

Dr. Frank Creegan – Remembrance

We the Chemistry class of 1971 on learning of the illness and then passing of our professor, mentor and friend, Dr. Frank Creegan, felt that saying goodbye was not enough. We wanted to share with our Washington College family the man we knew for over 50 years. Frank Creegan, Terumi Shigematsu, Ed Schulman, and I started our journey together at Washington College on a September day in 1967. George Williams followed us, transferring in the following year. At some point in the fog of history Frank dubbed us the “Fab Four.” We’ll leave it to you to figure out why.

Ed

I used to endlessly entertain my classmates with my imitation of all the WC Chem professors, Frank (Creegan), Joe (McLain), and John (Conkling). In my imitation of Frank, I emphasized his saying the word “bond”, as in “chemical bond,” over and over and over, in his Lowell Massachusetts accent. They still ask for it.

In Frank’s case, that human “bond” was lifelong. The Chemistry majors of the class of ’71 idolized Dr. Frank Creegan. We would sit in astonishment of his lecturing for an hour without pause and without notes. His command of chemistry seemed limitless. How could one individual know so much in his field, I wondered?

At the Washington College graduation in May 2022, I was the inaugural recipient of the John A. Conkling Award for Excellence. Frank nominated me which I considered another honor. In my acceptance speech, I suggested to the faculty that your students are always watching you. You may not realize it. They discreetly watch your mannerisms, humanity, how you live your lives, commitment to family, students, field of expertise, on and on. In a sense, we all remain “students.” We remain vigilant. We are all watching. Why do we watch so closely? We seek mentors.

Frank easily checked all the boxes and became that lifelong mentor to me and all my ’71 Chemistry classmates. Contact with us and mentorship did not end at graduation. Frank brought me back to lecture to chem majors, and for decades, encouraged me and followed my research. Sadly, he even showed us mentorship, strength, and courage in his final email to us in February 2024, detailing his unsuspected health struggles a few months before his death.

In my long career in clinical practice, teaching, and basic research, I sought to emulate Frank. His influence was profoundly “in my head.” In medical school his freshly felt influence propelled me to be the best, and as faculty and professor—to widely be considered the expert in my field. Also, in human interactions, be patient, empathetic, and understanding.

Frank also had a sense of humor. At his 2007 retirement party in the science hall, Frank and Barbara asked me to emcee for his “roast.” They knew I did amateur standup comedy beginning in high school and throughout my career. And roast we did.

I remember one “insult” in particular. I asked people to look at the pictures hanging of the young Frank and then at the picture of the retiring Frank. I said convincingly that as a young man he proudly wore a toupee (he did not). The pictures did show hair at age 30! I expected Frank to throw a pie in my face. No one laughed harder than Frank (Barbara also).

Frank was and will always be one of my mentors, whether academic or ethical. He was inspirational. Even though, as the saying goes, he is now in heaven's organic lab area, I still maintain that “bond” with Frank. It is unbroken. He will be missed by the WC community and profoundly by me and the “Fab Four,” our Class of ’71 Chemistry family.

Del

One story stands out in my memory. "It was the best of times, it was the worst of times," it was the fall semester of 1969, and I was beginning the most challenging semester of my college career. It was also fall of that year that colleges and universities across the US erupted to protest the war in Vietnam. College students protested, petitioned, educated and otherwise tried to influence the nation's actions. Little Washington College decided to protest by circulating a petition throughout Chestertown (door to door), have a march through the downtown, and then the following day take the petition to Washington the present to our congressmen. I needed to support this movement (as did my girlfriend). We decided to circulate the petition as well. But I had one MAJOR conflict – Organic Chemistry was at 8:30 AM that morning (you did not cut Creegan's class EVER). After a lot of soul searching, I decided I could copy the notes from my frat brother George and beg forgiveness from Dr. Creegan.

Our experiences that day, I'll save for another time. I arrived back on campus about 3:00 PM and went to the seminar room (chem majors' gathering place) to meet George and get the notes. At that moment, Dr. Creegan walked briskly into the room, lab coat flying, said hello to the folks in the room and then looked very seriously at me, I took a deep breath and readied my mea culpas. "Del, get your notebook out," he said. When I was ready (of course I had my notebook), he proceeded to give me the entire lecture I had missed that morning. When he had finished, we chatted for a bit. He took out his wallet and showed me his SNCC card, smiled and left the room. Student Non-Violent Coordinating Committee (SNCC) was one of the principal organizers of the student protests. This was the first of many occasions where Frank showed the depth and layers of personality. Looking at the many pictures of his life, you will see along with the silly hats, his raised hand with the victory V. That "V" was the peace sign students and protesters shared during that time. I will miss him greatly.

