



Saturday, September 13, 2014
Sterling Chemistry Laboratory
Yale University

Harry Wasserman



Harry H. Wasserman

1920-2013

Memorial Symposium in Organic Chemistry

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September 13, 2014

- 1:00 Scott Miller
Welcome
- 1:10 Bruce Lipshutz
Preserving Our Environment via Green Chemistry
- 1:55 Brian Stoltz
*Complex Natural Products as a Driving Force
for Discovery in Organic Chemistry*
- 2:40 John Wood
*Recent Efforts in the Synthesis of Complex
Natural Products*
- 3:25 Coffee Break
- 3:55 Steven Wasserman
*A Toll of Two Species: Signaling and Specificity
in Innate Immunity*
- 4:40 Short Presentations about Harry Wasserman,
chemist, mentor, teacher, raconteur, humorist,
editor, artist, musician, advisor, friend, family man
- 6:00 Closing

The Yale Chemistry Department
thanks for their support of this symposium:

The publisher and editorial board of the Tetrahedron journals

The Camille and Henry Dreyfus Foundation

Patricia Brodka, Bruce Lipshutz, and many other
friends, students, and family of Harry Wasserman

Harry Herschal Wasserman

December 1, 1920 – December 29, 2013

Harry Wasserman, served Yale and its Chemistry Department for 59 years, progressing from instructor to Eugene Higgins Professor Emeritus of Chemistry. He was a member of the National Academy of Sciences, an acclaimed teacher, and an accomplished watercolorist.

Harry grew up in and around Boston in a household often struggling to pay the rent. On weekends, he and his brothers would earn a few dollars sifting sand on Revere Beach for lost coins. Earning high marks at Cambridge High & Latin, Harry was awarded a Cambridge scholarship to the Massachusetts Institute of Technology. He started there in 1937 at age 16 and earned a B.S. in chemistry. While in college, Wasserman considered a career as an artist, studying with Boston painter and sculptor John Wilson.

After MIT, Harry began graduate studies at Harvard under the mentorship of R. B. Woodward. Harry interrupted his graduate studies in 1943 to serve in the 503rd Army Air Force in Africa and the Middle East. Rising to the rank of captain, he trained soldiers across the region to detect and protect themselves against chemical gas attacks. Returning to Woodward's lab after the war, Harry met Elga Steinherz, a fellow Woodward student whom he married in 1947.

Completing his Ph.D. research, he joined the Yale University faculty in 1948. His research in organic chemistry focused on the mechanisms of chemical reaction, the development of new synthetic methods, and the synthesis of natural products. He and his co-workers made seminal contributions to the chemistry of reactive species: singlet oxygen, cyclopropanones, ethoxyacetylene, beta-lactams, and vicinal tricarbonyls, to name a few. His methods led to synthesis of important natural products including prodigiosins; tetracycline and beta-lactam antibiotics; macrocyclic lactones; polyamines; and erythrina, isoquinoline, and vincamine alkaloids. These accomplishments led to his election to the National Academy of Sciences in 1987 and his receipt of the Arthur C. Cope Scholar Award. He mentored the development of more than 150 graduate student and post-doctoral researchers.

In the classroom, Harry taught organic chemistry for more than four decades, gaining admiration for making an often-dreaded course clear and enjoyable. He took time to elevate the teaching of organic chemistry to the level of performance art. His teaching was recognized by Yale's Devane Medal for excellence in teaching, a Yale College prize for Distinguished Undergraduate Teaching, and the Catalyst Award of the Chemical Manufacturers Association. In honor of his distinguished career, Yale University has established the Wasserman Prize for Excellence in the Teaching of Chemistry.

Harry's students and colleagues remember him as a warm and witty friend and mentor, fascinated by the beauty of structures, natural and manmade. He was upbeat, down-to-earth and game for adventure, whether beachcombing for driftwood treasure with the kids and grandkids on Cape Cod, or exploring museums and marketplaces with Elga. He savored good stories, a firm handshake, Benny Goodman, Humphrey Bogart, and the Marx Brothers.

While traveling widely for his science, he always took his brushes and sketchbooks. He would often delight family and friends with letters or postcards illustrated with watercolors of people, ports and landscapes. His paintings of campus architecture graced the cover of the Yale summer course catalog for fifteen years.

Jazz was Harry's other lifelong passion. A self-taught clarinetist, he played regularly with a number of jazz combos, including a quartet of Yale chemists performing as "The Gloom Exterminators".



Harry (clarinet) Jim English (accordion) Lars Onsager (bass) Ben Owen (guitar)

Harry died at 93 and is survived by his wife Elga; his children Daniel, Diana, and Steven; seven grandchildren; one great-granddaughter, and his brother, Herbert.

My father spent his last months in simplified life,
The patterns on a television screen held mystery we could not fathom.
His sleep held dreams we could not share.

What sands he sifted in that sleep
From Revere or Africa or Wellfleet
We could only guess

As when he used to lose himself in the mellow notes from his b flat clarinet,
Without score or companion.

My father told great stories. He drew wonderful sketches.
He might capture the twists of a tree trunk for all to admire,
Or the chemistry between a little girl and her horse for her pleasure alone.

My father was a tease. He taught his sons to see wicked truths.
He taught his daughter to be strong and weak and his grandchildren that
Games could be invented with just a soap bottle.

He collected people. His friendships were vast: my father never forgot a face.
His love for my mother was intense and complex and strong.

My father knew how to teach. He taught the most challenging of subjects as though it was Shakespeare. When his students struggled, he took it personally.
He taught the dog to count. He taught his children to pun.

My father loved words. He loved colors and sound and tastes.
He loved to get up early in the morning when the air was crisp.
He greeted the milkman and the paperboy and the fruit vendor who came to the door.

