

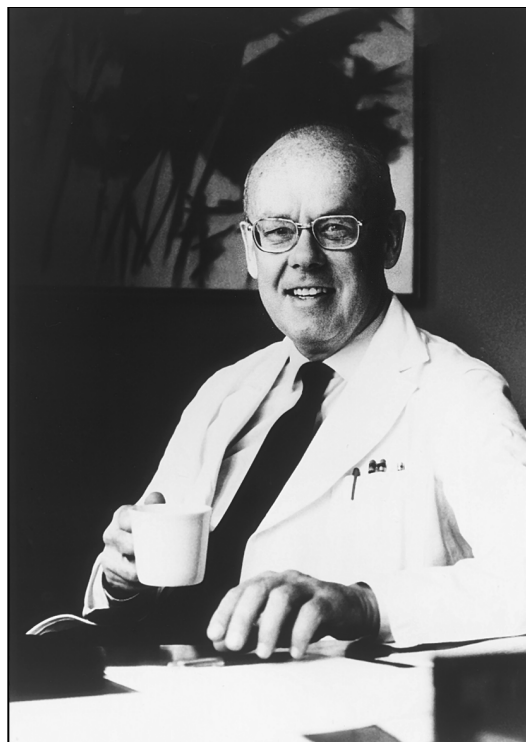
A Tribute To Pete Ahrens

E. H. "Pete" Ahrens, Jr., a central figure in the history of this Journal, died on December 8, 2000, after a long battle with metastatic malignancy. Pete was the most eloquent and forceful of a number of individuals who, in the late 1950s, realized that better communication was needed among investigators of lipid metabolism and lipid biochemistry, and proposed the founding of this Journal. Time easily distorts the memory of distant events; to verify Pete's role in the history of the Journal, I reviewed correspondence between us during those years. In a late phase of gestation of the *Journal of Lipid Research* (*JLR*), just prior to publication of Volume 1, No. 1, Pete was in England on sabbatical leave. He deputized me to "look after" the laboratory at Rockefeller, and there were many letters informing him about my activities and asking for detailed instructions. On September 25, 1958, I wrote to describe conversations that I had had with Don Zilversmit and Joe Bragdon:

Don, Joe, and I talked for hours and hours, with and without the advisers from the Heart Council. I do think we clarified many issues, and that the Journal is therefore another step along its way to becoming a reality. Your little child is gradually growing into a big man.

Obviously, I felt then, as I do now, that Pete was the father of this Journal.

In the 1940s and early 1950s, lipids or lipides (there was disagreement as to which term was correct) did not have the same cachet as proteins or carbohydrates. Lipids of biological origin were known as complex mixtures of water-insoluble substances with components not easily resolvable and not quantifiable by spectrophotometry or other means. These analytic problems, however, were being solved: countercurrent distribution had shown the way to a complete separation of partial glycerides from triglycerides. The method was cumbersome and soon gave way to column chromatography; then, a revolution occurred in lipid investigation when gas-liquid chromatography (GLC) came to these shores. Tony James and his colleagues in England had developed GLC as a rapid and accurate method for analysis of the dozens of fatty acids in biologically derived mixtures of lipids. James came to Rockefeller and set up the first GLC in the United States. Imagine the excitement and sense of promise that was in the air when these new methods became available! A number of the most active and influential "lipidologists" met each year in early June at a Gordon Conference held at the Kimble Union Academy in Meriden, New Hampshire. Originally, this conference was called "Blood," but, as a new age for



lipid research dawned, the less sinister name of "Lipid Metabolism" was chosen. Pete was always a central figure at the Gordon Conference. Who can forget his presence?—a friendly colleague radiating enthusiasm for all endeavors, whether talking about new analytic methods or demonstrating at the Thursday night banquet how to use one's little finger to extract the last bit of delicious Maine lobster from the tough russet carapace.