Del Boardman
8/07/2024

Terumi

I am one of four chemistry majors of the class of 1971. We are so proud to be Dr. Creegan's first organic chemistry students at Washington College. When we took his organic chemistry classes in 1968-1970, who could have imagined that the friendship between Dr. Creegan and us could last for more than half-century? Yes, we are exceptionally fortunate to have his wonderful mentorship and friendship for 56 years until his departure from this world in May of 2024.

Going back to a snowy day in 1968, while no one was walking on the campus, I decided to go to the Dunning Hall to see if Dr. Creegan was there. I was studying for an upcoming exam and had many uncertain points. I brought a 4-inch-thick Morrison and Boyd, a textbook of organic chemistry, with all my questions marked. I was so happy to find him in the lab, and I asked if I could ask questions. He said "sure," and I started asking questions one-by-one. He answered my questions promptly and thoroughly, even writing diagrams on the white board. At the end, he asked me, "are there any more questions?" I said "no", and I looked at my watch. To my stunning surprise, three hours had passed. Dr. Creegan never rushed me or showed any sign of irritation and answered my last question in the same calm manner he answered my first question. He was a very patient, creative and kind teacher.

All four of us enormously respected him as our professor, but he was only 29 years old at that time! I never imagined that he would offer to be my Uber man 50 years later. When I visited Chestertown in 2019, I asked him by email if there was Uber in Chestertown. He immediately

replied “I am your UBER man!!! 😎”, pasting a smiling face with a pair of sunglasses on his email. Yes, Frank, the UBER man, gave me an hour ride to an Amtrak station from Chestertown, saying “how many times do I get to talk with you?” He even carried my suitcase up the staircase for me at the train station.

As I recall, he had a unique style of teaching chemistry. One time, he drew an organic compound and another small chemical on the blackboard. He asked what product would be formed when the two reacted. Dr. Creegan next zoomed his attention to a single student, who was in the process of actively thinking, drawing something in the air with his pen and mumbling. Dr. Creegan approached closer to this student. In the meantime, another student who was ready to propose a potential product raised his/her hand. However, Dr. Creegan kept standing silently beside the first student. After about five to 10 minutes, this student finally started proposing to Dr. Creegan how electron might move step-by-step during the reaction, leading to the final product! “Yes, it is correct!”, said Dr. Creegan. On May 8 of this year, at the reception following the funeral mass of Dr. Creegan, I shared this episode with Dr. Leslie Sherman, Chairman of Department of Chemistry. She said, this is a good example of what Dr. Creegan referred to as “Creative Learning.” She said it was surprising that he even practiced it for his first class he taught at Washington College! I did not know any better then, but certainly he was a special teacher—he was creatively and intuitively designing a strategy on how to encourage his students to actively think in order to learn at a deeper level.

From 2003 to 2004, Dr. Creegan and his wife, Barbara, had a sabbatical leave at University of California, Berkeley. At that time, I and my husband, Yoshinori Kohwi, had faculty positions at Lawrence Berkeley National Laboratory in Berkeley (LBNL). So, we had a nice reunion of the chemistry class of 1971 in Berkeley and had a memorable walk together in the Muir Woods National Monument (full of tall redwood trees). In Berkeley, Dr. Creegan saw a huge poster displayed on the side of the shuttle bus of LBNL, busy connecting campuses. This poster had an image of a protein SATB1 that we found, with the word “Did You Ever Wonder?” along with a photo of me working at the lab. To my surprise, he obtained the original digital file of this poster from LBNL and displayed it as an 8-ft long banner on the staircase wall of John S. Toll Science building when he returned to Washington College in 2004. In August of 2023, Dr. Creegan emailed me that after 20 years the original banner needed to be replaced by the new banner that would be made to last for very long time. He did it at his own expense and even sent me photos of each step as it was mounted on the wall—apparently, he was there witnessing the entire procedure and taking pictures for me.

In December of 2023, only five months before his passing, in the Chemistry Department Newsletter (Washington College *Chimica Acta*), Dr. Creegan included a section under “ALUMNA SPOTLIGHT” about the annual students’ Summer Internship at our laboratory at University of California San Francisco (UCSF). We have been accepting students from Washington College every summer for research experience for the past seven years. He personally contacted some of the past students to write about their experience with us. Reading their stories made us so happy and proud of our students. This was only two months before his serious illness was discovered. I do not know any other cases that a professor keeps promoting his/her students for more than 50 years!

