

ASIA PACIFIC

Japan Center Questions Stem Cell Breakthrough

By MARTIN FACKLER APRIL 1, 2014

TOKYO — A study once hailed as a breakthrough in creating stem cells contained fabricated and doctored images that cast doubt on its findings, a Japanese research institute concluded on Tuesday in a blistering investigation into a case that has become a major embarrassment for the country's scientific community.

The report, by the government-supported Riken institute, singled out the study's lead author, Haruko Obokata, a stem cell biologist at the institute's Center for Developmental Biology in Kobe, saying she had altered or misrepresented the illustrations in her research papers. Just a few weeks ago, Ms. Obokata, 30, was lionized in local news media as a scientific prodigy who could be considered for a Nobel Prize.

Riken, one the biggest and most prestigious scientific institutes in Japan, assembled a panel of experts to review a list of irregularities in two papers that a group led by Ms. Obokata published in January in the journal *Nature*. An interim report in early March found that the study contained mistakes. On Tuesday, the panel took a more aggressive stance, concluding that the papers contained serious flaws and should be retracted.

In a statement issued through her lawyer, Ms. Obokata refused to retract the research. She disputed the institute's conclusion that she had intentionally falsified data, saying that she would appeal its findings.

"I absolutely cannot accept the conclusion that research was fabricated and doctored," the statement said.

The panel said three other co-authors did not participate in the falsification of the images. But it did fault them for failing to notice irregularities.

Ms. Obokata grabbed national headlines by leading a team of scientists

who said they had succeeded in finding what appeared to be a remarkably simple way of creating stem cells from regular mouse cells, by immersing them in an acidic bath. She called the newly created cells STAP cells, for stimulus-triggered acquisition of pluripotency, a term that refers to the ability of stem cells to turn into any other type of cell.

In embryos, that ability allows stem cells to grow into anything from muscle to brain cells. Researchers hope to use it in future medical treatments that could allow them to regenerate damaged nerves or other tissues or even grow entire organs.

While Riken said on Tuesday that the papers contained multiple problems, it shied away from saying whether the group had actually succeeded in creating STAP cells, declaring that more research was needed. Such cells have been highly controversial among scientists, with some saying that they could not reproduce Ms. Obokata's research results.

Riken opened its investigation after doubts about the group's research began surfacing in the scientific community soon after the publication of the papers. The inquiry's focus included images of what were supposed to be two different placentas that proved to be identical, images that looked as if they had been spliced together, and photos of cells that appeared to have been lifted out of Ms. Obokata's 2011 doctoral dissertation describing an entirely different experiment.

Riken said that Ms. Obokata told the experts that she had used the images from her dissertation by mistake. It called her explanation unconvincing, saying that the use of the images had "destroyed the credibility" of data used in the papers in Nature.

The panel also found that she had manipulated images by cutting and pasting them together. It said she told the panel that she did this to make the image appear neater, and that she did not know that this was unethical.

At a news conference, Riken's president, Ryoji Noyori, a Nobel Prize-winning chemist, said, "Unfortunately, within the collaboration between researchers in the current case, research misconduct occurred due to a young researcher's lack of experience and awareness of the importance of research ethics, the lack of leadership among researchers in a position to help her, and a lack of mutual verification among the groups."

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