

'Zero tolerance' for research misconduct here

Institutions take steps to safeguard scientific integrity after data falsification scandal

Lin Yangchen

Research institutions here have reaffirmed their commitment to safeguarding scientific integrity and taken steps to drive home its importance to researchers, in the wake of a data falsification scandal in publicly funded research that rocked three institutions here last week.

Ongoing investigations by Nanyang Technological University (NTU) have already led to the retraction of six academic papers in international journals, the termination of principal investigator Ravi Kambadur's joint appointments at NTU and the Agency for Science, Technology and Research (A*Star), and the revocation of the PhD degree of co-author Sudarsanareddy Lokireddy.

Worldwide, scientific fraud is not generally considered a criminal offence and there is no legislation in Singapore that explicitly deals with it, except in the case of ethical misconduct in human biomedical research.

In total, 23 authors were involved in the six retracted papers. NTU research integrity officer Tony Mayer said NTU has "zero tol-

erance towards research misconduct", and requires all researchers to sign a declaration that they will uphold research integrity, and deposit their research records in a central system.

Other major research institutions here have similar policies.

Professor Steven Miller, vice-provost of research at Singapore Management University, said the university has policies to uphold high standards of integrity and to investigate any allegations of research misconduct.

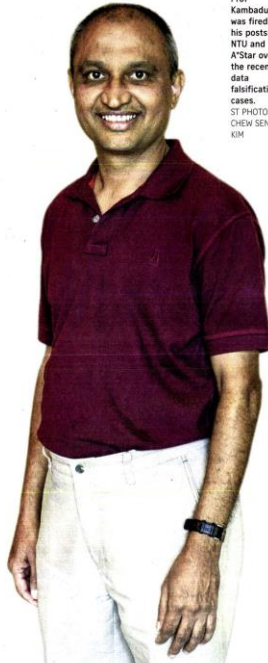
And Professor Martin Dunn, associate provost of research at the Singapore University of Technology and Design (SUTD), said the university has a research integrity code (RIC) based on the Singapore Statement on Research Integrity.

This statement was developed by participants from 51 countries at the second World Conference on Research Integrity in 2010.

He added: "In the light of recent events, SUTD held a training session with researchers as recently as early July, to highlight the importance of the RIC, and raise awareness of these issues.

"With regard to research malpractice, we adopt an approach of strict zero tolerance, protection of whistle-blowers, and recognition of model behaviour."

DISHONEST ACTS continued on B15



Prof Kambadur was fired from his posts at NTU and A*Star over the recent data falsification cases. ST PHOTO: CHEW SENG KIM

Scandals in the scientific community

The tower of scientific exploration and discovery is periodically shaken by tremors of research misconduct in both academic and industry labs.

Take the example of Ms Haruko Obokata of top Japanese research organisation Riken, who lost her PhD last year and whose collaborator committed suicide after discrepancies were found in her data and others were unable to reproduce her purported success in reprogramming adult cells to function as stem cells.

Singapore's scientific community is not immune either.

Major research malpractice cases in the past include that of Dr Simon Sharov, who was fired from his position as head of the National Neuroscience Institute in 2003 for conducting tests on Parkinson's disease patients without their informed consent.

In 2012, the National University of Singapore uncovered evidence of fraud in 21 papers authored by Dr Alirio Melendez, resulting in at least five retractions.

Two years later, the university was compelled to review its recruitment process after it emerged that former faculty member Anoop Shankar had faked his credentials.

And earlier this year, while investigations on the myostatin scandal were ongoing, it was reported that Nanyang Technological University had retracted 11 papers authored by Dr Noel Chia and his colleagues on the topic of special education, over ethical doubts and lack of primary data to authenticate their research.

Lin Yangchen

When some add dishonesty to the equation

FROM B13

The research under scrutiny in the latest case concerns myostatin, a protein that has been the centre of attention in obesity control and slowing down muscle degeneration since at least the 1990s.

The impact of the falsifications on the sciences and its applications to healthcare is not yet clear.

Dr Lee Chung Horn, an endocrinologist (hormone specialist) at Gleneagles Medical Centre, said that no myostatin-linked therapies are currently in use, but added: "Still, scientists are held to an ethical code of intellectual honesty."

Although 23 authors were involved in the six retracted papers, not all of them may be guilty of wrongdoing. A large-scale scientific study typically has many components and collaborators, scientists pointed out.

Scientific fraud generally surfaces when a whistle-blower raises the alarm, or when other researchers cannot replicate the results.

A senior scientist who wished to remain anonymous said: "When you have thousands of scientists, there may be one or two undesirable characters who will cheat."

He added that competition and the pressure to produce results might be motivations. "The system can induce people who are too obsessed with key performance indicators (KPIs) to do this for short-term gains such as funding."

KPIs for scientists often include the number of papers and the impact factors of the journals in which they are published, which some scientists have argued are not the best determinants of the quality of research.

As the latest investigation continues here, questions still remain over who else will be fingered and the implications of the fraud.

Mr Lokireddy, who did his PhD at NTU before moving on to Harvard, is still listed on the Harvard Medical School website as a post-doctoral

23

Number of authors involved

6

Number of papers retracted