

"Prove all things, hold fast that which is good"
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Joseph Emory Coleman

October 11, 1930 - June 28, 1999

Service of Remembrance

September 21, 1999

Joseph Emory Coleman

Prelude

Mr. Thomas Murray organist

J.S. Bach Praeludium in B minor
J.S. Bach In peace and joy I now depart
J.S. Bach Sleepers, Wake
J.S. Bach Sheep may safely graze

Introduction

Dr. William Konigsberg

Speakers

Dr. Leon Rosenberg
Dr. Meredith Applebury
Dr. Peter Lengyel

Solo for Flute

Olivier Nowak

J.S. Bach Sonata in A minor
 Sarabande
 Bourree

Speakers

Mr. Patrick Nolan
Dr. Joan Steitz

Hymn

“Once to Every Man and Nation”
The congregation
Dr. Deiter Soll, Leader
(words to be found on back of program)

Images

Images from the life of Joseph E. Coleman
A presentation by Michael, Samuel, and Julia Coleman

Postlude

Mr. Murray
J.S. Bach Praeludium in E-flat

Once to Every Man and Nation

Once to every man and nation Comes the moment to decide,
In the strife of truth with falsehood, For the good or evil side;
Some great cause, some new decision. Offering each the bloom or blight,
And the choice goes by forever 'Twixt that darkness and that light.

Then to side with truth is noble, When we share her wretched crust,
Ere her cause bring fame and profit, And 'tis prosperous to be just;
Then it is the brave man chooses While the coward stands aside.
Till the multitude make virtue, Of the faith they had denied.

Though the cause of evil prosper, Yet 'tis truth alone is strong;
Though her portion be the scaffold, And upon the throne be wrong,
Yet that scaffold sways the future, And, behind the dim unknown,
Standeth God within the shadow Keeping watch above His own. Amen

Images
and
Remembrances

Dr. William Konigsberg, Introduction

We join together, today, to mourn the loss of Joe Coleman and to celebrate his life. Joe and I joined the Biochemistry Department at the same time in the summer of 1964. Our labs were near neighbors for about 30 years and we became good friends and colleagues as our scientific interests began to overlap. Joe was always available and ready to discuss anything and I frequently sought his advice and counsel which he generously provided. His range and depth of scientific knowledge were enormous, as was his insight into human affairs. He was a careful and critical observer of people and their behavior. Joe had high standards and was not reluctant to raise his voice when he thought that outrageous policies were being advanced or when he felt that people were being treated unfairly. Joe was scrupulously honest and direct. I knew I could always get a straight answer from him and I appreciated that very much. When problems come up now, I often find myself thinking "What would Joe have said or done about this."

Joe was a singular spirit and his death leaves a void, which on a personal level, can never be filled. He was devoted to his family, his students and postdoctoral fellows, and went to extraordinary lengths to help them in any way possible. His deep concern for our department and for the University was a distinguishing feature of his career and his life at Yale. Joe will be remembered here not only for his remarkable contributions to teaching and research, but also for his departmental leadership and his contributions on so many levels to the life of this University.

There is a poem, by Elizabeth Bishop, that captures some of the sense of loss that I feel with Joe's passing.

ONE ART

The art of losing isn't hard to master;
So many things seem filled with the intent
to be lost that loss is no disaster.

Lose something every day. Accept the fluster
of lost door keys, the hour badly spent.
The art of losing isn't hard to master.

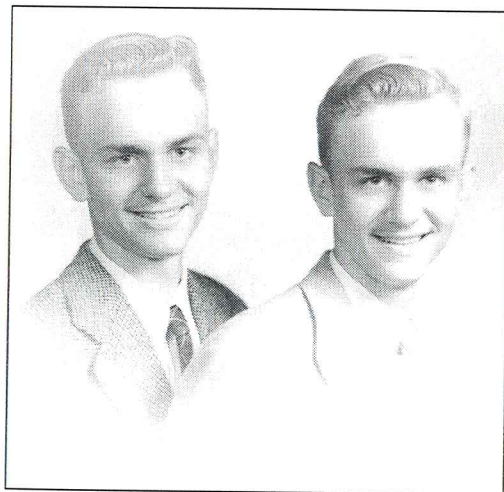
Then practice losing farther, losing faster:
places, and names, and where it was you meant
to travel. None of these will bring disaster.