When he swam in the pool we would watch his kick and his arms and his head rotate in and out, in and out.

Transported to the Caribbean my father loved to snorkel and he got the most reluctant of his companions to swim with him in the clear warm sea.
The fish and coral and rock offered a palette of motion and mosaic and grace.

On the night he died my father and I listened to jazz.
Or I listened to jazz and my father was jazz.

My father lived 90 rich years. He dissolved over a quiet three.
Now he is the color and the motion and the sound and sand.
He is the mystery and ours are the dreams.

My Father's Dreams

Diana Wasserman

Harry loved to tell self-deprecating stories like this one:

Harry Wasserman Meets Ted Kennedy

In the early 70s, Elga Wasserman did very well as a law student, well enough to be named Bailiff ("Oyez! Oyez!") for the annual Moot Court. This earned Harry, together with the parents of Elga's classmates, an invitation to attend the festivities.

Funding for basic research had declined from the halcyon post-Sputnik days, but here was a strategic opportunity for American Science. One of the distinguished judges for the Moot Court, together with Judge A. Leon Higginbotham, would be Senator Edward M. Kennedy, who chaired the Senate Committee responsible for the NIH budget.

Since his time with the Senator was likely to be limited, Harry spent the preceding week discussing with key colleagues which were the most critical points he should make in support of the nation's science, and pondered carefully just what he would say.

After the trial there would be a reception at the Presidents Room in Woolsey Hall. Harry selected a seat near the door of the courtroom, so that after the judges had been ushered out he could hurry over to Woolsey Hall, arriving before the rest of the audience. He found Senator Kennedy already besieged by even quicker students. But Harry saw his opportunity. The Senator was fondly eyeing the bar across the room. Harry attracted his attention and asked if he would like a drink. Yes indeed, "A rum and tonic, please".

By the time Harry had returned with the rum and tonic, parents had joined the reception and supplanted the students around the Senator. Kennedy gratefully accepted the drink but then noticed uncomfortably that he was the only one in the circle with a glass. Graciously the Senator asked the others if they would like something. Yes. "A Dubonnet", said one mother, "just a soda water", said another, "a gin and tonic", said a father.

Kennedy turned to Harry, "One Dubonnet, one soda water, one gin and tonic."

Just as Harry was returning from the crowded bar with a tray holding the parental drinks, a senatorial bodyguard approached to inform Kennedy that his limousine was waiting below, and he was whisked away.



From WWII, when he advised army buddies to use their gas masks, until his last decade, when he advised a young faculty member on maintaining equilibrium in life, Harry may have preferred communicating with cartoons even over language and music.



Symposium Speakers

Bruce H. Lipshutz spent four years at Yale (1973-1977) as a graduate student with Harry Wasserman. After a two-year postdoctoral stint with E. J. Corey at Harvard, he began his academic career at the University of California, Santa Barbara, in 1979, where today he continues as Professor of Chemistry. His program in synthesis focuses on new reagents and methodologies, mainly in the area of organometallic chemistry. While these contributions tended to fall within the area of “traditional” organic synthesis, more recently his group has shifted in large measure towards green chemistry, with the specific goal being to *get organic solvents out of organic reactions*. To accomplish this, the Lipshutz group has introduced the concept of “designer” surfactants that enable key transition metal-catalyzed cross-couplings.



Brian M. Stoltz was born in Philadelphia in 1970. After spending a year at the Ludwig Maximilians Universität in Munich he obtained his BS in Chemistry and BA in German from Indiana University of Pennsylvania in 1993. He then earned his Ph. D. in 1997 under the direction of Professor John L. Wood at Yale University specializing in synthetic organic chemistry. Following an NIH postdoctoral fellowship in the laboratories of Professor E. J. Corey at Harvard University (1998-2000), he joined the faculty at Caltech in 2000 where he is currently Professor of Chemistry. His research focuses on the design and implementation of new synthetic strategies for the synthesis of complex molecules possessing important biological properties, in addition to the development of new synthetic methods including asymmetric catalysis and cascade processes.



John L. Wood was born in 1961 in Keokuk, Iowa. He received a B.A. degree from the University of Colorado in 1985 and a Ph.D. from the University of Pennsylvania in 1991 under Amos B. Smith, III. In 1991 he moved to Harvard University as an American Cancer Society postdoctoral fellow and continued studying natural products synthesis in the laboratories of Stuart Schreiber. He joined the faculty at Yale University in 1993 as an Assistant Professor and was promoted to Full Professor in 1998. In 2006, Professor Wood moved from Yale to join the faculty at Colorado State University as the Albert I. Meyers Professor of Chemistry. In 2013 Professor Wood moved to Baylor University where he is the Robert A. Welch Distinguished Professor of Chemistry and a Cancer Prevention and Research Institute of Texas Scholar. Throughout his independent career, Professor Wood’s research has focused on the development of strategies and methods for the synthesis of pharmacologically interesting natural products.



Steven A. Wasserman is a Professor of Biological Sciences at the University of California, San Diego. He earned his A.B. from Harvard University and his Ph.D. from MIT before postdoctoral studies at UC Berkeley. His research focuses on Toll signaling, a pathway conserved from insects to humans for transducing information within cells regulating innate immunity. Using the fruit fly *Drosophila melanogaster* as a model system, the Wasserman research group maps out signaling modules, control circuitry, and effector functions using genetic, molecular, biochemical, and bioinformatic techniques. A research mentor for more than a dozen doctoral students and 50 undergraduates, Steve has received distinguished scholar awards from both the Markey Charitable Trust and the David and Lucille Packard Foundation, as well as a Distinguished Teaching Award for undergraduate teaching. He is also a coauthor of Campbell Biology, the most widely used introductory college biology textbook.