

Ray D. Owen, Ph.D., AAI '66

1915–2014

Pioneering immunologist and longtime AAI member Ray D. Owen, Ph.D., an emeritus California Institute of Technology (Caltech) professor of biology and recipient of the AAI Excellence in Mentoring Award in 1999, died on September 21 at the age of 98. Owen's 1945 discovery of immunological tolerance in twin cattle was a building block for the experimental induction of tolerance through immune suppression and for early tissue grafting, which initiated the era of organ transplantation.

AAI extends condolences to Dr. Owen's family and many friends and colleagues, including those who benefited from his generous and dedicated mentoring. The following remembrance from David Owen, son of Ray and the late June Owen, incorporates the recollections of AAI members Jeff Frelinger and Suzanne Ostrand-Rosenberg and past member Tommy Douglas, all former students of Dr. Owen. AAI gratefully acknowledges the submission.

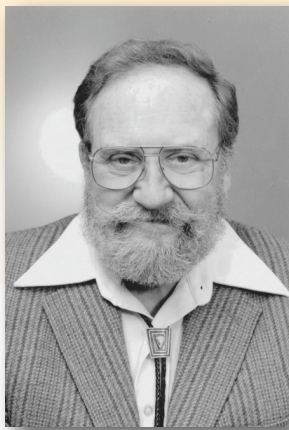
Further below is the Caltech tribute to Ray Owen, reprinted with the kind permission of author Kathy Svitil and Caltech.

Hello Friends of Ray and June Owen --

As you may already have heard, my father, Ray D. Owen, longtime professor of biology at Caltech, passed away on September 21st. He was 98 years old. He died at the Californian Convalescent Hospital in Pasadena, where he had been a patient for the past three years. June Weissenberg Owen, his great wife and my wonderful mother, died in the same hospital in August of 2013. They had prearranged to be cremated and in the coming days their ashes will be spread together over the Pacific Ocean off the coast of Southern California.

The biology division at Caltech has graciously agreed to hold a memorial event for my parents; time and details to be determined. Inquiries may be directed to Cynthia Carlson, Assistant to the Chair in Biology at Caltech, who is keeping a list of those interested in attending.

Many of you have previously expressed how indebted you feel to Ray and June for all kinds of things that they did for you. From participating in many late afternoon conversations with my parents, where we'd talk about the day's events, I know this for sure: their lives were immeasurably enriched by their interactions with you, and



Ray Owen

they treasured their relationships with all of you. It was a two-way street.

I asked three former students of my father to write a little about what it was like in his lab. You probably know them: Jeff Frelinger, Suzanne Ostrand-Rosenberg, and Tommy Douglas. Below is what they came up with—I think it's great:

Ray was famous for mandatory 10 a.m. and 3 p.m. coffee times in his office in the basement of Kerckhoff. While this was seen from the outside as Unicorns and Rainbows, invariably, each morning and afternoon, without much formality, experiments were planned, the newest Nature articles were summarized, and the skills of lucid and concise presentation of ideas were honed. While Ray was always supportive, he was also critical. We were all expected to defend our ideas, approaches, and experiments. Alternatives were carefully considered, and the quality of the science was the highest. This process was quite remarkable because Ray managed to nudge us in the right direction without ever actually telling us what to do or how to do it. He not only brought out the best in us, but he also gave us the confidence to express ourselves, and he did it almost without our realizing what was happening. It was not only exciting to explore ideas with Ray. It was also fun. Without exception, Ray shared all his many visitors with the lab, whether they were leaders in the field or newly minted postdocs. As we sat around the table drinking coffee, we were expected to provide a 3-minute summary of our work, starting with the big question and getting to the details of the experiments—vital early training for the elevator pitch now so important.

We were delighted, but not surprised, when Ray received The American Association of Immunologists (AAI) award for outstanding mentoring in 1999. His demanding but nurturing and supportive mentoring style was obvious to those of us who trained with him. But because Ray's style was unassuming and subtle, it was not necessarily apparent to outsiders. Ray believed that his job as a mentor was to help everyone who came through his lab get to where they wanted to be. Not surprisingly, Ray's reputation was also known to many Caltech Biology Division graduate students not in his lab, and these students would also come for coffee and to talk. Many of the people Ray worked with became distinguished professors; others became practicing physicians, teachers, or industrial scientists. Ray was equally proud of all of them. He relished seeing them

progress through their careers, and enjoyed hearing about their personal lives. We, in turn, felt privileged to have had the opportunity to have been associated with such a creative and unique individual. Ray engendered the affection of all of us not only because he was a wonderful, thoughtful, and intelligent person, although he was all of that, but also because he created an environment that opened up for us a world of exploration and gave us the attitudes and tools to have rewarding and productive careers. We will miss Ray, but in many ways he's still with us, since we think of him regularly as we try to emulate his mentoring style and pass it on to the next generation.

Sadly, but with best wishes to all,
- David Owen

Remembering Ray D. Owen (1915–2014)

Immunology pioneer Ray D. Owen, emeritus professor of biology at Caltech, passed away on Sunday, September 21, at the Californian-Pasadena Convalescent Hospital in Pasadena, California. He was 98.