I lost my mother's watch. And look! My last, or
next-to-last, of three loved houses went.
The art of losing isn't hard to master.

I lost two cities, lovely ones. And vaster,
some realms I owned, two rivers, a continent:
I miss them, but it wasn't a disaster.

—Even losing you (the joking voice, a gesture
I love) I shan't have lied. It's evident
the art of losing's not too hard to master
though it may look like (Write it!) like—disaster.

Elizabeth Bishop



Dr. Leon Rosenberg, Speaker

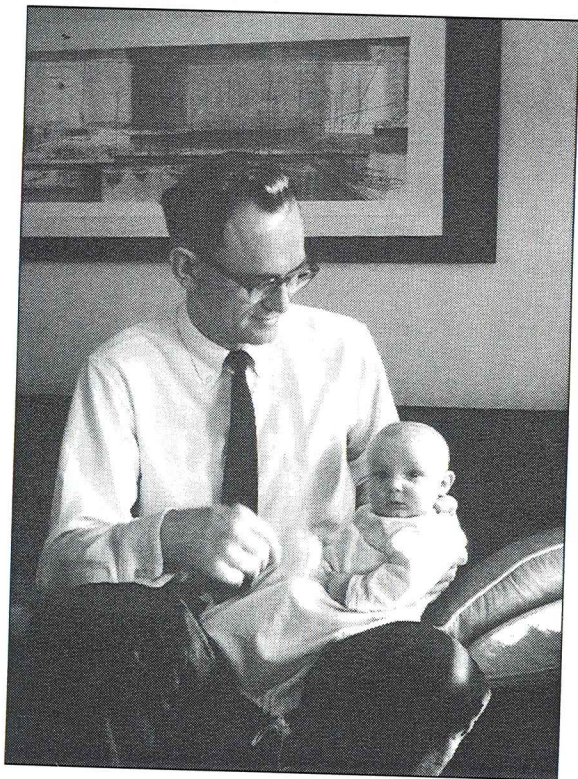
A few months after I joined the Yale faculty in 1965, Joe Fruton called and asked if I might like to teach a course in the Biochemistry Department with another new faculty member named Joe Coleman. I said "yes" and quickly made arrangements to meet Joe. And so began a 35-year long friendship with the principled, accomplished man whose life we memorialize today.

Joe and I shared the belief that biochemistry could be effectively taught to medical students using, as text, specific human disorders such as sickle cell anemia, hemophilia, gout, and diabetes. This was to be serious biochemistry, not a watered-down facsimile. We named our course "Biochemical Mechanisms of Disease," wrote and rewrote the syllabus, which never quite became a book, and taught together for the next 25 years. Our relationship was remarkably harmonious. (Some who knew both of us might say surprisingly harmonious.) We liked and respected each other and agreed on almost everything. It was a pleasure to go into his office, close the door, talk about the course, and gossip about all kinds of Yale things and Yale people. Joe was direct – you might even say homozygous direct. He was also homozygous honest, sincere, smart and responsible. His passion for excellence – for doing the right thing – in his research, his teaching, his department, and his university was unequalled in my experience. Few people – except Phoebe and their children – lived up to his expectations. That meant that he was often disappointed by the direction of the school or the behavior of colleagues. But he never gave up on anything or anyone, and always gave more than his fair share – as a teacher, a collaborator, a chair, or a confidant.

During the years I was Dean, Joe and I saw less of each other, but that didn't matter. Whenever we had a chance to talk, it was as if we were assistant professors again without any need to posture or become reacquainted. I knew I could depend on him to tell it like it was, when he agreed with me and when he didn't. I could count on his integrity and candor, rare qualities that are priceless to anyone trying to lead a large organization.

I saw Joe for the last time this Spring. He'd had his surgery and chemotherapy and was in the throes of radiation treatments. We sat in his living room and he looked quite fit, although the baseball cap he wore with the bill cocked over his right brow seemed a bit out of character. We talked about his brain tumor, its histology, the care he was receiving, and – what else – Yale: the medical school; the dean; the president; MBB. He

was the same Joe and he insisted that he'd be teaching this Fall. A couple weeks later, he called me and said he'd seen the website for a course called "Biotechnology and Its Social Impact" that I'm now teaching at Princeton. He wondered whether I'd like to join him in teaching something similar for Yale undergraduates. "Great idea," I said and I believed we would come full circle to our Yale roots. It won't happen except in my mind's eye where it will reside with all the other positive thoughts and feelings I have for Joe – gratitude, admiration, trust and love.



