

## In Memoriam

### **James Olds**

1922-1976

**A Tribute  
by**

**Mila and Arnold Scheibel**

*James Olds, Bing Professor of Behavioral Biology, died in a swimming accident on August 21.*

**W**E FIRST got to know Jim Olds against the background clatter of half a hundred rats seeking heaven or risking hell, and, to our unaccustomed ears, his self-stimulation laboratory sounded like nothing so much as a great secretarial typing pool whose staff had reverted to hunt and peck.

It was 1956, and the place was a one-story, frame, ex-bachelor-officers' quarters on the Brentwood VA Hospital

grounds — one of the innumerable "temporary" buildings whose status had become uncertain and whose term was open-ended. We found that Jim had been given the west wing, as we had the east wing, and biochemist Sam Eiduson, the north. Our laboratory environment cycled with the season, murderously hot in summer, frigid in winter, uncomfortable always but, at least, plenty of space to be uncomfortable in. And we found that Jim and Nicki could be quite as uncomfortable as we; so misery's bond developed first, soon to be replaced by other bonds more enjoyable and meaningful.

Jim thought hard and moved fast, and we wondered at the almost machine-gun rate at which he turned out implanted rats to join the performing flock and give him further data points.

Jim's coming had been much heralded among the small UCLA neuroscience community, still under the thrall of the epochal discoveries by Magoun from the previous decade. Much was expected of the new psychologist from the North, this "Elvis Presley of Neurophysiology," as

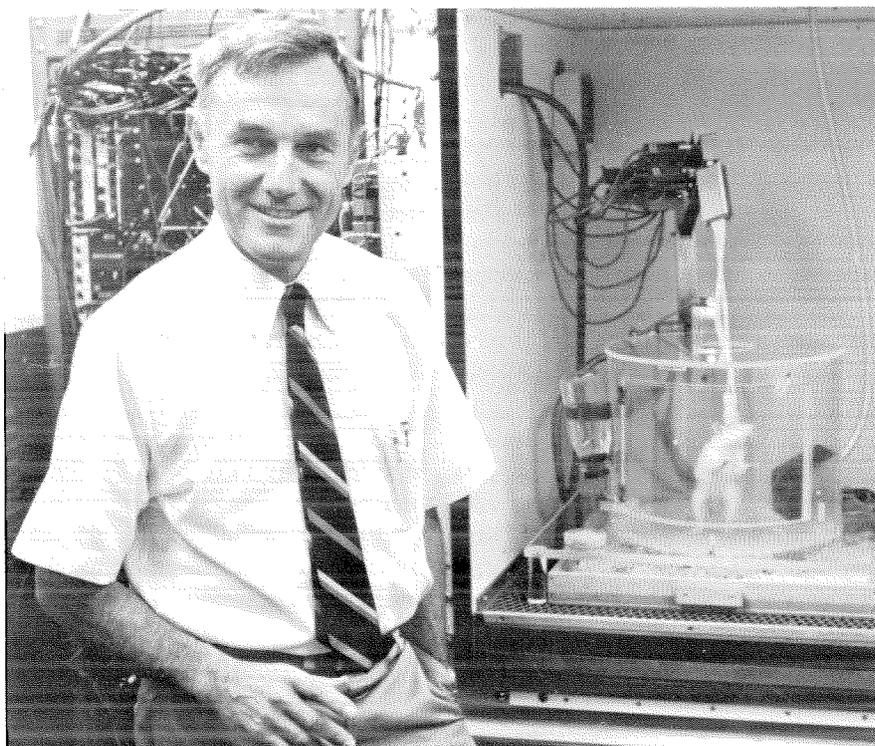
Robert Heath had called him. And Jim was no flash in the pan. His lab materialized quickly and his operation grew, and students and technicians were soon working the same long hours as the young master.

We often talked to Jim in those days, sprawled on the laboratory steps in the early evening, drinking coffee after midnight, or cussing mutually over a central animal room that always smelled like one. Little was understood about his discovery at the time. While many of us saw it as a fundamental element in a new psychophysiology of hedonism, there were some to whom it seemed more like an electrode artifact, or perhaps the result of a local epileptic seizure.

