

OBITUARY

Veronica Rodrigues (1953–2010)



Veronica Rodrigues, geneticist, developmental biologist and neuroscientist died in Bangalore on 10 November 2010. A spirit of adventure, using the best available methods to address well-posed questions, characterized her scientific life. This, and the attention to detail that she and her group brought to their experiments resulted in work of quality that has left an indelible impression in the field of olfactory developmental biology.

Veronica's ability to learn and innovate, and the timing of her entry into the field of neurogenetics, made for the success of this pioneer in her scientific endeavors. In the early 1970s Seymour Benzer started the systematic attempt to link genes to behaviour by screening for mutants in *Drosophila*. Obaid Siddiqi, head of the Molecular Biology Unit of the Tata Institute of Fundamental Research, a leading member of the elite club of phage and bacterial geneticists, went to Caltech on a sabbatical and brought neurogenetics to India. Amongst his early students in this area, Veronica worked with Obaid as a graduate student starting in 1976. Their study, which presented the isolation and characterization of olfactory mutants in *Drosophila*, was a landmark paper and influential in the field. Yet, with all its promise, neurogenetics at that time was intensely speculative as the nature of the genes which affected behaviour was not known. When it became possible to isolate and sequence genes, many graduate students

went to the new molecular biology labs to learn and apply these methods to their questions. Veronica instead chose to go to Tübingen, where she applied methods of identifying active regions of the brain to the study of olfactory information coding. On her return to the Tata Institute, Veronica began a programme to first chart the molecular, cellular and developmental biology of the olfactory sense organs and then of the antennal lobe. These studies have proved to be the foundations of the field, and a huge body of superb work from excellent groups all over the world, has emerged from this work. More recently, Veronica's work has focussed on how properties of neural networks emerge from their molecular and cellular composition. These studies, many of which have been published and others that will come out soon, show the ability to elegantly link gene expression, the cellular localization of key molecules, the communication between neurons and the behaviour of the animal. Such studies are the beginnings of our understanding of how the development of nerve cells is linked to behaviour.

Passionate about science, Veronica saw it linking good ideas to doing well-thought-out experiments. Idle talk was not for her. The Tata Institute's liberal support to its faculty is meant to allow them to take on formidable questions that require time, thought and effort. While many forget the last word in this liberal ethos, Veronica was demanding on herself and on others to get good science done, written and published. Yet, her life was full of fun, generosity and inclusiveness. Young students started off feeling that the demands of excellence in thought and experiment were too high. Soon though, respect, admiration and affection evolved and they became her close friends. She hid from all but a few all the trials and challenges she personally faced. These were huge and real, but she always thought of them as matters requiring care and human attention but not as incapacitating or overwhelming. Veronica had strong views on science and its administration. Her impact on the Department of Biological Sciences at Mumbai and the National Centre for Biological Sciences in Bangalore were transformative: it is fair to call her their moral touchstone. In taking any decision, the question was asked if she would approve. With her gone, we will honour this pioneering scientist, a caring colleague and dear friend by working to keep our institutions spirited, demanding and yet places where it is a pleasure to address the most demanding questions.

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