



Omar Bagasra (1948-Present)

Professor of Biology
Claflin University

Director
South Carolina Center for Biotechnology

"I know I'm making a difference in other people's lives."
Omar Bagasra, 2006.

Overview

Dr. Omar Bagasra is a professor of biology at Claflin University, a historically black university in Orangeburg, South Carolina, and is also the founder and director of the South Carolina Center for Biotechnology. His research combines environmental medicine with molecular biology and health disparity issues. Bagasra is particularly interested in finding out why African Americans have the highest rates of prostate cancer (as well as diabetes, hypertension, and female breast cancer) in the world. He has also made a notable contribution to his field by discovering *in situ* PCR, which allows researchers to determine the percentage of HIV-infected cells in a body. His other areas of interest include:

- A Unified Concept of HIV Latency
- An Edible Vaccine for Malaria Using Transgenic Tomatoes
- Role of Micro-RNAs in Regulation of Lentiviral Latency and Persistence.
- Localization of human herpesvirus type 8 in human sperms by *in situ* PCR.
- RNAi as Antiviral Therapy
- Zinc and prostate cancer
- Role of zinc and zinc transporters in the molecular pathogenesis of diabetes mellitus.

Bagasra says that this life-long intellectual curiosity keeps him in the environmental field.

Early Life and Career

Omar Bagasra was born on October 9, 1948, on the plains of India. He is the eldest of Amina and Habib Bagasra's eleven children. Just prior to his birth, India gained independence from Great Britain, and Bagasra's family joined an exodus of twenty-five million people who left India for the newly-formed nation of Pakistan. Bagasra remembers many difficulties growing up in the "newly born country", where social

instability and a lack of resources made life a challenge. “Financially, socially, it wasn’t a stable place...there was always the threat of war,” Bagasra recalls.

These difficulties influenced Bagasra’s education. He recalls his school having to implement double shifts to accommodate all the students: “We had almost no books; what we did have were mostly used or discarded from libraries or donations from developed nations. Our education system was not much of a system at all. We had inherited it from the British, and it was completely inadequate for our people.” Despite these hardships, Bagasra remained intellectually curious, and would take any available opportunity to read.

Bagasra’s desire to learn propelled him to academic success. He received both a BS and an MS in microbiology from the University of Karachi in Pakistan. Bagasra then immigrated to the United States, where he obtained his doctorate in microbiology and immunology from the University of Louisville. Bagasra also received his medical degree from the Universidad Autonoma de Ciudad Juarez, Mexico, in 1985. He has completed his residency in Pathology, and a fellowship in Clinical Laboratory Immunology as well as one in Infectious Diseases.

Bagasra became interested in connections between the environment and health while studying the AIDS virus in Philadelphia. This interest was strengthened when his mentor and PhD advisor, Dr. John Wallace, developed and died from an aggressive form of prostate cancer. Bagasra’s sorrow over his mentor’s death compelled him to pursue further research on the disease. He became convinced that a combination of environmental factors and genetic predisposition were to blame. Later, he would focus his studies more specifically on zinc and the prostate.

Importance of Mentorship to Career Development

Bagasra says Dr. Wallace’s influence on him as a young PhD student was tremendous. Bagasra had left his family in Pakistan to pursue his education, and Wallace became a combination father figure, friend, and advisor. Bagasra describes Wallace as “an outstanding advisor. I learned many skills from him, including how to be a good speaker, thinker and analyzer. He would give anyone who had even the slightest bit of potential the chance to be a scholar—regardless of grades and so on. I try to be as open, and I use all his teachings in my life.” Wallace was also the only African American chairman of a microbiology department in a majority-white school. Bagasra tries to carry on Wallace’s legacy by mentoring minorities in his undergraduate and graduate biotechnology programs.

Contributions

Currently, Bagasra is a professor of biology at Claflin University, a historically black university in Orangeburg, South Carolina, and is also the founder and director of the South Carolina Center for Biotechnology. His research combines environmental medicine with molecular biology and health disparity issues. Dr. Wallace’s legacy continues to influence his research topics: Bagasra is particularly interested in finding out why African Americans have the highest rates of prostate cancer (as well as diabetes, hypertension, and female breast cancer) in the world. He has also made a notable contribution to his field by discovering *in situ* PCR, which allows researchers to determine the percentage of HIV-infected cells in a body. Bagasra cites working in the university environment at Claflin as a career highlight;

he says it provides him with the opportunity to pursue meaningful research, while surrounded by friendly, supportive colleagues.

Bagasra says that this life-long intellectual curiosity keeps him in the environmental field. “I’ve been very inquisitive since a young age, and my job gives me a great deal of opportunities to answer all kinds of questions,” he says. “I can work freely without much hindrance, and I love to teach. I know I’m making a difference in other people’s lives.”

Advice to Young Professionals

Bagasra has this advice for minorities considering environmental careers: “Go for it—because you are really needed in this area. For those of us already involved, for minority communities, and even for the world, it is very essential that we have more people of color involved in this field. We need to know what is going on out there; we need more minorities to become experts in the field to make significant contributions to the future.”

For More Information

E-mail: obagasra@claflin.edu

Website: <http://www.claflin.edu/faculty-research/faculty-research/omar-bagasra>

This interview was conducted in 2015.