Mila and I were involved in a study of the longitudinal systems of the reticular formation, and we stressed — although we needn't have — the importance of understanding the phenomenon within the matrix of its substrate structure. We needn't have, because Jim was already asking the same question of us. And while we hadn't gotten that far rostral at the time, we promised to show him what we saw at the mesodiencephalic junction and beyond.

With a lengthy detour through the structural and functional basis of neural maturation in the kitten, it was to take us almost six more years to reach that portion of the brain stem with our structural studies. And by that time Jim was long since gone, attracted to Ann Arbor by a dynamic neuroscience program and the chance to be his own master. Temporary building T-45 was never quite the same without Jim's quick step and contagious laugh and — perhaps in part as a result — the area is now just one more VA parking lot.

Thinking of Jim, and trying to integrate the loss we all have suffered, it's easy to say that he was bright, fast thinking, a sparkling wit, and a tender friend. But one has to stop a moment to appreciate the enormous insight involved in making the right deduction and taking the appropriate action on the chance observation that an implanted rat returned by choice to the same spot



in the cage where he had received a brief electrical stimulus to his brain. From the beginning, his work had elegance and there were few lost motions. In fact, we doubt that Jim ever did a trivial experiment or asked an inconsequential question. How many of us can say the same?

Some time after Jim and Nicki returned from Ann Arbor to Caltech, we began a new type of relationship that continued until we lost him. While we seldom saw each other, we telephoned each other often, and while the specific subject area was usually different, the question was, somehow, always the same. "Jim, Nicki, what do you think the raphé cells are really doing?" "Arnie, Mila, what is the thalamus really there for?" . . . or why is the cortex organized in columns? . . . or can we think holistically about the medial forebrain bundle? . . . or any number of others.

As psychiatrically trained people, we had tried to structurally blueprint our way toward the organic bases of behavior. As a psychologist, Jim was trying to plot out the functional substrate. But our work led us by steps toward function, and his pressed equally toward structure. Our points of departure were different but eventually led toward common ground.

No matter how often we spoke, we wondered at the speed of his associations — and the color of his images, for he drew on a wide palette. He did more than speak to you; he fired at you. And the thoughts were interrupted only by the familiar "Do you follow me?" or, "See what I mean?" He was creative and synthetic, and he often created faster than he could find the words for shaping. Again, elegance and insight were the words that best described him intellectually.

He called us just a week before he lost his life and asked about something we had done on the possible thalamic substrates of body image. We were in deep water, and he was too, but since we all knew it, there was no harm. When we finished, he said again what he had recently begun to say many times over. "It's the anatomy that will

tell the story. One of your structural figures may contain hundreds of bytes of information, while a whole series of our experiments may give us only one or two. Damn it! I should be doing what you're doing. I'm in the wrong racket!"

But he had *never* been in the wrong racket. From those early observations with Milner, his work maintained drive and cohesion, and the system that he put together for us is so certain that today few high school biology students can be found who do not know of "the pain and pleasure centers in the brain."

As one looks back over the quarter century that frames his work, it takes on the aspects of a symphony — the statement in movements — varying in texture — but logical and inexorable in development.

His song is over, but what a song it was.

