# Nobel winner declares boycott of top science journals

## Randy Schekman says his lab will no longer send papers to Nature, Cell and Science as they distort scientific process

**Ian Sample**, science correspondent
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Randy Schekman, centre, at a Nobel prize ceremony in Stockholm. Photograph: Rob Schoenbaum/Zuma Press/Corbis

Leading academic journals are distorting the scientific process and represent a "tyranny" that must be broken, according to a Nobel prize winner who has declared a boycott on the publications.

Randy Schekman, a US biologist who won the Nobel prize in physiology or medicine this year and receives his prize in Stockholm on Tuesday, said his lab would no longer send research papers to the top-tier journals, Nature, Cell and Science.

Schekman said pressure to publish in "luxury" journals encouraged researchers to cut corners and pursue trendy fields of science instead of doing more important work. The problem was exacerbated, he said, by editors who were not active scientists but professionals who favoured studies that were likely to make a splash.

The prestige of appearing in the major journals has led the Chinese Academy of Sciences to pay successful authors the equivalent of $30,000 (£18,000). Some researchers made half of their income through such "bribes", Schekman said in an interview.

Writing in the Guardian, Schekman raises serious concerns over the journals' practices and calls on others in the scientific community to take action.

"I have published in the big brands, including papers that won me a Nobel prize. But no longer," he writes. "Just as Wall Street needs to break the hold of bonus culture, so science must break the tyranny of the luxury journals."

Schekman is the editor of eLife, an online journal set up by the Wellcome Trust. Articles submitted to the journal – a competitor to Nature, Cell and Science – are discussed by reviewers who are working scientists and accepted if all agree. The papers are free for anyone to read.

Schekman criticises Nature, Cell and Science for artificially restricting the number of papers they accept, a policy he says stokes demand "like fashion designers who create limited-edition handbags." He also attacks a widespread metric called an "impact factor", used by many top-tier journals in their marketing.

A journal's impact factor is a measure of how often its papers are cited, and is used as a proxy for quality. But Schekman said it was "toxic influence" on science that "introduced a distortion". He writes: "A paper can become highly cited because it is good science - or because it is eye-catching, provocative, or wrong."

Daniel Sirkis, a postdoc in Schekman's lab, said many scientists wasted a lot of time trying to get their work into Cell, Science and Nature. "It's true I could have a harder time getting my foot in the door of certain elite institutions without papers in these journals during my postdoc, but I don't think I'd want to do science at a place that had this as one of their most important criteria for hiring anyway," he told the Guardian.

Sebastian Springer, a biochemist at Jacobs University in Bremen, who worked with Schekman at the University of California, Berkeley, said he agreed there were major problems in scientific publishing, but no better model yet existed. "The system is not meritocratic. You don't necessarily see the best papers published in those journals. The editors are not professional scientists, they are journalists which isn't necessarily the greatest problem, but they emphasise novelty over solid work," he said.

Springer said it was not enough for individual scientists to take a stand. Scientists are hired and awarded grants and fellowships on the basis of which journals they publish in. "The hiring committees all around the world need to acknowledge this issue," he said.

Philip Campbell, editor-in-chief at Nature, said the journal had worked with the scientific community for more than 140 years and the support it had from authors and reviewers was validation that it served their needs.

"We select research for publication in Nature on the basis of scientific significance. That in turn may lead to citation impact and media coverage, but Nature editors aren't driven by those considerations, and couldn't predict them even if they wished to do so," he said.

"The research community tends towards an over-reliance in assessing research by the journal in which it appears, or the impact factor of that journal. In a survey Nature Publishing Group conducted this year of over 20,000 scientists, the three most important factors in choosing a journal to submit to were: the reputation of the journal; the relevance of the journal content to their discipline; and the journal's impact factor. My colleagues and I have expressed concerns about over-reliance on impact factors many times over the years, both in the pages of Nature and elsewhere."

Monica Bradford, executive editor at Science, said: "We have a large circulation and printing additional papers has a real economic cost ... Our editorial staff is dedicated to ensuring a thorough and professional peer review upon which they determine which papers to select for inclusion in our journal. There is nothing artificial about the acceptance rate. It reflects the scope and mission of our journal."

Emilie Marcus, editor of Cell, said: "Since its launch nearly 40 years ago, Cell has focused on providing strong editorial vision, best-in-class author service with informed and responsive professional editors, rapid and rigorous peer-review from leading academic researchers, and sophisticated production quality. Cell's raison d'etre is to serve science and scientists and if we fail to offer value for both our authors and readers, the journal will not flourish; for us doing so is a founding principle, not a luxury."

• This article was amended on 10 December 2013 to include a response from Cell editor Emilie Marcus, which arrived after the initial publication deadline.

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