Immediately after receiving an email from Dr. Creegan sent to all four of us informing us of his serious health issue, I called him (February 19, 2024) and I was able to talk to him, not knowing that it would be our last conversation. He said he never realized he had cancer hiding in his body, and he thought he had a flu for about 2 weeks. He was planning to update us by email about the treatment—but unfortunately due to the sudden decline of his health, he did not have a chance to do so. We miss him so much and we all realize how precious he was for our careers and lives.

We have now lost all three chemistry professors at Washington College, Drs. Joe McLain, Frank Creegan, and John Conkling. We admired them so much—they were our mentors who taught us how important it was to keep wondering to understand the mechanisms. I am telling my own students “You’ve got to think”, referring to my own chemistry professors at Washington College. Their beautiful souls always remain in our hearts and will be passed on to the future generation.

In closing, I treasure the strong bonds of friendship among the four of us (the Chemistry Class of 1971) brought together by the mentorship of Drs. McLain, Creegan, and Conkling. I still remember our long hours of working in the lab and marching down together the long path from Dunning Hall to return to our dormitories every midnight. We still talk about our loving memories of all three mentors at Washington College.

Terumi Shigematsu, 1971 (current name: Terumi Kohwi-Shigematsu, Ph.D.)
Professor in Residence
University of California San Francisco

George

I met Dr. Creegan in 1969 as a transfer student to Washington College. Previously a Math major, I changed to Chemistry, optimistically (perhaps foolishly) planning to graduate on time in 3 years. My first few classes of Organic Chemistry with Dr. Creegan, my scariest college experience to date, made me seriously question my ability to achieve those goals. Frank was intense, had very high expectations, moved at a lightning speed rapidly filling the chalk board and would erase it twice as fast, challenging students to keep up with his pace. Despite his frantic push to move through the complicated material, he never left anyone behind. He would regularly stop to make sure everyone grasped the concept before launching into the next topic. There were four Chemistry majors in Dr. Creegan’s first Chemistry class (first to start with organic and complete the degree with him), and as the least of the four of this very talented and ambitious group, I sincerely appreciated his energy, and his passion for teaching. I was able to graduate in three years as a Chem major, thanks in large part to Dr. Creegan.

Upon graduation and serving three years in the Navy, I entered Dental School, and I credit Dr Creegan’s preparation for helping me successfully graduate with my DDS. I went on to become a faculty member teaching dental students for 40 years, always striving to emulate Dr Creegan’s qualities of compassion, drive and commitment to his students.

I will cherish the memories of Dr. Creegan and his wife Barbara, two years ago hosting the four of us, his first class, 51 years after our graduation. Frank and Barbara brought us together, entertained us, made great crab cakes and created a memorable weekend, a fitting tribute to his lasting influence on us all. Thank you, Frank and my great classmates of ’71.

George Williams DDS, MBA
Professor of Dentistry
Class of 1971



Dr. Frank J. Creegan and his wife, Barbara, at the 51st reunion in Chestertown, 2022.

Addendum

The following excerpt is a quote from the first issue of Washington College Chemica Acta by Dr. Leslie Sherman, chair of the department of Chemistry. Washington College:

SOME HISTORY:

In 1971, Professor Joe McLain...the then Chair of the Department...appeared before the Committee on Professional Training (CPT) of the American Chemical Society (ACS) to forcefully **AND** successfully argue that, despite the ACS requirement that **four tenured faculty** were necessary to provide the breadth and depth of a balanced chemistry curriculum, Washington College had in himself, Frank Creegan, and John Conkling, three Ph.D.s who were more than capable of providing an educational experience that would match **OR** exceed that provided by colleges and universities, with four or more faculty members, found on the ACS list of approved schools.

With the utmost humility, I'd like to introduce the first class to study chemistry solely under the mentorship of those exceptional professors. After 53 years we are still working to live up to Joe's vision, Frank's expectations and John's passion. We all consciously tried to live up to their expectations.

1971 graduation



2011 40th reunion



2022 51th reunion



Brief profiles for the four chemistry majors of the Class of 1971.

Edward Schulman

Dr. Edward Schulman, Professor Emeritus of Medicine at Drexel University College of Medicine (DUCOM) is an internationally recognized researcher, educator, and clinician with backgrounds in both Pulmonary/Critical Care Medicine and Clinical Immunology and Allergy. He served as the Director of the Division of Pulmonary, Critical Care and Sleep Medicine at Hahnemann/DUCOM for 27 years.