Dr. Meredith Applebury, Speaker

The memories I wish to share with you are what I call the Beginnings, the start of Joseph E. Coleman's career at Yale. Dr. Coleman, as we called him out of deep respect, had just come from Harvard Medical School. He was what Harvard calls the "triple threat:" a superbly trained clinician at the head of his class, a respected research scientist with a new Ph.D. at his disposal, and a true teacher. It was his tales of metal ions, carbonic anhydrase, and the promise to enter the inner structure of proteins with biophysical chemistry that were attractive.

In early 1965, Maureen Harris and I became Coleman's first graduate students. Maureen undertook studies of protein biosynthesis and I started examining the role of metal ions in structure and function of alkaline phosphatase. And so began a long and distinguished career of research teaching. We were joined in the next year by Harry Duckworth and Jim Maynard. We four were a ragged lot, untutored, unskilled, and I am sure regarded skeptically by the Committee on Admissions as of questionable potential, the unfortunate result of a low cut-off for those years' applicants. And yet Maureen, with a second degree in Epidemiology is Director of the Diabetes Group at NIH, Harry, Chairman of Chemistry at Manitoba, Jim, a financial advisor for Biotechnical investments, by far the most financially solvent of us all.

In the years to follow, Joseph E. Coleman became the teacher, the scholar, and the mentor, worthy of this nation's highest praise. These three traits were somehow distilled to sustain my own path in science through these years. It is a mystery how teaching succeeds, some elixir of example and self, a willingness to share the experiment, to allow the pupil to discover and fail, to support the student to struggle and succeed.

Teaching: In the early years, Joe Coleman was neither calm, nor yet hardened to academia's continual turmoil. With affection, we called him "the great white bird", as he flew down the hall of 333 Cedar Street, his white labcoat flapping. But when he came back to the lab, his fraught melted into a ligand field for zinc, the beauty of a copper-protein spectrum, and the metal-ion dependence of unfolding-refolding of alkaline phosphatase. He taught by example; for then, and I believe throughout his career, he worked in the lab. He was available while running circular dichroic spectra, or extracting metal ions from buffers. He taught the essence of science: exploring, discussing, tinkering, and discovering – what is slowly eroded for most by administration, management, grantsmanship,

raising money. The return to the lab is the peace for the soul.

Scholarship: Joe Coleman's own scholarship set a standard for us. We started with protein globs, somewhere in which zinc, magnesium, copper, were imbedded. But Coleman was a resource for small metallo-organic structures; he had a sense for metal roles in structure, in catalysis. Even in the few years we were at Yale, we watched the crystal structures of carbonic anhydrase, alkaline phosphatase come to life. In the next thirty-five years, Joe Coleman would build and master a field – a field that changed from a “unique role” for metal ions, to an almost “ubiquitous role.” Zinc would show amazing feats of organization, like binuclear zinc, trios of zinc, quartets of zinc that we never imagined. If there is a joy to aging, it is the assembly of knowledge, the acquisition of information that enables you to perceive growth in science. Joe Coleman delighted in the unfolding coordinates, arguing for mechanism, offering a bit of judgement, and teaching us scholarship – his world of metalloproteins.

Mentoring: And I stand here to represent the flux of students and postdoctoral trainees, which Coleman mentored, as they call it these days. The older word is simply advised. Conscious or unconscious, he offered a form of silent encouragement. This real, but unspoken support gave a length of tether and fostered independence. High standards were there, but it was up to each of us to develop our own course. Years might pass, but then contact and even a directive would come, if advice were sought. With time comes the realization, how rich was this support, this training, which drove us on.

I speak for the beginnings, and have the experience of time. Out of Joe Coleman's lab came Professors, Associate Professors, and Assistants Professors in Biological Sciences, Biotechnical Officers, Chairman of Departments, a Director of an Imaging Center, Dean in a Medical school, and on. The record stands self-evident.

