BMJ 2015;351:h5694 doi: 10.1136/bmj.h5694 (Published 28 October 2015)

EDITORIALS

A major failure of scientific governance

Public inquiry is needed to learn from an egregious case

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Today *The BMJ* retracts a 1989 paper by R K Chandra,[1 2] a Canadian scientist who recently lost a libel case against the Canadian Broadcasting Corporation (CBC). The broadcaster had accused him in television programmes of scientific fraud and financial deception.[3 4] Chandra has had one other paper retracted,[5] but it seems probable that many of his published studies are fraudulent. This long running and still unresolved saga raises serious questions about the governance of science and calls for a comprehensive response.

The BMJ started the process that led to the Canadian programmes when in 2000 it asked Chandra's university, the Memorial University of Newfoundland, to investigate a study submitted to the journal that the editors thought might be fraudulent.[3]

Unknown to *The BMJ* editors, the university had already done an investigation in 1994-95, which concluded that "scientific misconduct had been committed by Dr Chandra." The allegations had been made by the university's professor of paediatrics. The investigating committee faced great difficulties. It noted that "no raw data (or files) of any kind were exhibited"; it could not "identify anyone who did or remembers a significant amount of the work"; and "the coauthors of the papers had little or very likely nothing to do with the work." There were no hospital records to support the study, which the committee found "unbelievable."

The university did not publish the committee's report, did not alert the editors of journals that had published the studies, and took no action against Chandra. The report came into the public domain only through the recent CBC libel case. The university has now told *The BMJ* that the report was not released because it was "flawed … and could not be relied upon." However, in the 2006 television programmes the university representative said that the university had dropped the case because Chandra threatened to sue: "There would," said the representative," be loss of reputation, loss of income, etc."[4]

The BMJ's exchanges with the university in 2000 elicited yet another story. The university said there was no problem with the study Chandra had submitted. *The BMJ* asked the university what form its investigation had taken and was eventually told that Chandra had resigned from the university and left the country and that the university could do no more. It did not mention its earlier investigation.

The BMJ rejected Chandra's paper, but *Nutrition* published it in 2001. *The BMJ* notified *Nutrition* about its anxieties and the paper was eventually retracted in 2005.[5] The CBC programmes, broadcast in 2006,"uncovered a pattern of scientific fraud and financial deception dating back to the '80s."[4] Studies for which Chandra had received substantial funding had simply not been done. He had also started a vitamin pill business, using his fraudulent studies to encourage sales, and when he sued the CBC he claimed losses from his business of $125m (£81m; €110).

The three programmes, in which one of us (RS) appeared, are convincing and damning.[4] Yet still the university and Canadian authorities did nothing. Chandra sued the CBC for $132m (included damages for the libel and invasion of privacy). He also sued the university, but as part of a settlement agreement the university promised to consider Chandra for an emeritus professorship "in the same manner as any other nominee." CBC fought and won the case in a trial lasting some three months in the summer of 2015; one of us (RS) gave evidence on behalf of CBC.

Despite Chandra losing the trial, the university and Canadian authorities have still taken no action. *The BMJ* asked the university to release the report on its investigation from the 1990s, but it has declined, repeating that the investigation process was flawed but not saying why. *The BMJ* also put 20 questions to the university, but it has declined to answer most of them (the questions and available answers are provided as a data supplement). The university has said, however, that a long process is nearing completion and that there may be news within months. Now that the report from the 1990s is in the public domain, *The BMJ* has sent copies to the editors of journals that published the relevant studies; it has also sent a copy to the *Lancet*, suggesting that it look further at its 1992 paper that reported on the same study as the paper retracted from *Nutrition*.[6]

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Extra material supplied by the author (see http://www.bmj.com/content/351/bmj.h5694?tab=related#datasupp)

Questions put by *The BMJ* to the president of the Memorial University of Newfoundland in September 2015, in relation to the work of R K Chandra

It has taken a quarter of a century for a study that is clearly fraudulent to be retracted. Many more of Chandra's hundreds of published studies may be fraudulent. All human activity includes misconduct, and there will be rogue scientists. What matters is how we respond when it occurs. This saga highlights a collective failure to defend the integrity of science. It is shameful that the university, Canadian authorities, and other scientific bodies have taken no action against Chandra and that is has been left to the mass media to expose his fraud. The biggest failing lies with the university. As Liam Donaldson, once England's chief medical officer, has said: "To err is human, to cover up is unforgivable, and to fail to learn is inexcusable."[7]

The university, the Canadian authorities, and the world of science now have a chance to learn from this case. We suggest that the Canadian government institute an independent public inquiry into the case and share its learning with the world. Calls are increasing for research misconduct to become a criminal offence on the grounds that universities too often fail to respond to misconduct and that the police know how to investigate effectively.[8] Science still has time to put its own house in order, but that time may quickly pass.

Competing interests: We have read and understood BMJ's policy on declaration of interests and declare the following interests: RS was the editor in chief of *The BMJ* from 1991 to 2004. He asked the Memorial University of Newfoundland to investigate Chandra's paper submitted to the journal in 2000 and subsequently notified *Nutrition* of the journal's suspicions. He appeared in the CBC programmes and gave evidence on behalf of CBC in the libel trial against it. He had his expenses paid to travel to Toronto (economy class) but was not paid a fee. FG is the current editor in chief of *The BMJ* and is responsible for all it contains.

Provenance and peer review: Commissioned; not externally peer reviewed

1 Retraction. *BMJ* 2015;351:h5682.
2 Chandra RK, Puri S, Hamed A. Influence of maternal diet during lactation and use of formula feeds on development of atopic eczema in high risk infants. *BMJ* 1989;299:228.
3 White C. Ranjit Chandra: how reputation bamboozled the scientific community. *BMJ* 2015;351:h5683.
4 CBC. The secret life of Dr Chandra parts 1-3. www.youtube.com/watch?v=gKYr1VerT4A; www.youtube.com/watch?v=2R7-QM8eKCM; www.youtube.com/watch?v=YbQNlm7sw5A.
5 Chandra RK. Effect of vitamin and trace-element supplementation on cognitive function in elderly subjects. *Nutrition* 2001;17:709-12.
6 Chandra RK, Effect of vitamin and trace-element supplementation on immune responses and infection in elderly subjects. *Lancet* 1992;340:1124-7.
7 Donaldson L. CMO quotes: patient safety. 2004. http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Aboutus/MinistersandDepartmentLeaders/ChiefMedicalOfficer/CMOPublications/QuoteUnquote/DH_4102570.
8 Call the cops. *Nature* 2013;504:7.

Cite this as: *BMJ* 2015;351:h5694