

letters suggest that, given a few years more, she would have contributed to new, major breakthroughs. Of the letters selected for publication here, no more than a quarter will interest historians of science, and they add little to the picture painted some 15 years ago by Doris Moore in her biography of Lady Lovelace. Where the interest may lie is in the light that the letters throw on the problems of Byron's family — a conclusion that would have thoroughly annoyed Ada herself. □

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## Carl who?

Tim Lincoln

**The Pill, Pygmy Chimps, and Degas' Horse: The Remarkable Autobiography of the Award-Winning Scientist Who Synthesized the Birth Control Pill.** By Carl Djerassi. *Basic Books: 1992. Pp. 319. \$25.*

ALONGSIDE the me-too title and the subtitle (half an essay in itself), a stern Carl Djerassi looks out from the dust jacket of his autobiography. On the back, Stephen Jay Gould all but calls Djerassi a Renaissance man, and Linus Pauling says he neglected his work for a couple of days because he found the book so compelling. Who can disagree? Djerassi has lived a life well worth the telling. Here he does so deftly, throwing in some soul searching about the dark corners of his personal life and commentary on science, universities and the American Way in the process.

The title is an echo of those favoured by Gould in his popular works. It is intended to hint at Djerassi's impressive range of activities and achievements. 'Pygmy chimps' reflects his involvement in a quest for a good animal model in biomedical research (which met with mixed fortunes), and 'Degas' horse' his growing interest in the arts, in later life, as poet, novelist and patron. On this second count he writes of his collection of Paul Klees and of his establishment of the Djerassi Foundation, an artist's colony, and mentions in passing his fondness for opera and (with becoming modesty) his splendid, racy novel *Cantor's Dilemma*. He also lets on that he has an aversion to paying import duty.

These stories, and the unexceptional traveller's tales, are all well and good. But it is Djerassi's incarnations as an organic chemist with entrepreneurial leanings and as a Jewish immigrant to

the United States from Europe that give his book its especial attraction and claim on a wide audience.

In 1939, aged 16, Djerassi stepped on a liner at Genoa, saying goodbye to a Vienna overrun by the Nazis and then hello to the United States. The two seem to have been made for each other. The United States offered the young Djerassi an education in chemistry and unlimited opportunities; Djerassi offered energy, ambition and a certain refusal to be constrained by norms. The upshot — told in the best two chapters, cleverly part didactic on steroid chemistry and part thriller — was the synthesis first of cortisone then of 19-nor-17 $\alpha$ -ethynyltestosterone (norethindrone), a highly active inhibitor of ovulation when taken orally. That was the birth of the Pill, at Syntex in Mexico City on 15 October 1951, and rumination on the consequences for Djerassi, not to mention for women, takes up much of the rest of the book.

This is mostly sobering stuff. At the centre of the book is horror at the decline of pharmaceutical research into control of fertility and contained fury over the issue of abortion. And there are, for instance, the differences of opinion with women's groups (with which, it has to be said, Djerassi has considerable empathy) and with regulatory bodies such as the Food and Drug Administration and the Environmental Protection Agency (EPA). The following quotation comes in a different context, the testing of a synthetic insect-growth regulator for mosquito control. But it gives a taste of research later in Djerassi's career, and I find it irresistible:

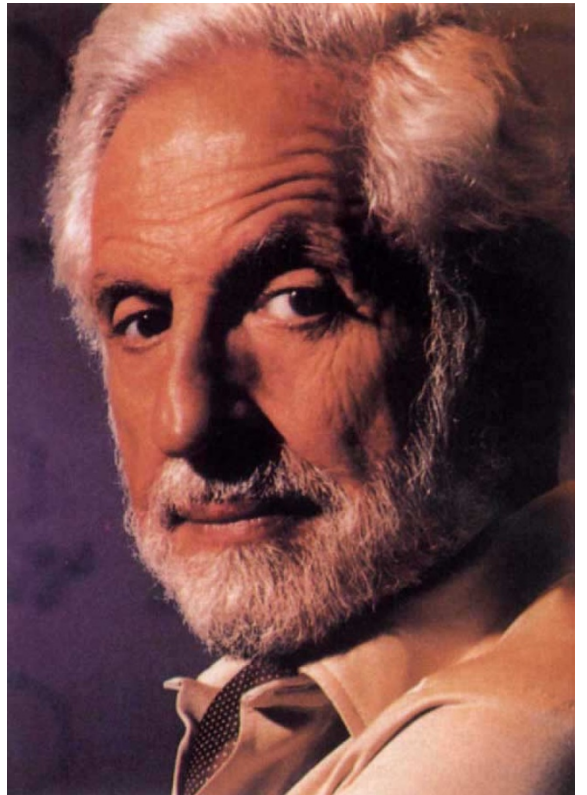
... by the time we finally received EPA approval for field applications, ALTO-SID's lack of toxicity had been demonstrated in water fleas, protozoa, copepods, sideswimmers, aquatic earthworms, mud-worms, leeches, tadpoles, and snails; in mosquito fish, bluegill, trout, channel catfish, cono salmon, carp, and stickleback; in crustaceans like seashore crabs, blue crabs, mud crabs, crayfish, acorn barnacles, and various species of shrimp. By that time we didn't have to be asked about oysters; we threw them in voluntarily.

As things turned out, the main (and considerable) pay-off of this line of work came from anti-flea and anti-cockroach

formulations.

Djerassi's later life revolves around Stanford, the university and nearby research-and-development community, and an enthusiasm for sniffing out research opportunities in business. Most, but not all, were to do with pest control, and not all were successful (the account of a doomed foray into film making, from earlier times, is a hoot).

It's all urbanely done, by and large, with the single note of personal bitterness being reserved for his mother, of all



From the cover of *The Pill, Pygmy Chimps, and Degas' Horse*.

**Carl Djerassi — from clean-cut chemist to bearded bard.**

people. There is too a nice line in self-deprecation woven through the book. What isn't clear is what Djerassi's subordinates have made of him. He says he hung up his lab coat in 1952; is he a tyrant of the research group, a fixer or a mentor? Also not clear is why he didn't take the step into the ranks of the truly Good and Great (which is not to say he hasn't had his honours and influence in policy making and such). He himself points out that in American academic circles he has remained mostly an outsider. Too much the maverick maybe.

Perhaps I inhabit overly parochial social circles, but I find that a common response to mention of Djerassi's name is "Carl who?". This remarkable autobiography of a remarkable man should put an end to that sad state of affairs. □

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