

A Big Problem



in a Small World



Mauritius, a small island located in the Indian Ocean off the eastern coast of Africa, is a popular paradise-like travel destination. It also has one of the highest incidences of type 2 diabetes in the world. About one-quarter of the 1.3 million strong multiethnic population has type 2 diabetes or is at high risk of developing the disease. Of those, many will ultimately develop blindness, kidney failure, and/or foot complications, a leading cause of amputation.

Rehana Jauhangeer grew up in the midst of this escalating problem, which affects not only people in her homeland, but also more and more of the world's population. Rehana is now working to pursue ways to combat the effects of this disease. She studies defects in the immune system of patients with diabetes which make them susceptible to the bacteria that invade ulcers in the foot. Specifically, she has developed a method for rapidly detecting the presence of bacteria in these ulcers. The test will help shorten treatment times, and may prevent foot amputation due to gangrene.

Initial Inspirations

"I have always been fascinated by science," Rehana says. "My high school chemistry teacher inspired me and was my role model—she would tell us to walk along the corridor wearing our lab coats—saying that one day this would be our uniform as scientists." After high school, Rehana began working in the central health laboratory at the Victoria Hospital in Mauritius. She then moved to London to begin work on her Master's and Ph.D. degrees at the University of Westminster under the supervision of Pamela Greenwell, Dave Perry, and Mike Wren.

"Rehana gave up many things to come to study in the UK including her job, her family ties, and her lifestyle," Greenwell remembers. "She immediately found a job to support herself, working in the university during weekdays and on weekends, then in a private laboratory at night. She did this for five years, and never complained, and she always had endless patience with students working with her," she says.

Now Rehana works as a postdoctoral researcher at the clinical immunology department at the University College London Hospital. There, she works with Marlene Swana, David Isenberg, and eminent scientist Ivan Roitt, whose seminal work in 1956 helped establish the previously unknown role of autoimmunity in human disease.



"I have always been fascinated by science."



Networking and Giving Back

According to Rehana, so far in her scientific career, the receipt of the UNESCO-L'Oréal Fellowship has been her "best and biggest achievement." When she was awarded the fellowship, she was honored with the task of presenting her project at the UNESCO headquarters in Paris in front of an audience made up of internationally renowned scientists, journalists, and diplomats. These efforts, she feels, have helped put Mauritius on the scientific map and have allowed her to attract more funding for her work. Since then, she has also had the opportunity to network with other scientists at international conferences, such as BioVision, held in Lyon each year, and has organized a workshop with the Mauritius Research Council that has brought together specialists in Mauritius who deal with the different aspects of diabetes treatment and its management. She has also been on a committee for the Global Scientific Challenges: Perspectives from Young Scientists conference organized by the International Council of Science, an umbrella organization of UNESCO.

Transmitting the Passion

Rehana serves as a visiting lecturer at the University of Westminster in the UK where she teaches biomedical sciences and molecular biology. In the future, Rehana would like to become more involved with applied research that will bring "real solutions in the form of therapies and better diagnosis of disease." She says she also wants to be involved with other activities for the public understanding of science and find ways to attract the next generation into studying science. "I am a great advocate of mentoring and transmitting the passion for science," she adds. "It is very important to have a mentor at the very beginning of your career and a person who would guide you to get on track for a successful and fruitful career in science." She adds that "to achieve your ultimate goals, passion is essential."