He published the seminal description on the synthesis and release of the primary cyclooxygenase products in the human lung. Since the early 1980s his research focused on the human lung mast cell, becoming the first to isolate and purify the human mast cell, the central cell of human allergies, allergic asthma and anaphylactic shock. He has published over 250 peer-reviewed articles, reviews, abstracts and book chapters on the MC and airway reactivity. Most recently (February 2023), he edited the book "Allergy and Pregnancy" for Elsevier Publishers. Dr. Schulman has been an established NIH- and industry-sponsored research investigator of fundamental mechanisms of HLMC biology, asthma and airway disorders. As an innovator, he holds patents related to novel mechanisms of MC activation and their control.

Dr. Schulman received his MD from Jefferson Medical College, where he was inducted into Alpha Omega Alpha and served as President of the Hobart Amory Hare Internal Medicine Honor Society. He completed his internship, Junior and Senior Residency in Internal Medicine at Duke University Medical Center, a Clinical Fellowship in Pulmonary Diseases at the Cardiovascular Research Institute at the University of California, San Francisco, and a Fellowship in Pulmonary Diseases and Clinical Immunology (Allergy) at the Johns Hopkins School of Medicine.

Dr. Schulman lectures regionally, nationally, and internationally on mechanisms of allergy and asthma, mechanisms and control of MC activation, and pathophysiology and treatment of asthma and COPD, and urban asthma epidemiology.

From 2003 through 2016, Dr. Schulman was named to the "Best Doctors in America." For multiple years he was named to *Philadelphia Magazine's* list of "Top Doctors." His breakthrough research on the human lung mast cell earned him Top Research Paper honors at the 1981 American College of Chest Physicians Annual Assembly. He received a Clinical Research Scholar Award from DUCOM in 2006 and John DiGregorio MD, PHD Outstanding Teacher Award in 2014. He received the inaugural John A. Conkling, PhD Distinguished Award for Excellence at Washington College's 239th Commencement in May 2022.

A Chemistry major and honor society inductee, Dr. Schulman served as News Editor of *The Elm*, President of the William James Philosophy Forum both junior and senior years, First Chair of the Washington College Concert Band, and member of the tennis team. He also performed stand-up comedy as a Spring Weekend Entertainer and was a member of the SGA.

Professor Emeritus of Medicine
Drexel University College of Medicine.

Terumi Shigematsu (Terumi Kohwi-Shigematsu)

She joined Washington College in 1967 planning to major in biology as she was interested in mechanisms of life. After completing an introductory course in inorganic chemistry, given by Dr. Joe McLain, who was Chairman of Department of Chemistry. Dr. McLain convinced her to major in chemistry instead. He said "Terumi, you've got to think! If you want to study biology, you've got to realize that all biological materials are made of chemicals. You must understand how chemicals make bond and how they dissociate." She was fully persuaded by him that these are fundamentally important things to understand biology. She took his advice, mentored by three outstanding chemistry professors, Drs. McLain, Frank Creegan, and John Conkling, and graduated as magna cum laude with a B.S. in Chemistry. She continued her graduate program in Physical Chemistry at The Johns Hopkins University. However, after passing the Ph.D. oral examination in honor, she decided to leave chemistry and switched back to biological sciences at the University of Tokyo and finished her Ph.D. in 1978 in biochemistry. She pursued her academic career in basic medical science in the United States. Her research in close collaboration with her husband, Dr. Yoshinori Kohwi, specialized in analytical chemistry, has been supported by grants from the National Institutes of Health for 39 years as of 2024, including MERIT Awards twice from the National Cancer Institute, the US Department of Energy, and other private foundations.

Nominated by Dr. Creegan, in 2002, she was awarded the Alumni Citation, the highest honor the Washington College Alumni Association can bestow on its members, for "excellence in scientific research." She was inducted as an inaugural member of the Theta of Maryland Chapter of Phi Beta Kappa in February 2007. She is an elected Fellow of the American Association for the Advancement of Science (AAAS).

Her entire research stems from the first major question she raised during her graduate program. She wondered whether the genetic material (DNA) can ever adopt non-canonical (non-B form) structures in cells. With Dr. Kohwi, they devised a chemical method to detect and identify sequences that adopt such non-double stranded form of DNA inside mammalian cells. This was highly controversial at that time as people did not believe DNA structures other than the Watson-Crick double-stranded structure. This discovery of non-B form sequences, termed base-unpairing regions (BURs), led to identification of a protein SATB1 that specifically recognize BURs. As senior scientist at the Lawrence Berkeley National Laboratory, Dr. Kohwi-Shigematsu investigated the intricate mechanisms by which an alternative DNA structure is recognized by specific nuclear proteins to trigger the onset and subsequent progression of certain deadly diseases. In her new position at the University of California, San Francisco (UCSF), her research team is continuously addressing how SATB1-BUR interactions organize entire human genome to change cellular functions, such as cancer metastasis and T cell development.