To Phoebe Coleman, Michael, Sam, and Julie, the Faculty of Yale University, and my own colleagues, the students of Joe Coleman:

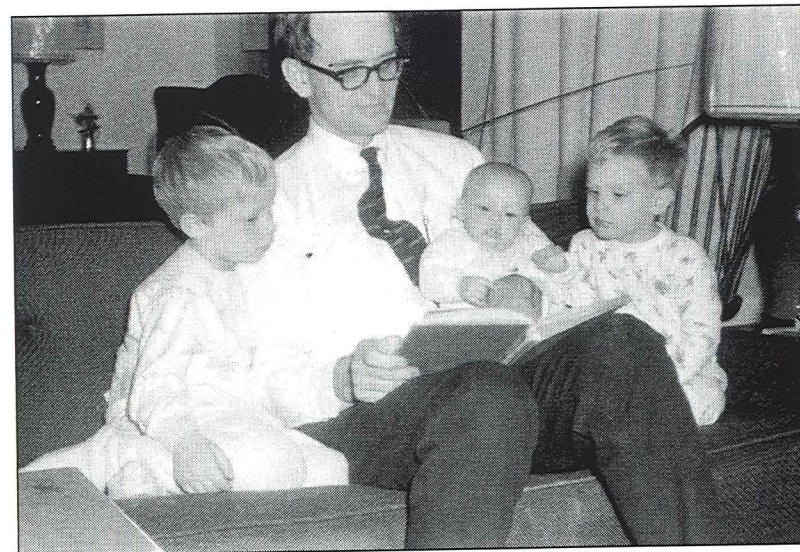
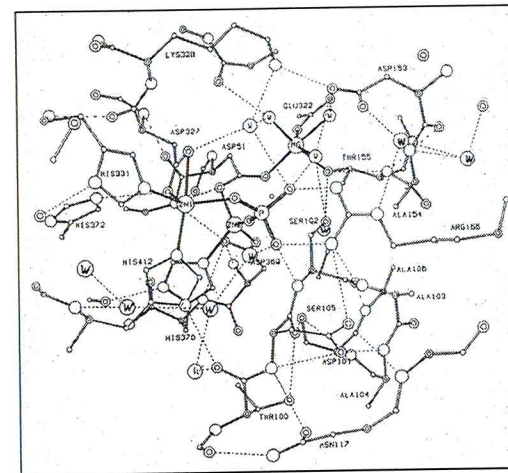
It is easier to end with someone else's words, and I take the last line of Brahms Requiem, itself taken from Revelations,

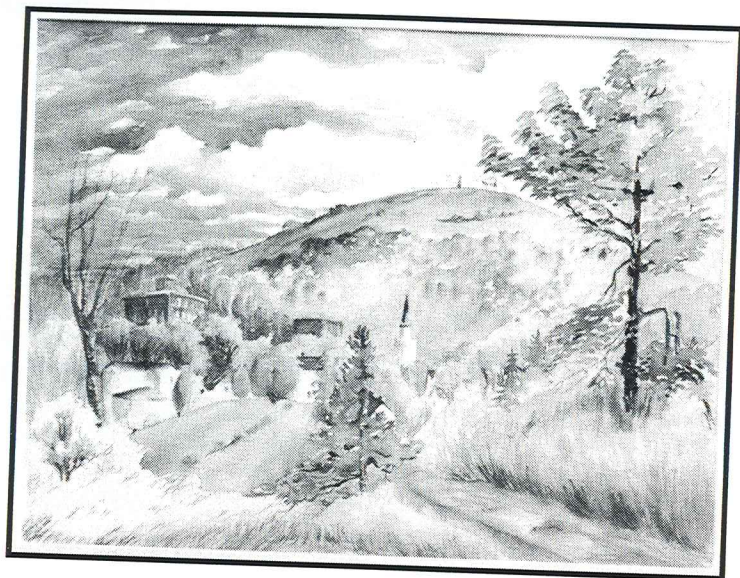
“Selig sind die Toten. Ja, ... daß sie ruhen von ihrer Arbeit; denn ihre Werke folgen ihnen nach.” †

If I may paraphrase, May you rest from your work, Joe Coleman, for your

science follows on.