Owen's major scientific contribution was his discovery, in 1945, of immunological tolerance in twin cattle. Using blood typing, he recognized that one of a set of fraternal twin cattle had no immune response to the foreign antigens (substances that provoke an immune response) introduced from their twins. The finding paved the way for the experimental induction of tolerance through immune suppression and for early tissue grafting—which initiated the era of organ transplantation—by Frank Macfarlane Burnet and Peter Brian Medawar, who received the Nobel Prize for the work in 1960. “In fact, Owen was the first to postulate that immunosuppressive treatments such as x-irradiation might allow incompatible transplants, and participated in the experiments in which bone-marrow transplants to irradiated recipients were first successfully demonstrated,” says Elliot Meyerowitz, Caltech's George W. Beadle Professor of Biology.

Owen's later work included studies on human antibodies, blood-group antigens, the evolution of immune systems, and the genetic analysis of the major histocompatibility complex—a large family of genes that plays an important role in the immune system and autoimmunity—of the mouse. “He was, perhaps, the most outstanding immunologist of his generation,” wrote Leroy Hood (BS '60, Ph.D. '68), cofounder of the Institute for Systems Biology in Seattle, inventor of the automated DNA sequencer, and a former student—and later colleague—of Owen's at Caltech.

“Ray promoted and loved genetics, as much or even more so than immunology,” says Mitch Kronenberg (Ph.D. '83), president and chief scientific officer at the La Jolla Institute for Allergy and Immunology, Hood's former grad student and postdoc, and a self-described “trainee” of Owen's. “In a sense, he was a pioneer in perceiving the importance of genetic variability as a determinant of biologic complexity, long before the advent of next-generation DNA sequencing and the concept of personalized medicine.

“He was amazing in that he never lost his interest in the progress of research,” Kronenberg adds. “On occasion he would drop me a congratulatory note after reading a paper from my lab—what a thrill for me—even when he was well into his eighties. In an interview at age 95, he disputed the notion that everything important would soon be known, but instead strongly expressed his excitement about the frontiers of science.”

Owen was born October 30, 1915, on a dairy farm in Genesee, Wisconsin. In 1937, he received a B.S. from Carroll College in Waukesha, Wisconsin—where he met June, his wife of 74 years, from whom he was inseparable; in 1941, he received a Ph.D. in genetics from the University of Wisconsin. After working for two years as a postdoctoral researcher at the University of Wisconsin and as an assistant professor at the same institution, Owen took a position as an associate professor at Caltech in 1947; he was promoted to full professor in 1953 and became professor emeritus in 1983.

At Caltech, Owen also was noted for his dedicated teaching—he received an award for teaching excellence from the Associated Students of the California Institute of Technology (ASCIT); for his extraordinary commitment to mentoring young scientists; and for his administrative roles. He served as chairman of the Division of Biology from 1961 to 1968 and as vice president for student affairs and dean of students from 1975 to 1980.

He chaired the ad hoc Committee on the Freshman Year that recommended the pass/fail grading system for freshmen (designed to make the transition to Caltech less “traumatic,” Owen once noted), adopted in 1964, and the introduction of electives into the previously rigid freshman curriculum. Under Owen's leadership, the committee also spearheaded the effort to admit female undergraduate students to Caltech; in 1970, the first female undergraduates enrolled at the institute.

Many of his former students and colleagues recall that Owen did not just help open the doors to female

I N M E M O R I A M

students, he actively assisted and nurtured them, both professionally and personally. As one of those first undergrads later described it, “However well women were mainstreamed into the biological sciences, women undergrads were definitely minorities at Caltech. We were beset by a constant stream of fellow undergrads, grad students, TAs, postdocs, and professors who appeared, called, wrote, popped into our dorm rooms, sent notes, flowers, and gifts, solicited dates, proposed marriage, pledged undying love and devotion, and everything in between! Then, we were trotted out to render the female perspective to faculty, alumni, parents’ groups, news media, potential students or donors, trustees, and other luminaries. We often suffered from too much attention. Ray’s calming presence was an antidote for those stresses. His maturity and his giving, caring attitude gave all of his students a restful haven in which to develop their science craft.”

Over more than six decades at Caltech, Owen was a beloved mentor not just to those first female students and subsequent generations of male and female undergrads but also to graduate students, postdocs, and young faculty.

“I believe that much of the wonderful scientific atmosphere I have the privilege of enjoying at Caltech is due in large part to the efforts of Ray Owen,” says Pamela Bjorkman, Caltech’s Max Delbrück Professor of Biology.

“Dr. Owen’s belief in the genderlessness and color-blindness of intelligence and creativity has encouraged men and women to excel in their chosen fields,” wrote Leonore Herzenberg, professor of genetics at the Stanford School of Medicine, in a letter recommending Owen for a lifetime mentoring award. “The success of this mentoring can be measured in terms of the contributions made by his students and many others who came in contact with him. In addition, it can be measured by the way in which those people for whom Dr. Owen served as a mentor have tended, like him, to tithe a portion of their time to help others achieve academic excellence.”