New realms of biological research were being opened by the lipidologists. Serum cholesterol and lipid levels had become of central concern as heart disease reached epidemic proportions in the United States. The ultracentrifuge and the use of electrophoresis permitted an examination of lipoproteins and their relationship to diet and disease. The exact steps in the biosynthesis of fatty acids and of cholesterol were delineated by careful chemical and enzymatic analyses. The lipid constituents of membranes were becoming better defined, creating models for membrane structure based on sound chemistry. New investigators were being drawn into lipid research, and there was a great need to share information on the new methodologies. How Pete Ahrens became a central figure in this endeavor brings us to consider his unique nature.

Pete possessed enormous energy and a willingness to translate talk into action. All of us have had friendly exchanges during breaks in scientific meetings during which we have heard or said ourselves, "Wouldn't it be good if we ____?" You can fill in the blank. It may be a suggestion for change in how the National Institutes of Health funds grants, some need for a new method, or any one of the many wishes we believe will advance our work. These verbal exchanges usually end by pointing out the difficulties or even impossibilities in doing or obtaining whatever is asked for. It is the rare person who leaps in to pursue the matter by formulating plans of action for making the wish come true. Pete was that kind of person. Whether it was his energy, boundless optimism, or many contacts in and out of the academic world, he was the one to get things started and, thus, it fell to him to become a central figure dealing with the burgeoning information in lipid methodology.

It is not surprising that the idea of a new journal to facilitate communication would elicit special enthusiasm from Pete. He was fascinated by the precise meaning and correct usage of words. In fact, it could be irritating to be on the receiving end of his chastisements for improper usage. He regularly pointed out that "data" is a plural noun. Whenever he saw a phrase such as "the data clearly shows that . . .," he would strike a thick red line through the second "s" in "shows." He was always quick to point out that beginning a clause with either "which" or "that" should not be random; the choice of a word can influence the meaning of the clause. The new *JLR* became the happy recipient of Pete's grammatical precision. This was formalized when he urged Peter Woodford to become the Journal's arbiter in judging correct usage of words and clarity of expression. Pete Ahrens (1) expressed his devotion to language in a piece he wrote in 1984 describing his relationship with his students and fellows:

I firmly believe that their prowess and their contributions have been shaped to some degree by my own faith in the beauty and power of our sharpest tool, the English language, and in the desire to communicate with each other that can only occur face to face in an atmosphere of mutual trust, friendliness, and sharing. (p. 1448)

Under his leadership, clear writing came to be a widely admired characteristic of the Journal.

There were other elements to Pete's input. He was a fastidious man, but never prissy. His clothes were not elegant or particularly expensive, but were carefully selected. In the laboratory, he liked to wear khaki pants, and one favorite old pair had dozens of tiny holes. Such holes were often present in our lab coats and trousers in the days when we cleaned our own pipettes with a vicious mixture of sulfuric and chromic acids. Sprinkles of this deadly brew readily ate through clothes, but Pete's pants, holes and all, were spotlessly clean and pressed. In and out of the laboratory he radiated cleanliness, good health, and vigor. Sometimes, after a squash game, he would develop an unusual reddish hue (he was quite the player in his day); the same glow could be seen after a drink or two of Cardhu, his favorite single malt scotch whiskey. It seems to

me, though, that his best glows occurred during conversations among his many friends at one of his favorite talking spots: the old Rockefeller Institute lunch room or the Century Club in New York. Conversations were always enriched by Pete's lively questioning, seeking order, common sense, and understanding. Pete's desk was always clean, reflecting a well-organized schedule, an attention to careful use of time, and devotion to meeting deadlines and commitments. The development of the *JLR* profited from these qualities.

One searches in vain for some single, special event that made Pete what he was. He was born in Chicago, but early in life, Bronxville, New York, became his home. He attended the Hotchkiss School and, thereafter, Harvard College and Harvard Medical School, receiving his M.D. in 1941. An internship and residency in pediatrics at Babies Hospital of Columbia-Presbyterian in New York followed. After serving in the Air Force in World War II, he came to the Rockefeller Institute of Medical Research to begin his long and productive research career. Many years of hard work performed with care and happy relationships with colleagues shaped his career more than any single event.

