

Teaching Scientists the Value of Virtue

BY JUSTIN OAKLEY

Science students must be taught to act with integrity when faced with fraudulent research, as well as how to deal with the pressures applied to whistleblowers.

US President Barack Obama's announcement of his administration's support for science and the need to take "bold action" in tackling major challenges like climate change and bioethics (see pp.26–27) reminds us of the importance of protecting integrity in science.

As the fraudulent cloning claims of South Korean stem cell researcher Prof Hwang Woo-Suk demonstrate, strong government pressure on scientists to achieve rapid results can compromise scientific integrity. What bold action can be taken to preserve scientific integrity when the pressure is on?

External oversight of research through an office of scientific integrity is part of the answer (see *conScience*, Jan/Feb 2009, p.41), but we also need to attend to the arguably more fundamental matter of a scientist's character. Recent advances in medical ethics education can point the way for science educators to instill in their graduates a more robust sense of the importance of integrity in their professional lives.

Poor role models in the health care workplace are major factors in determining whether medical graduates act on the ethical principles taught to undergraduates. However, some clinicians continue to regard ethical analysis of decisions as pointless, believing that ethics is too time-consuming and that there are "no right answers" anyway.

The corrosive influence of such clini-

cians on medical graduates is commonly referred to as the "hidden curriculum" in medicine. We can actively combat this phenomenon.

Innovative experiential approaches to teaching medical ethics developed by A/Prof Thomas Faunce at the Australian National University and Dr Stephen Bolsin, a whistleblower from the Bristol Royal Infirmary who is now at Geelong Hospital, have had considerable success in helping medical graduates to counter the hidden curriculum.

Medical ethics is often taught by providing students with ethical frameworks promoting the best consequences or acting according to various duties and codes. However, these often have little to say about the importance of an individual's character, personally or professionally.

By contrast, the ancient notion of virtue emphasises the sort of character an individual expresses in their decisions and actions. Contemporary approaches to ethics based on virtue have enjoyed resurgence recently, and educators teaching ethics in faculties of medicine, nursing, law, business, and journalism have embraced them to good effect.

Faunce and Bolsin extend the teaching of virtue ethics by adding a substantial component of experience. Medical students learn directly from individuals who have expressed professional integrity in blowing the whistle on colleagues' unethical behaviour. Students are then immersed in a simu-



lated whistleblowing situation over an extended time, and experience how it feels to report on corrupt colleagues and what the aftermath of such actions can be.

There is good reason to believe this approach to teaching virtue ethics can help imbue medical graduates with the resilience they need to resist the influence of negative role models in the workplace.

As governments look increasingly to scientists to help deliver communities from the evils of climate change and global pandemics, it is time the educators of future scientists take similar steps. Whether or not science has a hidden curriculum akin to medicine, science graduates do encounter colleagues with negative attitudes to ethics, as do graduates in any profession.

Science educators need to help graduates develop a robust commitment to acting with integrity in their professional lives. Students should come to appreciate how it feels to be exposed to negative role models in the workplace, and how to resist their influence.

Employing the sorts of experiential approaches used successfully in medicine could enhance the teaching of virtue ethics and other ethical frameworks to science students. Scientific integrity needs to be protected from within as well as without, lest it be sacrificed in the name of progress. Otherwise we all end up paying the price.

A/Prof Justin Oakley is Director of the Centre for Human Bioethics at Monash University. *conScience* is a column for Australians to express forthright views on national issues. Views expressed are those of the author.