

# A Clone of Your Own?

By Arlene Judith Klotzko

Reviewed by Michalis Hadjimarcou, Cyprus

To clone or not to clone? That is the question that the book *A Clone of Your Own?* sets out to investigate. In the process, the reader is taken along a majestic journey through the science and ethics of cloning. The result is a thorough and accurate account of what cloning is all about, and why a natural method of asexual reproduction – practiced by millions of species since the beginning of life on Earth – has recently caught the attention of scientists, law-makers and lay public worldwide.

Removing a twig from a rose bush and planting it to produce a new bush is cloning. So is the cell-division process by which bacteria and other microbes replicate. Embryo splitting, the rare but naturally occurring event that produces identical twins, is another form of cloning. None of these phenomena has ever caused much concern. However, when Dolly the sheep was cloned in 1997, the announcement made headlines around the world. The reason is simple: a mammal was cloned by transferring the nucleus from a fully differentiated mammary cell from an adult sheep to an enucleated egg cell from another adult sheep. The resulting cell was able to develop into a fertile new organism, Dolly, who in turn was able to reproduce naturally. In the years that followed, scientists have successfully cloned cows, pigs, goats, mice, rabbits, horses, rats, cats and mules. These developments have led to a lively debate about whether humans should be included on the list of mammalian species to be cloned. The

pros and cons of this possibility is the main subject of *A Clone of Your Own?*.

The initial chapters of the book introduce the reader to an interesting account of how people's attitudes, beliefs and fears about the power of science change with time and in response to landmark developments, such as the birth of test-tube babies. Additionally, the book includes a fascinating description of the negative effect that certain science-fiction books and movies have on the way people view science. This effect is derived mostly from science's ability to give humans the most distinctive power of God: the ability to create life. Two of the most prominent examples of such books and movies are Mary Shelley's *Frankenstein* and Aldous Huxley's *Brave New World*.

In the remaining chapters of the book, Arlene Judith Klotzko sheds light on the history of the efforts to clone mammals, as well as on future prospects. Special attention is paid to the various applications of cloning, such as its use for therapeutic purposes. Scientific information is given on how cloning can be combined with other biotechnology techniques, such as xenotransplantation and the production of transgenic animals, to help cure many of humanity's worst diseases. Also, the book provides important details of the cloning process and its possible adverse implications for the cloned organisms. Finally, a detailed presentation of the legal and moral issues that would arise from the various cloning applications in humans completes the discussion of

whether human cloning should be allowed.

Considering the massive attention given to cloning since the birth of Dolly the sheep, this book is likely to appeal to anyone with enough curiosity to find out what the excitement was all about. Despite its complex vocabulary, the book is easy to follow and both the content and style maintain a high level of interest.

*A Clone of Your Own?* could be valuable to advanced high-school biology teachers. Firstly, the information on the science of cloning and other related biotechnology applications is simple enough to be used directly as teaching material. Secondly, the book includes a number of the important questions that scientists had to answer as they attempted to unravel the mysteries of how complete organisms develop from single cells. The experiments designed and executed to answer these questions could be the subject of productive and insightful discussions in the classroom.

Apart from the scientific information provided, the book's most important contribution is perhaps the fact that it helps to dispel many irrational fears about cloning and its resulting products, which have terrorised people's imaginations for decades.

## Details

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