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## Roger Stanton

1898-1976

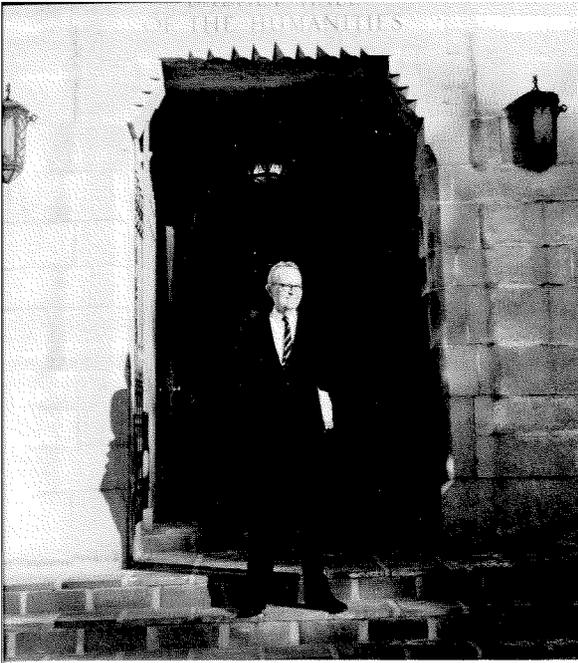
### A Tribute by Kent Clark

**I**N FEBRUARY 1951, Roger Stanton, then Director of Institute Libraries, issued a plea to the faculty, alumni, and friends of Caltech. He intended, he said, to establish central archives — a collection of documents relevant to the history of Caltech — and he needed help from everyone who had records to contribute. The history of Caltech, he explained, constitutes "an exhibit of human achievement"; and the story of Caltech as an institution, he implied, is as fascinating and instructive as some of the arcane knowledge the Institute has produced. What Roger Stanton did not say (and probably never thought) as he began to assemble the now-voluminous archives was that his

own career would make a bright chapter of Caltech history. In retrospect, however, this fact is obvious enough.

Roger Stanton, who died on July 26, came to Caltech in 1925 as an instructor in English. Armed with an MA from Princeton, a BS from Colgate, and one year's teaching experience at Colorado College, he launched into a career of teaching composition and literature to Caltech undergraduates. In this enterprise (roughly equivalent, many believed at the time, to bringing classic culture to the Ostrogoths) he was joined the same year by another bright young instructor from Princeton, L. Winchester Jones. The two men, soon to be known to all Caltech simply as Roger and Winch, were hired by Clinton Judy to strengthen the humanities program, and it was expected that in a pinch they could teach anything from Greek literature to contemporary history. Since Dabney Hall would not be completed until 1928, they were assigned to an office in West Bridge, hardly big enough (Winch recalls) to accommodate two desks and the pipe that Roger then affected, but adequate for the establishment of a lifelong friendship.

Along with an addiction to literature, Roger brought with him a passion for music and live theatre. Through his musical interests, he naturally gravitated to the Coleman Chamber Concert organization, and eventually served for 11 years on its board of directors — helping to establish the pattern of cooperation between Caltech and Coleman that still continues. Through his interest in theatre, he became acquainted with Gilmore Brown, the director of the old Community Theatre, then on Fair Oaks Avenue, and for about 10 years he acted in Brown's productions. In the thirties, he became co-director of Caltech student productions. The plays he directed, classical comedies by Plautus and Terence, are still remembered by Caltech veterans with something between admiration and awe. George MacMinn once said, in effect, that anyone who has missed seeing Techers clad in togas leaping about Culbertson Hall has never been truly happy. And Winch Jones has said, more recently,



that the polish of the productions was amazing — especially to Caltech professors accustomed to hearing their students mangle the language. To hear students declaiming Plautus with flawless rhythm and diction was enough to make English instructors weep.

In the late twenties Roger returned to Princeton to take a PhD and in the process made one of his greatest contributions to Caltech history. At Princeton he met his now-legendary friend and colleague Harvey Eagleson and influenced him to come to Caltech. Eagleson, in turn, recruited his friend Bill Huse. The result of this chain reaction in serendipity was to provide the new Dabney Hall with a remarkably versatile English staff. Under the wise and benign guidance of Clinton Judy and George MacMinn, the team of Stanton, Jones, Huse, and Eagleson soon established a formidable reputation for its teaching ability and for its effect on the social and cultural ambience of the Institute. To this happy combination Roger brought his own particular brand of discriminating taste and a wide variety of cultural experience. In the days before travel grants, he traveled a good deal, both in Europe and in the United States and Mexico; and he had an eye for art, architecture, and gardens to go with his interests in literature, history, and music. He became something of an expert (though he never claimed to be one) on everything from Norman farmhouses to the preserving of kumquats. While he guided his students through

the mysteries of the English sentence or the philosophy of Browning, he was able to carry on a persistent, unannounced (and sometimes successful) campaign against provincialism.

Though Roger's tastes were highly literary, he did not contribute to literary journals; his published writing, done mostly for the benefit of the Institute, was chiefly technical and historical. During World War II, he collaborated with Henry Borsook on a series of articles on foods and nutrition, and shortly after the war he produced a 40-page history (which he describes as a publicity release) of the then-infant JPL. His later writing, both published and informal, dealt principally with libraries and the handling of scientific-historical documents.