† Selig sind die Toten, die in dem Herrn sterben, von nun an. Ja, der Geist spricht, daß sie ruhen von ihrer Arbeit; denn ihre Werke folgen ihnen nach. (Rev. 14:13, last verse of Brahms Requiem)





Dr. Peter Lengyel, Speaker

Thirty five years have passed since Joe Coleman and I became part of the Yale faculty. I got close to Joe, however, only when, about a dozen years ago, I joined his course he called "Molecular mechanisms of disease." This has been taken by first-year medical and MD/Ph.D. students with a strong preparation and interest in biochemistry. With an M.D. from the University of Virginia, a Ph.D. in biochemistry from M.I.T., and a residency and senior residency in internal medicine at the Peter Bent Brigham Hospital, as a background, Joe was eminently capable of organizing and teaching this course. As he indicated in the Introduction to the syllabus that he wrote and revised almost every year, the aim of the course was: "to give the student an introduction to the many correlations that can be made today between biochemistry and the various disease states."

Joe, who was emotionally involved in everything he did, cared profoundly for the course and its students. In addition to giving the bulk of the lectures himself, he used to attend all the presentations by the other instructors, often asking questions and making clarifying comments to assure that the students benefit the most.

Joe suffered his disease with admirable courage, and continued to teach part of the course in spite of undergoing chemotherapy and radiation.

Last week, I went to the Chair office to find the comments of the students to Joe's course and teaching. I would like to conclude by reading a very few of these comments collected during the last fifteen years:

"Dr. Coleman is a very dedicated and considerate professor of MB&B 800. He teaches the course very effectively, making the dry subject (at least, to me) of biochemistry appealing and exciting."

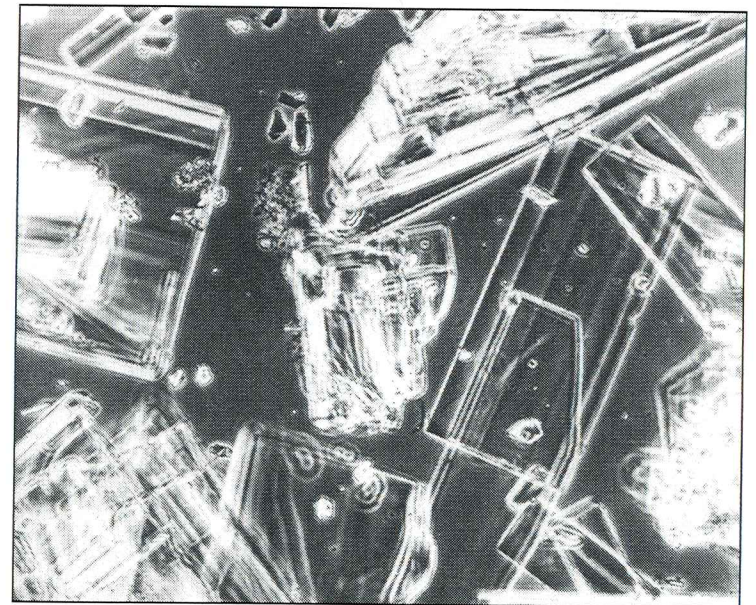
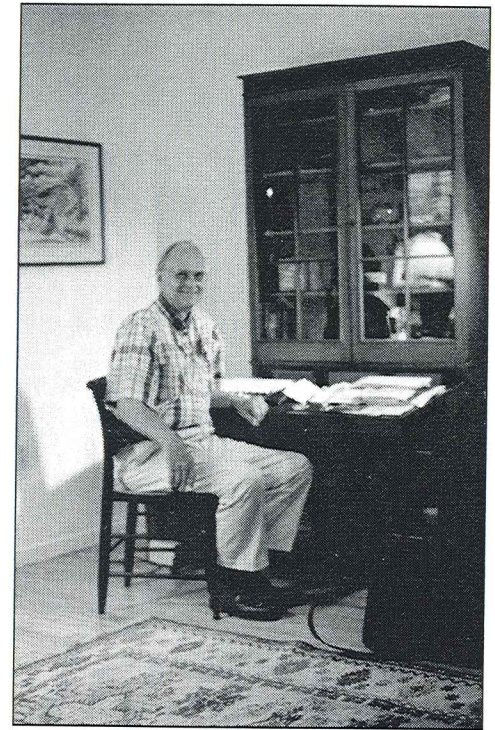
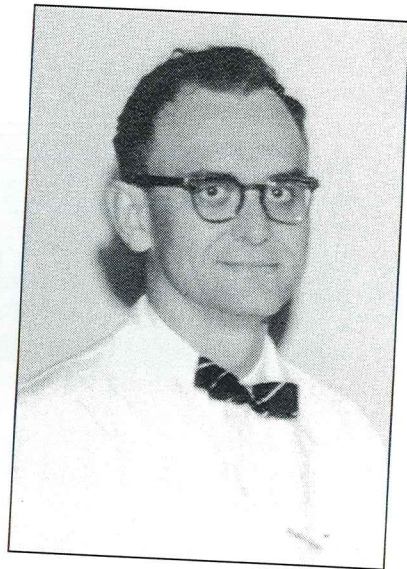
"Dr. Coleman great, humorous, detailed. Made a lot of connections much clearer. The anecdotal style of teaching worked great."

