



Stephen I.N. Ekunwe, PhD (1960-Present)

Associate Professor of Biology/Assistant Chair

Jackson State University

"Focus on what you are passionate about." Stephen Ekunwe, 2005.

Early Life and Education

Stephen Ekunwe was born in Nigeria, the second of Gabriel and Mary Ekunwe's seven children. He observes that in Nigeria, the incentive to get an education is great: "You either get an education or you are nothing." His mother was a self-employed businesswoman, while his father worked for the country's public health department treating people with leprosy. Ekunwe dates his interest in public health to observing his father go about his job.

After completing his secondary education, Ekunwe got his first job in Nigeria, teaching mathematics and physics at the high school level. Ekunwe's first environmental job was also in Nigeria; working in the laboratory at a Guinness brewery. One of his responsibilities was to take samples of effluent flowing from the brewery into a nearby river, which served as a source of drinking water for the local population. Ekunwe sampled water upstream and downstream of the effluent point of entry, and then analyzed its composition and impact on the ecosystem. In this way, he was able to bring a quantitative perspective to human impact on the environment and public health.

Ekunwe eventually left Nigeria to pursue further studies in the U.S. He completed his undergraduate degree at Jackson State University, worked briefly in hotel management, then returned to school to obtain his master's degree in molecular biology. His teaching career began at Tougaloo College, where he worked for two years before beginning his doctorate in molecular biology and microbial genetics at Michigan State University. Upon receiving his Ph.D. in 1998, Ekunwe was hired as an assistant professor at Jackson State with funds from a Research Center in Minority Institutions (RCMI) grant. That grant, awarded by the National Institute of Health (NIH), helped establish a Center for Environmental Health at the university.

Importance of Mentorship to Career Development

Ekunwe says a number of mentors have contributed to his professional success. He specifically cites his doctoral advisor Professor Larry Snyder, who taught him new ways to think about microbial genetics and create experimental designs; his current department chair Paul Tchounwou, who provided guidance on

navigating a career in academia; and Professor Terrance Leighton of the University of California-Berkeley, who interested Ekunwe in bio-remediation, and with whom he has collaborated on a number of projects.

Ekunwe, in turn, has served as a mentor to a number of (primarily graduate) students. He has advised masters' students working on their theses, and served as a committee member for doctoral students. Ekunwe proudly notes that five African American students have prepared for their masters in biology in his laboratory, where he models research practices and helps the students with their analysis, writing, and project presentation.

Ekunwe says that a high point in his career was making the switch from bacterial to cancer research. Cancer was not something Ekunwe had researched as a doctoral student, but a well-assembled study on the subject yielded good results, allowing him to make the transition with relative ease. Ekunwe is also very excited about his current project; he has discovered an edible plant which early studies indicate may act to retard the growth of certain cancers, particularly colon and prostate cancer. His work represents the first time that the herbal properties of this plant have been scientifically studied for their potential to fight cancer.

Challenging Times

Ekunwe recalls the struggles of his professional career as well as its high points; he remembers that the choice between academia and the industrial private sector was a difficult one, and he felt torn between the two. Ekunwe's wish to give back in the classroom eventually won out; especially after completing his doctoral studies, he felt he had gained expertise that could be useful in an academic context. While at one point tempted to join a pharmaceutical company in Chicago, Ekunwe ultimately believes he made the right choice by remaining in academia. As for his fundamental choice to pursue the biological sciences, Ekunwe says has been drawn to the field throughout his life; observing his father's work as a public health professional, and attending a scientifically rigorous secondary school, compounded that attraction. Ekunwe says he doesn't remember wanting a career in anything other than the sciences; he always found the discipline to be a natural fit.

Highlights

Ekunwe has vice-chaired (2004-2005), and chaired (2005-2006) the Division of Cellular Molecular and Developmental Biology of the Mississippi Academy of Sciences, where he works with a diverse population of science professionals. He also works with the Jackson State Center of Excellence in Minority Health. As a professor at a Historically Black University, Ekunwe works largely with African-American students, but he notes there are also international students who lend a diverse presence to the campus.

While Ekunwe is understandably proud of his professional accomplishments, he feels his greatest accomplishment is his family. His wife, a doctoral student in public health, shares his professional interests. He has two sons, one a chemical engineer and the other an electrical/computer engineer, and two daughters, one a college freshman and the other still in high school.

Ekunwe tells students seeking a career in a scientific or environmental field to focus on their passion. "I have a bias for the field I am in but I will not try to force students into my area of interest," he says. His

advice: Find what makes you tick, and if that happens to be an interest in bio-medicine, wonderful, because there is much good work that still remains to be done.

For More Information

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