In 1948 Roger accepted, on a temporary basis, an appointment as Director of Institute Libraries. This assignment, one of the best temporary appointments in Caltech history, was to last for 13 years. The range of Roger's interests, his devotion to clarity and order, and his knowledge of the Institute, along with much patience and quiet tact, enabled him to deal effectively with some crucial problems of growth and development: the planning of a central library to replace, or supplement, the scattered divisional libraries, the expansion of library holdings, and the modernization of techniques, to name only three. With a great deal of help from his friends on the faculty and an excellent library staff, he laid the essential groundwork for a new library system. At the time of his retirement, in 1966, he was inclined to regard his library service, next to his years of teaching, as his most significant contribution to Caltech.

Typically, as a collector of Caltech records, Roger was concerned with everyone's records except his own. His files in the faculty office and the humanities division consist principally of two vitae, one filled out in 1943 and the other in 1963. Both are as terse and laconic as telegrams, and although both contain some rare bits of information, they bear about the same relationship to the variety and texture of Roger's life at

Caltech that an armload of bricks bears to a completed mansion in San Marino. They duly record the fact that Roger Fellows Stanton was born in Pittsburgh in 1898, that he received his secondary education at the Peddie School in Hightstown, New Jersey, that he came to Caltech in 1925, that he served on many committees, that he eventually went through all the ranks from instructor to professor. They also record, more unusually, that he served three months in the U. S. Army at the close of World War I and that for a year after his graduation from Colgate he worked as a bond salesman (of all things) for Security Bank in Los Angeles. What they do not record, or even hint at, is the complexity of his interests and accomplishments or the personal friendships and commitments that defined his relationship to the Institute. One item contained in both vitae, though perfectly true, should probably be revised. In reply to the question *Married or Single*, Roger correctly answered *Single*. Like his friends Harvey Eagleson and Don Clark, he was a lifelong bachelor. Perhaps it would be appropriate, however, if at least on the Divisional copy of the record his answer was changed to *Married, California Institute of Technology, 1925-1976*.

Kent Clark is professor of English at Caltech.

## Jerome Vinograd

1913-1976

A Tribute  
by William R. Bauer

**J**EROME VINOGRAD, who was recently named the first Ethel Wilson Bowles and Robert Bowles Professor of Chemical Biology at Caltech, died at the Huntington Memorial Hospital on July 3. His death at the age of 63 was unexpected, even though he had previously experienced two major heart attacks during his 25 years at the Institute. Jerry is survived by his wife,

Dorothy, and by two children by a previous marriage, Julie and Deborah.

Caltech was only about half its present size in 1957, and Jerry Vinograd had been a research associate in chemistry for about a year, when I arrived on the scene as a freshman. My initial plan had been to become a nuclear physicist, but that was before I had actually taken freshman physics. Verner Schomaker, who was my faculty section advisor in chemistry, suggested that I consider trying a research project in protein chemistry.

First on the list of names he gave me was that of Dr. Jerome Vinograd, and I remember making my way to the dimly lit subbasement of Church lab for our first encounter. He was very distinguished in appearance even at the age of 44, with snow-white hair ("you can always spot me in a seminar room") and an enthusiastic twinkle in his eyes. He started to explain his research, which was then concerned with the subunit association in hemoglobin, and before I knew it two hours had elapsed. Two hours with a freshman. For the first time Caltech had become a very friendly place, and I was hooked.

Jerry always dealt with others, scientists or not, on the basis of respect for their abilities and genuine interest in whatever they had to offer. Once, upon returning from an otherwise dull meeting in Washington, he waxed enthusiastic about a chance conversation with a labor leader while waiting for the return flight at Dulles. He was excited because he had learned something new — how a very different sort of person thinks and operates.

