

# Editorial

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*B Sury, Associate Editor*

Woody Allen says, “I’m astounded by people who want to ‘know’ the universe when it’s hard enough to find your way around Chinatown.” Nevertheless, many scientists continue to pursue such things. Hot in the news is stem cell research. An aim is to artificially stimulate human egg cells to undergo a process called ‘parthenogenesis’ and take stem cells from the resulting embryos. Apparently, the team that cloned the sheep Dolly has been given permission to create human embryos from unfertilised eggs. It does happen among some insects and reptiles! What is more, a London firm claims it can extract the white blood cells from any human’s blood and turn them into a ‘stem-cell-like’ state. If so, there would be no need to bother with conventional stem cells. If this truly works, it would revolutionise the treatment of heart disease and Parkinson’s disease, as the cells could be turned into beating heart cells and nerve cells. Apparently, the technique used by this firm has successfully turned white blood cells into the blood-generating stem cells found in bone marrow. The hot subject of human cloning has several supporters now. Although the expected benefits to human beings from such research projects are fundamental, they are still controversial as, apart from fears about failure of the technology, there are ethical issues as well. For instance, it has been suggested that a cloned child may be burdened with the thought that it is a copy and not an original, which may demean its sense of individuality and self-esteem.

Supporters of human cloning are quick to point out that far from producing photocopies, important aspects like learning from the environment and memories cannot be passed on by cloning. All this makes one feel like Tweedledee when he says, “If it was so, it might be; and if it were so, it would be; but as it isn’t, it ain’t. That’s logic”.

All such research would not have been possible but for the funda-



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mental discoveries in modern biology. Perhaps one of the most famous Nobel Prizes was the one given to Crick, Watson and Wilkins for their discovery of the structure of the DNA. Every school child knows now what DNA is, but what every school child does not know is that the scientist featured in this issue, Rosalind Franklin, was very close to solving this mystery. It is only after looking at her X-ray photograph (Photo 51 of B-DNA reproduced on the cover page) that Crick and Watson came up with their double helix. The controversy surrounding this fundamental discovery is described in the Article-in-a-Box. After Rosalind Franklin quit working on the DNA (see Article-in-a-Box for a possible reason), she was a world leader in determining the molecular structure of viruses using X-ray crystallography.

Emmy Noether, one of the greatest mathematicians of all time was only allowed to lecture by advertising her courses under the name of a male contemporary like Hilbert. Sonya Kovalevsky had to enter into a marriage of convenience merely because she wanted to study at a university and young, unmarried women were not allowed to travel alone. However, both of them did earn the outstanding repute commensurate with their contributions from contemporary researchers. However, it seems not to be so with Rosalind Franklin. There are some extreme versions of her story but perhaps the most balanced point of view is presented by Maddox in her biography. Reading it, one does not feel Rosalind Franklin would have been difficult to get along with but rather gets the feeling that she simply expected to be appreciated and respected for her scientific work, a thing which any top male scientist takes for granted. If, indeed, Rosalind Franklin could not interpret her DNA data (as some had suggested), one might say tongue-firmly-in-cheek that it is due to her quest for thoroughness as already suggested by her name – an anagram of which is ‘Ran for skill in DNA’.

