

variability allowed pharmaceutical companies to bypass ethics in the developing world. Placebos also happen to reduce trial costs and provide better evidence.

Though India's clinical trial scenario receives nothing more than a few passing references, one can't help but draw parallels and wonder about the fate of pharmaceutical research in this

country. How is India going to respond in the wake of being dubiously hailed as the "global clinical trials hub"? With the inflow of clinical trials investments, will the Drugs Controller General of India beef up regulatory mechanisms? Or will clinical trials become a part of healthcare delivery for disadvantaged groups? At present, one can only guess.

How to catch a thief

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Frank Wells and Michael Farthing, (eds). Fraud and misconduct in biomedical research. London: The Royal Society of Medicine Press; 2008, pp 300 (paperback) Paperback ISBN 978-1-85315-786-8 45 £ UK

Fraud and misconduct have probably always existed in biomedical research and, as is evidenced by recent events, they are here to stay. Witness, for example, two recent cases, one in basic science from 2006, that of the Korean stem cell researcher Hwang Woo-Suk, and the other from clinical medicine in 2009 (after the book under review was published), that of Scott Reuben, the anaesthesia and pain researcher. Both of them published papers in leading journals in their field which changed the way we think about and practise science and medicine – until their fraud was detected. Thus, the authors begin the book with these appropriate words in the preface: "It is with some regret that a fourth edition of this book still has relevance today."

Fraud and misconduct in biomedical research, in its earlier avatar (with the redoubtable Stephen Lock as one of the editors) has been acclaimed as a masterpiece and this edition, which is largely rewritten, is meant to be a textbook for dealing with fraud. In this, the editors of the book have succeeded. The six sections of the book deal with the basics of fraud (value systems, issues in publishing and a definition of misconduct), a review of the history of fraud in North America and Europe, the prevention of fraud, how to detect fraud, how to investigate it and, finally, the way ahead.

The book reiterates that fabrication, falsification, plagiarism and theft are the four cardinal examples of fraud. Much of this is to achieve fame, financial gain, promotions and at times, to use Stephen Lock's term, because of a "Messiah complex". However, our changing values and a changing society have dictated that many things which would once have been considered entirely acceptable are now looked upon entirely differently. Richard Smith, ex-editor of the *BMJ*, discusses some of these ethical issues that arise in publication. These include, among other things, failure to obtain informed consent for research, failure to publish (!) or publishing too much. Informed consent is perhaps the best known aspect of research ethics and needs

no elaboration. But failure to publish, particularly if the results are negative, also constitutes misconduct. This is because, it is argued, it is the researchers' duty to publish, and because negative results rarely get published, this can result in a bias in favour of a treatment – which would be unscientific. Journals nowadays insist on patient consent even for the publication of case reports. I must confess that I had never understood the logic of this, but Smith explains why the *BMJ* started asking for this – and I now see the logic of it. Yet, Smith himself admits that they sometimes felt they were going too far in this and thus, there are still many unanswered questions about the appropriateness of consent in all cases.

About one third of the book deals with the methods of detection of research misconduct – appropriate indeed for a textbook. The means of doing this are varied and at many levels – right from using the electronic media to identify fraud to the use of audits to the use of appropriate statistical analysis to unearth fraud. There are explanatory examples – but the authors do not divulge all details. Of course, it makes sound sense not to reveal your hidden strengths to the enemy. It is interesting to learn that most cases of misconduct are brought to light because of whistleblowers. Yet most of these whistleblowers – as seen in numerous anecdotes in the book – suffer financially, professionally and mentally after blowing the whistle. Other thought-provoking bits of information in the book were these: research fraud is not considered by many, it appears, as heinous as financial fraud; none of the 26 cases of fraud in the UK (p 73) are by women; and as recently as 2007, 41% of over 200 leading biomedical journals gave no instructions about authorship criteria.

Can this book be improved further, in the next edition, perhaps? My only wish, or perhaps grouse, is that the book is largely West-centric. It is, of course, entirely up to the editors to decide who they wish their target audience to be (European and American), but given that they intend this to be a text, I believe they should address a larger, global audience. Indeed, while the preface states that the contributors are "from all corners of the world", I could only see contributors from Europe and the USA. Even the excellent histories of fraud are largely about cases from North America and Europe. Surely South America, Africa,

Asia and Australia have also had their share of problems with fraud - and certainly, all of us could learn valuable lessons from these. Russia and India are now centres of clinical trials and ethical issues (and thereby issues dealing with misconduct) have arisen in a considerable number of trials.

