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Nobel prizewinner's paper retracted

A paper in *Nature* co-authored by Nobel prizewinning scientist Linda Buck has been retracted after the researchers were unable to reproduce the results. The authors now report that they have found "inconsistencies" between the original data and the data published in 2001.

The retracted paper (Z. Zou, L. F. Horowitz, J. -P. Montmayeur, S. Snapper and L. B. Buck *Nature* 414, 173–179; 2001) describes tracing individual neural pathways from scent receptors in the nose through to the brain's olfactory cortex. Researchers in Buck's lab, then at Harvard Medical School in Boston, Massachusetts, produced transgenic mice that expressed a plant protein in neurons that have a specific odour receptor. The plant protein can travel across the junctions between neurons, allowing researchers to map neuronal networks by pinpointing the protein's location.

But researchers in Buck's lab, now at the Fred Hutchinson Cancer Research Center in Seattle,

Washington, have since been unable to reproduce the original results. A subsequent review cast doubt on the validity of the published data. "There were inconsistencies in the data that were in figures contributed to the paper by the first author compared to the original data," says Buck. "I would say that we have totally lost confidence in the conclusions of that paper."

A synopsis of author contributions, published together with the retraction (see page 120), lists co-first-author Zhihua Zou as solely responsible for providing data and figures for the paper. Zou, now a researcher at the University of Texas Medical Branch in Galveston, did not respond to *Nature's* requests for comment. Lisa Horowitz, who shared first authorship with Zou and continues to work in Buck's lab, was credited only with providing reagents and designing experiments.

Harvard Medical School has formed an ad hoc committee to review the retraction, and Buck has asked the Fred Hutchinson Cancer

Research Center to review two later publications on which Zou was the lead author. "It's disappointing of course," says Buck. "The important thing is to correct the literature." The retracted paper has been cited 138 times, according to Thomson Scientific's ISI Web of Knowledge.

But the retraction will probably have only a minor effect on the field, says olfactory-neuron researcher Hitoshi Sakano of the University of Tokyo, Japan. Other researchers have corroborated some of the paper's results using other techniques, he notes. Neuroscientist Gilles Laurent of the California Institute of Technology in Pasadena, whose work on insect olfactory networks has occasionally conflicted with the results reported by Buck's lab, says that this has not hindered his research. "These questions are sufficiently complex and require such large amounts of data at high resolution that I have never considered them convincingly resolved in any system," he says. ■

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