

Professor Suzanne Cory AC

The degree of Doctor of Science (honoris causa) was conferred upon Professor Suzanne Cory, PhD, FAA FRS, at the Faculty of Science graduation ceremony held on 11 May 2000.

Citation

Chancellor, I have the honour to present Suzanne Cory for admission to the degree of Doctor of Science (honoris causa).

Professor Cory has been, since 1996, Director of the Walter and Eliza Hall Institute of Medical Research in Melbourne.

In 1961, Suzanne Cory started a Science degree at the University of Melbourne, with the intention of majoring in chemistry. One morning, she walked into a genetics lecture which, she has said, set the course of her life. That day, Professor Michael White inspired her with "an enthusiasm and awe about the nature and organisation of our genes that has never left [her]." As a result, she took up biochemistry and this introduced her to the emerging domain of molecular biology which Professor Cory described as then being an "upstart new science, born from the double helix {of DNA}, and hell-bent on unlocking the molecular secrets of life by cracking the genetic code".

Some time later, with the same sense of "heady excitement", she decided to undertake a PhD. She says that "with the naive audacity of youth", she applied to the MRC Laboratory of Molecular Biology in Cambridge where Watson and Crick discovered the structure of DNA, and was accepted. Most scholarships in those days were reserved for men. "Only one," she recalls, "the Overseas Scholarship from the Royal Commission for the Exhibition of 1851, seemed to have forgotten to make the restriction." She won it, and went to Cambridge.

At the Laboratory for Molecular Biology, she discovered that dabbling in science was not enough. She said: "One had to ask the big questions and be engaged full force."

From 1969 to 1971, Professor Cory was a Rothmans Fellow at the Institute of Molecular Biology at the University of Geneva in Switzerland, working with Dr Gerry Adams on the sequence of the RNA genome of the bacterial virus, R17. One surprising finding in that work was the high degree of ordering of the structure of the large RNA molecule which, to this day, continues to attract the attention of structural biologists.

In 1971, Professor Cory returned to the Walter and Eliza Hall Institute in Melbourne and established a research group which has carried out work recognised as a major contribution to our understanding of the genetic background to the establishment of antibodies in the immune system.

Professor Cory then directed her attention to the chromosomal changes that are often seen in cancer cells. The question was: "What was happening to the DNA, the genetic material, that was both changing the chromosomes and producing the tumour?" The studies undertaken by Professor Cory and her group forged a conceptual link between chromosome appearance under the microscope and the molecular basis of tumour formation. These studies provided a basis for the understanding of cancers, including leukaemias and lymphomas, by identifying the culprit genes involved. These experiments were amongst the first to use transgenic animals in Australia and they inspired the development of this approach to addressing many different questions in biomedical science both here and overseas.

Professor Cory's more recent work has been in the area of programmed cell death, the process that leads to neuronal sculpting of the brain, and all organs of the body for that matter. She and her group showed that one particular protein promotes cell survival. So, in some forms of leukaemia instead of the cells dying off after a particular time they persist and become too numerous for normal function of the body's anti-microbial and anti-tumour defence systems.

In view of her great success with manipulating genes in the mouse, Professor Cory's most recent work has involved delivery of genes into blood-forming stem cells using a retrovirus. This is one possible avenue for the use of gene therapy in the possible future treatment of leukaemias and inherited errors of metabolism. We look forward to the leadership of Professor Cory and others in this exciting field.

For her contributions to Science, Suzanne Cory was elected a Fellow of the Australian Academy of Science in 1986, the Royal Society of London in 1992; and amongst her more recent honours were the Australia Prize in 1998 together with Professor Elizabeth Blackburn, Professor Sir Alec Jeffreys and Professor Grant Sutherland, and in 1999, appointment as Companion in the Order of Australia.

Chancellor, I present to you, Suzanne Cory for admission to the degree of Doctor of Science (honoris causa) and I invite you to confer the degree upon her.