

**1994**

**J.K. Haynes**

J.K. Haynes is the David Packard Professor and Chairman of the Department of Biology and Adjunct Professor of Physiology at Brown University. He has also been nominated as the new Chair of the ASCB Minorities Affairs Committee and brings to his position commitment and dedication to expand the role of the Committee and improve minority representation in the life sciences. Haynes, a member of the ASCB just since 1991, was recruited into the ASCB's Minorities Affairs Committee by its retiring Chair, Jim Wyche. As the new Chair, Haynes' immediate goals will be to increase the number of minorities represented in the ASCB. Haynes has observed in his travels and talks with minority students, biologists, and predoctoral students that many are working in cell biology. Another goal is for the ASCB to develop more minority outreach programs to foster interest in science among pre-college students. And finally, Haynes feels it is critical that working minority scientists establish networks, mentorships, and other forms of support to help young minority scientists advance in their fields.

Haynes himself had many mentors to encourage his academic interests. His father, a graduate of Bishop College in Texas, was a high school principal and long-time head of the Louisiana Education Association. His mother, a graduate of Spelman College and Atlanta University, was a high school teacher and guidance counselor in Baton Rouge, Louisiana, Haynes' hometown. During his freshman year at Morehouse, Benjamin Mays, the President of Morehouse, served as Haynes' freshman advisor. Haynes was interested in becoming a physician and enjoyed his biology classes taught by James Birnie, Frederick Mapp, and Roy Hunter. Hunter's embryology course was so exciting that Haynes decided to study developmental biology following his graduation in 1964.

Haynes attended Brown, where he earned his Ph.D. Haynes worked on his Ph.D. in Donald Kimmel's laboratory, studying the time of appearance and regulation of the enzyme Tryptophan Pyrrolase during development of the frog. During this time, Haynes also took the Embryology Course at the Marine Biological Laboratory at Woods Hole. By the end of his doctoral research, he came to realize that in order to understand development, a scientist really needed to know the techniques in the field of molecular biology. After receiving his Ph.D. in 1970, Haynes stayed on at Brown as a Research Fellow, working in the laboratory of the molecular geneticist Seymour Lederberg on the phenomenon of host restriction and modification of lambda bacteriophage in *E. coli*.

Following his postdoc at Brown, Haynes did a post-doc at MIT and worked with Vernon Ingram on sickle cell anemia, a disease on which Haynes has spent much of his research career.

At MIT, Ingram and Haynes developed a simple method for screening the population for the sickle gene. Haynes also worked on a method of prenatal diagnosis of the disease and began analyzing membranes from sickle erythrocytes, searching for secondary alterations in proteins.

Haynes left MIT to become Assistant Professor at Meharry Medical College in Nashville. In 1978, Haynes joined the faculty at Morehouse College as an Associate Professor and Director of the Office of Health Professions (OHP). Much of his early efforts at Morehouse were focused on developing the OHP and to enhancing premedical education. The OHP developed a Standardized Exam Preparatory Course and a Summer Program for pre-freshman premedical students. By 1980, Haynes had been appointed full Professor of Biology, and in 1985 was awarded the David E. Packard Endowed Chair in Science and became Chairman of Biology. Haynes and his colleagues developed a new biology curriculum in 1991, which contains a substantially greater laboratory emphasis and includes new required courses in plant sciences and ecology, and a Senior Seminar in Evolution.

Haynes' administrative responsibilities were time consuming, and by 1991, he decided to re-energize his research and take a sabbatical leave with Leon Goldstein at Brown. Haynes sought out Goldstein, a leader in the field of cell volume regulation, because by then it had become clear that the reason that sickle erythrocytes became trapped in capillaries was due to their very viscous cytoplasm resulting from their loss of water, due to a membrane defect. He wanted to learn as much as possible about the mechanisms that cells use to regulate their volume, hoping to take a more specific approach to analyzing the defect in sickle erythrocytes. Haynes' work, published in 1993, established that cells are able to decrease their volume from the swollen state by opening a membrane channel that allows the amino acid taurine to flow out of the cell, which in turn leads to the loss of water by the cell.

Besides his activity with the ASCB Minorities Affairs Committee, Haynes is a member of Emory University's School of Medicine Internal Advisory Committee for the Sickle Cell Comprehensive Center Grant Application. He has also served as Chair of the NIH Study Section on Initiatives for Minority Students and as Chair of the Aetna Site-Visit Team to evaluate the impact of the Howard Hughes Medical Institute Grant on Minority Students at Emory University.

Haynes and his wife, Carolyn, a hospital administrator, recently celebrated their 25th wedding anniversary, and enjoy playing tennis and taking walks and jogs together.