"Dr. Coleman's lectures were fantastic. The information was abundant, but he took the time to make everything clear. The clinical correlations were by far the best part of the course. I loved this course."

"Great course. Coleman phenomenal. He is always laughing, and

loves what he does. Unbelievably knowledgeable and a pleasure to learn from."

So much for the quotes. This is how an educator might wish to be remembered.





Mr. Patrick Nolan, Speaker

My heart felt thanks to Phoebe Coleman for the privilege of sharing with you my memories of Joe Coleman.

In early May 1978, I met Joe for the first time upon interviewing him for the MB&B Business Manager position. Sensing that I was nervous, Joe was very soft-spoken and friendly, taking great pains to make me feel welcome. He described the job responsibilities, and he explained that after I interviewed the other search committee members (Fred Richards, Joan Steitz, and Dieter Soll) he would call me with a decision.

Fortunately for me Joe offered me the job. On July 1, 1978, I walked into Joe's office and must have still looked nervous, as once again Joe made me feel welcome. How quiet my new boss is, I thought. As Joe was the very first Yale faculty member that I met, I remember wondering if all Yale faculty were so reserved. Was I in for a big surprise!

In my first year, Joe asked me to calculate a departmental budget for him to present to the medical school associate dean. After exchanging formalities, Joe presented our budget and argued in support of our position. After Joe finished, the Associate Dean told Joe that he would have to cut our budget. Joe responded: "That's outrageous! That's totally unacceptable!" Joe turned to me and said: "Pat, you had better leave now." So back I went to my office. Later Joe came into my office and shouted: "Idiots! They have no clue! They don't know what's going on in this department. No wonder this place is running amok!" After mustering the courage, I asked Joe what happened. "What happened? I'll tell you what happened! We're getting every dime that we asked for or I'm going to call the president, that's what happened!"

Thereafter whenever I walked into Joe's office I never knew quite what to expect, but I did know that life with Joe was never going to be dull. Soon after our budget meeting, some of our upstairs C-wing neighbors complained about getting sick from foul odors. After months of investigation, physical plant hired a contractor to rip open the C-wing walls and to seal the hallway utility chases. Fortunately Joe Coleman happened to be walking down the hall just as the contractor was to start demolition. "What are you doing with that jackhammer?" Joe asked. "We're sealing the chases, Doctor." "Under whose authority?" Joe asked. "Physical Plant", answered the contractor. "I should have known," Joe responded. "You will do no such thing! Pat, call the physical plant manager

immediately!"

Joe personally inspected the C-wing basement labs and found sinks without traps and broken glass/drain pipes that were the true causes of the noxious air problems. Joe insisted that the contractor responsible for the missing traps and broken pipes be called in to correct the problems at no cost to Yale.

Every winter to cut energy costs in the Kline Biology Tower, the engineering department would turn off the perimeter heating causing frozen pipes and a flood in Tom Steitz' office. Tom would call me and I would call physical plant to no avail. Finally one winter I appealed to Joe for help. Joe immediately called the Provost who called the Engineering Director who ordered that perimeter insulation be installed in KBT. (Of course, on exceptionally cold days Tom still got his feet wet until we moved him to the other side of the building!)