Lest it be thought that Pete spent all his time with the *JLR*, a brief summary of his many other contributions to lipid research is in order. His work at Rockefeller began with a clinical study of biliary cirrhosis, reported in a frequently quoted clinical review of this still not fully understood disorder. He became fascinated by the recognition that serum lipid levels, although high in biliary cirrhosis, do not lead to turbidity, as occurs in other situations in which serum lipids are elevated. He became aware of the increase in serum phospholipid with biliary cirrhosis, and realized that it was a major factor in maintaining clarity of the serum. This early work showed the importance of understanding the physicochemical differences of different lipoprotein classes. Thereafter, he studied the intraluminal digestion of fats, feeding chemically defined fats to humans, and removing intestinal contents via a gastrointestinal tube. Detailed analyses of the triglycerides and partial glycerides provided knowledge of the chemical steps in the digestion of fats. For these and other studies, he developed a formula diet for total alimentation with precisely known chemical constituents. He used formula diets to show the importance of fatty acid unsaturation and chain length as determinants of serum lipid levels. His formula studies also gave the first unambiguous data on the effect of high carbohydrate/low fat diets in provoking marked elevations in serum triglyceride. Formula diets and use of the best modern analytic methods also permitted him to make elegant studies of cholesterol balance in human subjects. A recurrent theme in this work was the demonstration of marked variations from one individual to another in the synthesis and processing of sterols.

From his studies in human subjects, he became convinced that the development of atherosclerosis and heart disease could not be fully explained by any single, simple dietary hypothesis. Although he was well known as a major contributor to the diet-serum lipid-atherosclerosis relationship, he objected to popular simplifications that would lay

all coronary artery disease at the doorstep of diet. Some thought him to be obtuse or stubborn, as he refused to endorse claims that changing our diets by lowering cholesterol intake would be the sole and most effective weapon to win the battle against heart disease. He was indefatigable in pointing out the necessity of additional clinical research in human subjects to delineate individual differences in response to diet. Unpopular as these views may have been, time has revealed the correctness of his views (2). It is now recognized that factors in our lifestyle other than diet (e.g., the functioning of endothelial cells and abnormalities of blood coagulation) may play prominent or even dominant roles in susceptibility to heart disease. In his research endeavors, Pete's identity as a physician made him an astute observer of clinical phenomena. He remained a devoted proponent of the importance of observing the variations in the functioning of humans as a key to uncovering the secrets of health and disease.

As academic medicine moved from its previous commitments to clinical science to the belief that all science in medicine comes only from the laboratory, Pete became alarmed. In 1992, he wrote a book entitled *The Crisis in Clinical Research*. It is the best available sourcebook for anyone wishing to examine how medical science has moved away from the traditional roots of clinical science, fusing observations made at the bedside and in the laboratory. Initially, some felt his passionate appeal for clinical research was no more than a dream of the past, but times are changing again, and there is now a strong move

to train clinical observers who can generate science at the bedside.

Pete's intense curiosity and wish to learn seemed boundless. Along with his medical pursuits, he had a deep interest in plant physiology and the special growth requirements of trees. To obtain answers to his horticultural questions, he founded an arboretum close to his summer home in the Catskill Mountains of New York, where education and research continue. Even his last illness was an arena for inquiry by his perceptive and forever-questioning mind. He spoke about the pathophysiology of his own disabling symptoms as though they provided a wonderful opportunity to learn more about human biology. He was not deluded as to the prognosis of his illness, but this did not preclude his trying to learn something about his disease, rather than complaining and coming away from the inevitable with empty hands.

And so, Pete Ahrens has left us, but all who knew him will never forget him. We are forever enriched by what he stood for and what he achieved.

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