

Science fraud: Journal urges China to show 'integrity'

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Leading medical journal The Lancet on Friday urged China to tighten measures against scientific fraud after dozens of papers written by two teams of Chinese chemists were found to be faked.

"For (President) Hu Jintao's goal of China becoming a research superpower by 2020 to be credible, China must assume stronger leadership in scientific integrity," the British weekly warned.

"China's government needs to take this episode as a cue to reinvigorate standards for teaching research ethics and for the conduct of the research itself, as well as establishing robust and transparent procedures for handling allegations of [scientific misconduct](#) to prevent further instances of fraud."

The call came after a specialist journal called Acta Crystallographica Section E uncovered extensive fraud in Chinese-authored papers that were published in 2007.

The studies purported to announce the invention of at least 70 structures in crystallography, or the study of the arrangement of atoms in solids. Crystallography is a key tool in materials science.

In an article dated December 19 on its website, Acta Crystallographica Section E said the [falsification](#) entailed taking bona-fide structures that had already been invented and changing one or two atoms to make the compound seem new.

The con had been belatedly spotted thanks to a computer programme that compares molecular structures, its editors said.

Two groups, one led by Hua Zhong and the other by Tao Liu, both of Jingtangshan University, Jian, in the eastern province of Jiangsu, are incriminated, it said.

Zhong's group has retracted 41 papers, and Liu's group 29, according to the journal, which says the tally of 70 frauds "is likely" to rise further.

The publication is open-access, meaning it is available for free on the Internet. The journal charges authors 150 dollars to print their papers, a fee that it says helps meet the costs of journal production and a "detailed and exhaustive [peer review](#)."

Peer review -- assessment of data by independent scientists of high standing -- is the traditional cornerstone of excellence in science publishing.

But a string of scandals over the last half-dozen years has caused the system to be closely questioned.

In the most notorious case, South Korean researcher Hwang Woo-Suk hoodwinked the prestigious US journal Science in 2004 and 2005 with claims that he had created the world's first stem-cell line from a cloned human embryo and developed 11 patient-specific embryonic stem-cell lines.

The claims raised hopes of new treatments for diseases such as cancer, diabetes and Parkinson's.

Disgraced when the fraud was unmasked, Hwang was sentenced last October to a two-year suspended prison term for embezzlement of

research funds and ethical breaches.

Chinese scientists have become prolific publishers, accounting for 11.5 percent of the 271,000 papers that graced science journals in 2008, according to monitoring organisations.

Acta Crystallographica Section E is published by the International Union of Crystallography, headquartered in the northern English town of Chester.

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