When not fighting to prevent frozen pipes, Joe was working diligently on behalf of our department. As only past and current Chairs can fully appreciate, it takes an enormous amount of time, energy and sacrifice to manage a department like MB&B, while still maintaining an active research operation. Faculty meeting agendas need to be planned, faculty job candidates must be evaluated, departmental budgets need to be analyzed, space planning must be done, and faculty teaching assignments must be made. For a department Chair, the list of things to do is endless. While one's colleagues attend a seminar, the Chair so often must sacrifice research interests for departmental concerns. Joe worked tirelessly on behalf of the department that he was so dedicated to, and that he cared so deeply about.

What Joe cared about most was his family. Phoebe was the focal point of Joe's life, and his best friend. Whenever certain problems confronted Joe, he would often start a sentence with: "Phoebe says..." or conclude a discussion by saying: "I think I'll ask Phoebe about that." Soon I would beat Joe to the punch by suggesting: "You know, Joe, we should ask Phoebe about that, don't you think?" "Good idea!" he would respond! Phoebe, on behalf of the entire department, and especially yours truly, thank you for all the times that you rescued us with your wise counsel whether knowingly or not.

While Phoebe was Joe's best friend and confidant, Joe's children were his source of pride and joy. Like all children growing up, they were also Joe's chief cause of confusion, exasperation, and at times, an empty wallet. Mike, Sam and Julie, while your relationships and adventures perhaps thinned

your dad's hair a bit prematurely, your maturing into adulthood made him obviously proud to be your father.

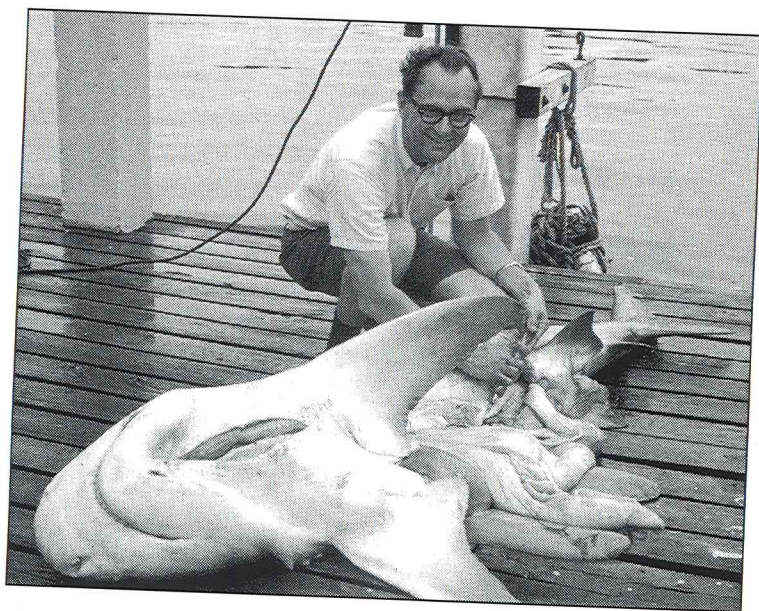
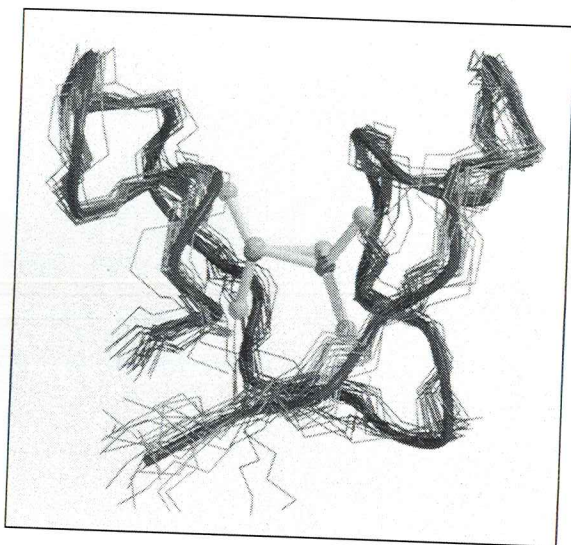
When Joe's twin brother Robert became seriously ill a few years ago, Joe traveled to Virginia to give his brother his support and encouragement. When Robert died, Joe took this loss very hard, just as we find it so difficult to accept Joe's passing.

