), the National Academy of Sciences Award for the Industrial Application of Science (1990), and the Nevada Medal (1992). The Society for Chemical Industry awarded him the Perkin Medal in 1975 and the American Institute of Chemists presented him with the Freedman Foundation Patent Award in 1971 and the Chemical Pioneer Award in 1973.

Djerassi is a member of the U.S. National Academy of Sciences and its Institute of Medicine, the American Academy of Arts and Sciences, the Royal Swedish Academy of Sciences, the Royal Swedish Academy of Engineering Sciences, the German Academy of Natural Scientists (Leopoldina), the Mexican Academy of Scientific Investigation, and the Bulgarian and Brazilian Academies of Sciences. He is an Honorary Fellow of the Royal Chemical Society. He has received twelve honorary doctorates and has given forty named lectures around the world.

Carl has long been heavily involved in the socio-political aspects of science. He became involved in upgrading science in less-developed nations and sponsored a number of measures to increase the level of scientific exchange between industrial and non-industrial countries. His prodding and ideas helped set up advanced research institutes in Mexico, Brazil, Zaire, and Kenya. He chaired the National Academy of Sciences Board on Science and Technology for International Development and was a driving force in the Pugwash Conferences on Science and World Affairs.

Carl's interest in the arts led to the founding of the non-profit Djerassi Foundation in the late '60's. Following the tragic death of his daughter Pamela, a poet, painter and ceramicist, the Djerassi Foundation Resident Artists Program was set up in 1982 in her name. The program is based at the 1400 acre SMIP ranch in the Santa Cruz Mountains overlooking the Pacific Ocean and provides residences and studio space for 70 artists annually in the visual arts, literature, choreography and music.

Embarking on his third intellectual career, Carl has already published numerous poems and short stories in literary magazines. He has published two autobiographies, one scientific and one personal, and has invented the genre of "science-in-fiction" to probe into the world of scientific discovery and the subculture of science. Two novels of this type, "Cantor's Dilemma" and "The Bourbaki Gambit," have appeared. The first portrays "the soul and baggage of contemporary science," including its brutal complications, baroque professional etiquette and complicated relations between professors and their students. Perhaps not surprisingly, most of Carl's writing to date has dealt with issues of scientific life.

In closing our salute to Carl Djerassi, we thank Susan Learned-Driscoll and Ingeborg Kuhn whose help has been instrumental in the organization of this issue of *Tetrahedron.*

Carl Djerassi has been a mentor, teacher, collaborator, friend and colleague to many. His creativity and originality have inspired us all. Few individuals have pursued so many diverse interests and careers as well as Carl Djerassi; still, one senses that there is far more to come.

David A. Lightner, John H. Dawson, and John I. Brauman

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