Terumi Shigematsu, 1971 (current name: Terumi Kohwi-Shigematsu, Ph.D.)
Professor in Residence
University of California San Francisco

George Williams

George Carroll Williams graduated as a chemistry major from Washington College in spring 1971 during the time of the active Vietnam draft. George enlisted in the Navy and served three years on board the aircraft carrier The Franklin D Roosevelt, CVA-42, spending most of this time deployed in the Mediterranean (including a solid year overseas in 1972). While on the carrier he developed an interest in Dentistry after receiving dental care onboard ship and subsequently spending many hours in the dental clinic. After taking the DATs on the ship, he applied to University of Maryland Dental School, was accepted and entered school in the Fall of 1974.

George maintained a busy schedule including various committees within student government, President of Student Government his senior year as well working part time outside school to support his dental education. Graduating from Dental School in 1978, George worked as an associate in private practice until Fall of 1979, at which time he joined the Faculty at his alma mater becoming a clinical instructor at University of MD Dental school/Baltimore College of Dental Surgery, in the undergraduate clinic. He maintained his private practice skills at a satellite clinic which he opened and managed, known as Harbor Health Care Center, located at Baltimore's Inner Harbor. The location was a multidisciplinary approach focusing on geriatric health care and served as a training site for senior dental students as well a faculty practice office. The management demands of running clinical operations at the dental school and the Harbor Health Care office prompted his return to advanced education. George completed his Executive Healthcare MBA at Loyola University of Maryland in 1984. Roles at the dental school included clinical teaching and management in multiple clinics at the dental school including undergrad, postgrad and faculty practices. The last 10 years of his career he also managed satellite clinical sites in underserved areas in the state of Maryland. He worked with senior dental students rotating through the clinics and worked with emphasis teaching Oral Surgery skills. In 2004 George was awarded the Faculty Service Award for Excellence in Teaching and Professional Demeanor. George retired as an associate professor after 40 years of teaching. He continues to be fondly remembered as a great mentor and friend to the dental students he taught.

George Williams DDS, MBA
Professor of Dentistry

Delos (Del) Boardman

Reading the accomplishments of my friends above is really humbling. I've always thought of the class of 1971 as "three Docs and Del". As you can see, I'm writing this in the first person. I'm not looking for a job. I'm talking to real people. In that vein I am not going into detail about my 50-plus years in the chemical business. I'd rather use this space to share with you what Joe and Frank and John taught me. First, not all are destined to get a PhD or MD. I got my own advanced degree on the machine floors of Coosa Pines, Alabama; Ticonderoga, NY; Iwakuni, Japan; Ludwigshafen, Germany and more than 100 other paper mills and pulp mills all over the world. Following Joe and Frank and John, I worked for seven different companies and my professors were 'Wild Bill' Craig, Carl Elmes, 'Slim' Thompson, Hans-Jurgen Dagen, Kai Ishikawa, and Allen Bowdler. Some, but not all of these instructors had PhDs, but they were all experts in their field. Bill Craig taught me that being a 'peddler' was a badge of honor because you know the chemistry but can also win the \$5 bet with the crew that it will perform well. Joe never let his PhD be known to the guys in the factories he visited because he knew they wouldn't trust him. You must show that you know your way around their world. I learned my real talent was to translate the complicated chemistry into language that makes sense in the field.

Frank Creegan taught me so much. Here's one of many things that resonates. We had done poorly on an exam so Frank shared that he once got score of less than 40 in grad school. He bought a one-way bus ticket home. It turned out that he got a B when the curve was applied. If you are not failing, you're not learning. Frank believed that Washington College gave us the foundation for a lifetime of learning and discovery. John Conkling showed me good rapidly becomes fair, you must keep improving just to keep up. Carl Elmes taught that friends buy from friends, be polite, remember their name, ask about family. Your product might not work but do not disappoint a customer. If you're not 20 minutes early, you're late. You already know what you're going to say, what your customer says is gold.

The foundation of chemical knowledge I got from Washington College and Joe and Frank and John gave me the skill to convince the best chemists in the world not only that I understood the concepts that they were proposing but gave them the confidence that I could sell it. I have worked in the board rooms and paper mills in the US, Canada, Scandinavia, Europe, China and Japan. It has been a fantastic ride.

Delos Boardman
Director of Sales and Marketing (Retired)
Harima Chemical - North America