I miss Joe yet I treasure my memories of him. I miss having lunch with him. I miss his presence in the department especially when I walk by his office. I miss the temper tantrum that Joe would display when a junior faculty member was denied a parking pass. I miss even more the *nuclear explosion* that would occur if *Joe* were denied a parking pass! I miss Joe's hearty laughter upon discovering that the new Gibbs corridor lights were too low! I remember his temper tantrum upon discovering that a 480volt transformer was mistakenly installed on a concrete base in his lab right where his centrifuge was supposed to be! How I remember that day! "Pat, would you come into the lab with me right now?" "Of course, Joe, what's the matter?" "What's the matter? What's the matter? What is that transformer doing there where my centrifuge is supposed to be?" Years later, Joe would recall that incident and we would both laugh about it. I miss his laughter, his kindness, his support, his love.

When my father became terminally ill from cancer in 1982, Joe was there for me throughout the entire ordeal. He took me to the medical school library to show me the latest research findings about my father's disease. He visited my father at the hospital, he listened to me talk about my anxieties, and he offered me encouragement in my time of need.

When my father died, a close friend sent me a card with a sentiment that gave me comfort at the time. This sentiment is the same one that Eleanor Roosevelt took comfort from after the loss of her husband, Franklin:

"They are not dead who live in lives they leave behind. In those whom they have blessed they live a life again."



Dr. Joan Steitz, Speaker

As you have heard from others, Joe Coleman was Chair of MB&B from 1976-1982. I'd like to summarize some of the highlights of his remarkable legacy and the imprint he has left on the department.

At the heart of Joe's chairmanship, as in all of his other University endeavors, was his vision to bring medicine to basic science and basic science to medicine. He had laid foundation for these efforts in his previous service to the institution. In 1966-1969, he had been acting chair during the tumultuous times that gave birth to the current department. Then in 1970-1975, he headed Yale's extremely successful Medical Scientist Training Program. He lavished considerable time and energy on the admission and guidance of each student; at the time he handed over stewardship of the program to become Chair, about one half of students were doing the PhD portion of the combined degree in MB&B labs. Likewise, Joe had been a founding member of the Molecular Basis of Disease course, which had rapidly developed into (and continues to be) the cornerstone of the MD/PhD program. This course systematically lays out how knowledge of basic science can illuminate our understanding of the disease process. Characteristically and quite remarkably, Joe insisted that he continue to teach this course even last fall while undergoing treatment for his cancer.

The theme of bringing science to medicine and medicine to science was also reflected in faculty recruitments made while Joe was Chair. One of the people brought to the Department by Joe was Bob Shulman, who initially established his lab on Science Hill, everyone expecting that he would continue his interests in using NMR to probe molecular structure. Bob instead began to focus on medical applications of NMR, his efforts culminating in the establishment of the Magnetic Resonance Center in the Medical School and its huge impact. Another important hire was Nigel Grindley, who came as an Assistant Professor to the Medical School but later migrated to Science Hill.

All who saw Joe in action know that he cared deeply about the welfare of the department and everyone in it. He developed a reputation for speaking out quite passionately in defense of MB&B or in support of what he believed was right. However he did it, Joe's arguments on behalf of the department usually prevailed, which was good for everyone concerned.

Unfortunately, not many written records survive from the period when Joe

was Chair. Melody did manage to rescue from the files a report written early in Joe's term when the department was undergoing review by the Biological Sciences Advisory Committee. A few passages exemplify Joe's vision of enhancing the discourse between medicine and basic science and how this would positively impact the educational enterprise. He writes about establishing courses in molecular biology for undergraduates who have no intention of becoming science majors; only much later did this become a reality. He urged interactions with Engineering and Applied Science over immobilized enzymes; these he envisioned "as a whole new area of industrial employment for biochemists." (This was when the job market for the first time seemed to tighten up for PhD biochemists.) He advocated that Yale establish a seven-year BS-MD program, so that students from the very beginning could be exposed to the synergy between basic science and medicine.

In closing, I'd like to mention Joe's continuing devotion to the department and its affairs even after retiring from the Chairmanship. I found that he could always be relied on for thoughtful and well-considered advice. He was always willing to do more in order to make things better. In short, Joe was a wonderful person who cared. I, for one, shall continue to miss him very much.