Noted Roger Perlmutter, executive vice president and president of Merck Research Laboratories and a senior research fellow at Caltech in the early 1980s: “Ray was then, and had been for many years, the very heart and soul of the Caltech biology division. His office in the basement of Kerckhoff, decorated with trophies courageously secured and lovingly forwarded by admiring former trainees, and masses of postcards from students and friends, served as an informal counseling suite. Ray’s door

was always open, tea and coffee were always available, and there was a steady stream of students who stopped by to discuss results, to seek advice, or simply to chat . . . Ray had time for everyone.”

“Ray was a true gentleman,” says Kronenberg. “Although he could be critical about a scientific approach or finding, his comments would be tinged with gentle humor or light sarcasm. He did not gossip, it was never a personal matter for him, and he never expressed disdain or a lack of respect for anyone. He seemed untouched by envy or enmity; these were emotions he just did not express.”

Owen, who coauthored *General Genetics*—the most widely used genetics textbook of its time—received the Thomas Hunt Morgan Medal from the Genetics Society of America, given for lifetime achievement in the field of genetics, in 1993. He was awarded the Mendel Medal of the Czechoslovak Academy of Sciences in 1966, earned honorary degrees from Carroll College and the University of the Pacific, and was a member of the National Academy of Sciences (NAS), the American Academy of Arts and Sciences, and the American Philosophical Society, among others.

In addition, Owen was president of the Genetics Society of America in 1962, a member of the Genetics Study Section of the National Institutes of Health (NIH) from 1958 to 1961 and its chairman from 1961 to 1963, a member of the Immunobiology Study Section of the NIH from 1966 to 1967 and its chairman from 1967 to 1970, chairman of the Genetics Section of the NAS from 1969 to 1972, and a scientist-member of the three-person President’s Cancer Panel from 1972 to 1975, where he served as an advisor to Presidents Nixon and Ford.

In his personal life, Owen professed a love of his family; his home, located a short walk from the Caltech campus, where he often conducted evening classes for students with his wife June serving cookies; his garden (camellias and chrysanthemums were his specialty); his travels and his friends in the international community of scientists; his research; his teaching; and his students.

“I think, as I look back at it,” said Owen, in a 1983 interview for the Caltech Oral History Project, “I’ve had a very fortunate and satisfying life. But when you get a letter from a student or get some word back about somebody who’s gone out into the world, and it appears that you have done something to influence a young person’s life or made

a difference in his life for the good—I think that’s the most ego-rewarding aspect of one’s life. And I’ve had a good many opportunities along those lines.”

Owen was predeceased by his wife, June, in 2013, who also passed away at the Californian-Pasadena Convalescent Hospital, and by a son, Griffith Hugh, who died in a car accident in 1970. He is survived by his son David.

A memorial service honoring both Ray and June is being planned by the Division of Biology and Biological Engineering. The details will be announced.

–Written by Kathy Svitil

See also:

1. In Memoriam published by Owen’s Caltech Division of Biology and Biological Engineering colleagues: <http://www.bbe.caltech.edu/content/ray-d-owen>
2. University of Wisconsin In Memoriam: Ray D. Owen Discovered Immune Tolerance, Paved the Way for Organ Transplantation: <http://news.wisc.edu/23157>
3. 1983 Ray Owen interview for the Caltech Oral History Project: http://oralhistories.library.caltech.edu/123/1/Owen_OHO.pdf

AAI Invites Additions to List of Women Speakers

The AAI Committee on the Status of Women (CSOW) has revamped the format of the *List of Potential Speakers and Chairs*. (See the November/December 2013 AAI Newsletter, page 39.) The committee also announced a new process for individuals to have their names added to the list. The changes are intended to broaden the range of areas of expertise of AAI members and to make the list more accessible and accurate as a resource for enhancing opportunities for women as speakers or chairs at professional meetings.

Listings were originally limited to women serving as heads of immunological research labs, but the CSOW Speaker List is now open to women AAI members fulfilling leadership roles in non-research careers as well.

The screenshot shows the AAI website header with the logo and navigation menu. Below the header is a search form titled "Find a CSOW Speaker". The form includes a search bar, a dropdown menu for "Primary Job Emphasis" (with "Institute Immune Responses" selected), a dropdown menu for "Area of Research/Expertise" (with "Immunology" selected), a "Select One" dropdown, and a "Sort By" dropdown. There are "Search" and "Reset" buttons. Below the form is a "Search Help" box with instructions: "To search the directory of active members, enter criteria into one field or a combination of the fields above, and then click Submit."

In addition to representing a broader range of leadership roles occupied by women, the list will be more accessible and more easily maintained. Individuals listed will be able to maintain their own entries as each now links to the individual’s Web page.

Viewers can determine how well the profile matches their need for a woman immunologist in a particular leadership role.

Women currently listed must supply their URLs to remain on the list. To be added to the list, contact Mary Bradshaw, AAI staff liaison for the CSOW (mbradshaw@aai.org).