It is of course well known that India, like many other developing nations, lacks a proper mechanism to check fraud. This has

been discussed in some detail elsewhere (1). If the good guys are to stay ahead of the bad guys, they would do well to read this book and put the methods in it to good use.

Reference

1. Padma TV. Medical journals struggling to unearth research fraud [Internet]. UK: Science and development network; 2005 Aug 5 [cited 2009 Nov 19]. Available from: <http://www.scidev.net/en/health/news/medical-journals-struggling-to-unearth-research-fr.html>

Medical emancipation

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***My sister's keeper* (Curmudgeon Films 2009) Director: Nick Cassavetes, 109 minutes.**

"I was born for a very specific purpose. I wasn't the result of a cheap bottle of wine or a full moon or the heat of the moment. I was born because a scientist managed to hook up my mother's eggs and my father's sperm and come up with a specific combination of precious genetic material."

This comment by a teenaged Anna Fitzgerald sums up the fundamental nature of this frighteningly thought-provoking piece of art. *My sister's keeper* peeks into family dynamics, marvelously capturing the parent-child bond. Based on Jodi Picoult's novel by the same name, it traces the life of Anna Fitzgerald (Abigail Breslin) who lives in California with her parents, Sara (Cameron Diaz) and Brian Fitzgerald (Jason Patric), brother Jesse (Evan Ellingson), and her sister Kate (Sofia Vassilieva).

When Kate is diagnosed with promyelocytic leukemia at the age of two, the peaceful and joyful life of this family takes an ugly turn. Following the unofficial advice of the doctor, the parents decide to conceive another child exclusively with the intention of saving Kate's life. Anna, an allogenic donor, is genetically engineered to be a perfect match for her elder sister. She undergoes innumerable surgeries and donates genetic material, including blood and bone marrow, to keep her sister alive. Because of her sister's dependence on her, Anna is unable to live the life she wants. The parents make Kate the epicentre of their lives, and struggle each day to keep her alive, often overlooking the other two children in the house.

Kate suffers from relapses despite infusions of stem cells from her sister's umbilical cord, as well as platelets and bone marrow. When she goes into renal failure, the parents want Anna to donate a kidney to Kate. Having spent her life in the shadow of her elder sister's illness, the time comes when Anna starts questioning her own existence and the purpose of her life. Tired of being a living donor for her sister, she does the most improbable - she hires a "91% successful lawyer", Campbell Alexander (Alec Baldwin), to get her rights to her own body. She confidently files a lawsuit against her own parents demanding "medical emancipation" - the right of a minor to decide on

her own medical treatment. She asks the court to take this authority away from her parents.

This evokes sundry reactions. Anna's father understands her need to be heard, but her mother - a lawyer turned homemaker is determined to lengthen Kate's life and moves to fight the battle in the court. As the legal case proceeds, a speech in the courtroom twists the reality of the case, bringing to light the most decisive part of the movie.

Underlining the physical and psychological ordeal faced by a family to keep a sick child alive, *My sister's keeper* brings to the forefront several ethical and moral dilemmas. Is it morally correct to do whatever it takes to keep one's child from dying? In this quest, how ethical is it to infringe the rights of the other child? Is it ethical to focus on one child at the cost of neglecting the other children? Is it ethical to bring a life into the world with a vested stake? Under what conditions, should medical emancipation be granted? Should it be granted at all? Is there an appropriate age to seek rights on one's own body? Ethical issues regarding genetic engineering of humans and distributive justice also emerge. (Treatment in medical establishments undertaking work of this nature is costly and not accessible to the majority of people.)

The film underlines the pivotal issue of medical emancipation of minors. Obstacles faced in organ transplantation are also succinctly mirrored when the family pressurises Anna to donate her kidney to her elder sister.

This movie is a string of scenes brilliantly shot and woven together by admirable acting: when love sprouts in Kate's life even as she is undergoing treatment, Kate walking down the stairs of her house to go for a party, Kate's visit to the beach, the proceedings of the case in the courtroom... such scenes will stay long in my memory. Nick Cassavetes has successfully dealt with a complicated subject, reflecting the different points of views thoughtfully. Powerful dialogues add magic to the tale. "There is no shame in dying," says the judge in a conversation. Good editing, the topicality of the subject, a harmonious soundtrack and a distinguished cast with well-defined characters all make this a moving film.