For Jerry, the method of dealing with a problem was of the greatest importance, and he was always concerned with fairness and propriety. This concern applied to science itself, to dealings with his colleagues, and to more everyday affairs. One of his most important characteristics was complete honesty, both intellectual and moral. The discovery of a new concept, or rather the concept itself, was of greater importance than the identity of the discoverer; and the members of his research group were encouraged to share

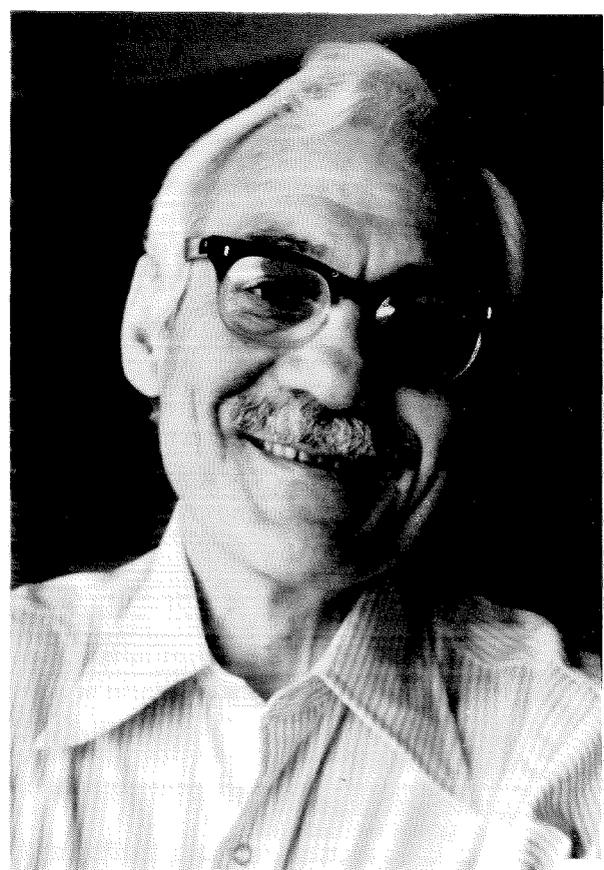
even preliminary results, as soon as sufficiently well grounded, rather than to live in an aura of secrecy. Since leaving his lab, I have come to treasure this philosophy, which emphasizes the excitement and fun of research.

Jerry Vinograd's scientific career resolved itself into three major periods: before his arrival at Caltech, when he worked as a research chemist for the Shell Development Co. in physical and colloid chemistry; the period between 1951 and about 1960, during which he studied the behavior of gelatin gels and various proteins, and when he made several substantial contributions to the development of ultracentrifugation; and the more recent years, when his attention was focused upon the structure, replication, and enzymology of DNA. Jerry's later work shows clearly the mark of his earlier training in physical and organic chemistry, and his papers are outstanding in molecular biology for their rigor and exactitude.

One of his greatest assets was the ability to break down intellectual barriers and to apply what he had earlier learned about one system (detergent micelles, say) to another (DNA). He was able to pass on this ability to his students, and he was a truly great teacher in the classical sense.

Among his many major contributions to molecular biology was the development, with the help of several collaborators, of density gradient centrifugation in concentrated salt solutions. This technique, applied under conditions of either equilibrium or of the steady state, has been responsible for many of the subsequent major advances in nucleic acid chemistry and biochemistry.

He was the first person to understand that circular duplex DNA acquires special topological properties when both strands are covalently closed. These DNAs, which often possess a tertiary structure and which contain a new kind of chemical bond, a topological bond, have turned out to be of extreme importance in molecular biology. He provided the primary leadership in this field until his death, with later work including the replication of the closed



circular mitochondrial DNAs and the enzymology of closed DNA. His initiative and imagination will be sorely missed.

In retrospect, however, Jerry will be missed at least as much for his personal qualities and great warmth of personality as for his scientific accomplishments. Throughout my lengthy sojourn in his laboratory as an undergraduate, graduate student, research fellow and (finally) collaborator, I was present as he grew in recognition from being a relatively obscure research associate to holding an endowed chair, becoming a member of the National Academy (along with a host of other honors and awards), and acquiring an undisputed place of importance both at Caltech and nationally.

All this had little effect upon his character or upon his approach towards dealing with others, and the youthful enthusiasm was still there when I last talked to him, on July 2, just as it had been in December of 1957.

He was loved and admired by his many friends, and he will be greatly missed.

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