



**Dawn FOX**

**Home Country**  
**Guyana**

**Degree**  
**PhD in Chemical**  
**Engineering**

**Expertise**  
**Chemical Engineering**

**Research Focus**  
**Arsenic**  
**Contamination of**  
**Groundwater**

**Host University**  
**University of South**  
**Florida,**  
**United States**

**Fellowship Awarded**  
**2008**

Dawn Fox was born in Bartica, Guyana, as the eldest of three children. Along with her brother and sister she grew up in many places, spending much of her childhood in Bartica and Caracas, Venezuela. She and her husband, a special needs educator and administrator, share a love of teaching.

After Dawn's father died when she was nine years old, her mother inspired her to be strong and independent and encouraged her interest in science. A female chemistry teacher whose courses sharpened her logical thinking and analytical reasoning skills also influenced her.

In August 1994 the tailings pond of Omai Gold Mines Guyana Ltd. suffered a breach and spilled cyanide-containing waste water into the Omai and Essequibo rivers. Downstream riverain communities including Bartica, her hometown, were adversely affected. This event became a major factor in Dawn's decision to focus her research on arsenic contamination of groundwater.

Currently enrolled in a doctoral program in chemical engineering at the University of South Florida in the United States, Dawn is researching an environmentally friendly technology based on cactus mucilage. Using a combination of spectroscopic and forces determination techniques to examine the interaction between the mucilage and arsenic, her research goal is to develop a safe and appropriate environmentally friendly water filter using cactus mucilage to remove arsenic and other contaminants from groundwater.

An estimated 50 million people are affected by arsenic contamination of groundwater, and the World Health Organization in 2001 recognized groundwater contamination as a major route for global exposure to arsenic.

Upon completion of her doctorate, Dawn plans to teach at the University of Guyana.