

David White

David was born into a large, close family in Boston, Massachusetts. He earned his undergraduate and graduate degrees at Brandeis University during an exciting time shortly after its founding, when this institution was characterized by small classes and dedication to intellectual pursuits. David's teachers at Brandeis had a powerful influence on his choice of careers. He recalls fondly his student days, his experiences on the wrestling team, his classmates (including Abbie Hoffman, who shared David's sense of fun and commitment), and his classes there. While still a graduate student, David worked with Charles Klein at NASA's Ames Research Exobiology Center at Moffet Field, California. But it was his subsequent work with Martin Dworkin at the University of Minnesota in Minneapolis that drew him towards a lifelong interest in the developmental biology of bacteria, especially the myxobacteria.

These remarkable bacteria have a life cycle keyed to their nutritional state that entails communal feeding, aggregation, and ultimately the formation of multicellular fruiting bodies so colorful and complex that their discoverer presumed them to be a miniature, mushroom-like fungus. Much of David's research has been devoted to understanding the physiology and biochemistry of the cell-cell interactions that underlie this complex behavior.

Arriving with his young family, David joined the Department of Microbiology here in 1967 and has spent his entire academic career in his beloved Bloomington. With a curly black beard and a full head of jet black hair, he was called "Little David" by Helen Arthur, who "ran" the department in those days. He also arrived with his love for motorcycles fully developed, although these have seemed to get larger and larger until he now tools around town on a BMW, reserving his huge Harley for a biyearly trek across the country.

David began a series of investigations on the myxobacteria that he subsequently pursued during

sabbatical leaves at the University of Maryland, the NIH in Bethesda, and the University of Heidelberg, Germany. This work documented the roles of light, specific ions, and an aggregation pheromone in the myxobacterial developmental process. It also provided beautiful electron micrographic pictures of the aggregation and fruiting process in *Stigmatella* that appeared in a number of review articles he and his students have authored. These photographs are classics and are widely used as textbook illustrations.

David never seems happier than when he is introducing students to his favorite bacteria and to the techniques used in learning about them. His infectious enthusiasm and his empathy with young people make David an effective and admired teacher in both the laboratory and the classroom. With an informal, low-key, yet animated personal style that invites classroom dialogue, and with his gift for immediately sensing the level of students' comprehension, David is able to adjust in mid-lesson the level at which to pitch complex scientific subject matter in order to achieve maximum understanding. His office is often full of students seeking further insights.

That his teaching excellence and dedication are appreciated by his students is evidenced by no fewer than five student-initiated awards for teaching garnered over the last fifteen years. Student praise from letters in support of these awards contains comments such as "most enthusiastic professor I have had," "best instructor," and "Don't retire." David's colleagues also have recognized his skill as a teacher by making him a mentor for beginning instructors in the department.

David's devotion to teaching microbiology extends beyond contact with students in the classroom and laboratory. He has chaired the Undergraduate Curriculum Committee for the past fifteen years, and has recently authored a well-reviewed and widely appreciated textbook on bacterial physiology and biochemistry (an expanded, second edition of which has just appeared) and a companion laboratory manual. David is most proud that his son Eric worked with him on this project during the writing and did all the illustrations. Of course, he will

also tell you how proud he is of his daughter, Judith, a J.D./Ph.D. who teaches at Northwestern University, and his son Seth, a master's candidate in computer science.

The textbook grew out of his course on bacterial physiology and biochemistry. The course was very popular because it taught basic intermediary metabolism in a class that made students feel they were learning in a tutorial setting. Students have called this text "wonderful," stating that it was "the only manuscript that made clear to me the whole issue of membrane bioenergetics." David's current preparation of a text for nursing students shows that his joy in teaching through writing continues.

Many of David's recent articles have been written at the request of colleagues or in collaboration with fellow faculty members at Indiana or elsewhere. He is a frequent guest lecturer. This is further evidence of the high esteem in which he is held by his professional colleagues.

David's support of his colleagues and friends is extraordinary. His devotion to a slowly dying colleague renewed an observer's faith in humanity. His devotion to the field of microbiology at a time when it did not appear that this subdiscipline would survive in the milieu of a large biology department reflected his perspective on the principle of the department and his regard for the people in it. David's local involvement in the VITAL Reading Program and the Community Kitchen, and especially in the arts (for twenty years David has been a regular performer in the Puck Puppet Theater at the Monroe County Public Library), represents an extension of his joy in life beyond the walls of the university.

David's retirement from teaching and research will leave a large void in the ranks of the biology department that will be hard to fill. We know that this will mean more time for David to enjoy his family, including his three grandsons, and partake in their lives, as well as more time to spend in the garden he has designed and to take some long trips on his motorcycle. He has earned this respite, but we hope he will remain in our academic community and continue to enrich us all.

George Hegeman
Arthur Koch