

Questions raised; U investigating stem cell study

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For a third time, the British magazine New Scientist spotted potential problems in a University of Minnesota report. Dr. Jizhen Lin defended his research.

A prestigious University of Minnesota research center is under scrutiny again following a magazine report about the possible manipulation of data in several studies on stem cell technology.

University officials confirmed Thursday that they are looking into questions raised by the British magazine New Scientist about research by Dr. Jizhen Lin, a scientist at the university's Stem Cell Institute. The magazine said it found what appeared to be "duplicated and manipulated images" in Lin's published studies dating back to 2001.

Lin defended his research in an interview with the Star Tribune on Thursday, saying he used accepted techniques to illustrate an experiment on the use of stem cells to treat hearing loss. "We are not trying to falsify the data," he said.

It is the third time that disclosures by the magazine have prompted an internal University investigation into research at the Stem Cell Institute. In the past two years, it also has challenged studies by Dr. Catherine Verfaillie, a world-famous researcher who once led the institute. One of her studies was later retracted because of fraudulent data.

On Wednesday, the magazine reported that a study published in December by Lin, listing Verfaillie as a coauthor, used what appeared to be duplicate images to illustrate different findings. The magazine said a close examination also raised questions about whether some images had been manipulated or "spliced together."

"After combing through more of Lin's research, we found possible duplications within images in six further papers, published between 2001 and 2007," the magazine reported. It notified the university of its findings in April.

The university issued a statement confirming that it had begun an inquiry.

"When an allegation of misconduct is made, we examine the evidence thoroughly and fairly," the statement said, "taking appropriate action to ensure that our standard of conduct is upheld and that the integrity of the scientific record is protected." Officials said there would be no further comment because the matter is under review.

Verfaillie brought the University international attention early in this decade because of the potential for stem cells to treat incurable illnesses.

The New Scientist found similar duplication of images in three previous studies coauthored by Verfaillie, who has since left the university. Verfaillie apologized after two separate university investigations confirmed the problems in her research or found additional ones.

In 2007, after the first New Scientist report, a university panel found flaws in one of Verfaillie's groundbreaking 2002 studies, of how adult stem cells can be turned into other types of cells. Last year, a second investigation concluded that a 2001 study led by Verfaillie contained falsified data, including four images had been intentionally altered. The inquiry cleared Verfaillie of wrongdoing, blaming a graduate student.

On Thursday, Lin, an assistant professor in the department of otolaryngology, acknowledged that some duplicate images had appeared in his paper. But he said they were not misleading; they were

images of the same gene used as a control in multiple experiments. He said the images were used this way to “show what we have observed.”

Verfaillie, who was one of several coauthors on the paper, could not be reached for comment.

Peter Aldhous, one of the authors of the New Scientist report, has been investigating stem cell research at the university since 2005. He said he began out of curiosity when other scientists were unable to replicate some of Verfaillie’s early work on adult stem cells.

Larry Goldstein, an embryonic stem cell researcher at the University of California, San Diego, said it is rare for such repeated investigations to be connected to one researcher.

“It’s still not clear whether they were a case of sloppiness or deliberate alteration,” he said.

“Scientists are like all other people. Virtually all are fundamentally honest, trying to do a good job. When you investigate, you are going to find deviation.”

He said scientific journals are not likely to catch deliberate falsification or errors, because the scientists who review studies are not cops. “Reviewers have to believe that what they were given was honestly put together,” he said.

He believes that most research papers would stand up to this kind of scrutiny. At the same time, he said, “there are many fine scientists at the University of Minnesota and my faith in them is unaltered.”

Staff writer Josephine Marcotty contributed to this story. Maura Lerner •612-673-7384

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