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Science

Predatory publishers earned \$75 million last year, study finds

By John Bohannon

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Need to get your research published? Don't want to be hassled by peer review or editorial quality control? You are in luck: There are thousands of scientific journals waiting to publish it right away, for a fee.

A new study finds that the fake journal business is booming—and puts some hard numbers on this murky academic underworld. Last year alone, so-called predatory publishers took in about \$75 million and published nearly half a million articles, researchers report today online in *BMC Medicine*.

"It took more than half a year to finish the data collection," says Cenyu Shen of the Hanken School of Economics in Helsinki, who conducted the survey with fellow information systems scientist Bo-Christer Björk. With some help from undergrad students, the team combed through hundreds of discredited academic journal websites to gather basic data.

Where did they get their list of predatory publishers? From Jeffrey Beall, the librarian at the University of Colorado, Denver, who both coined the phrase and for years has curated <u>an</u> <u>online black list of publishing bad guys</u>. Those on the list are "the worst of the worst," Beall says. "In the vast majority of cases there is almost universal agreement that any particular publisher or journal deserves to be on the list. These are journals that sport fake impact factors, that promise a 1-week peer review, that publish tons of papers that contain plagiarism, and that annoy researchers worldwide with doltish spam."

Beall's list has come a long way from its origins on a personal blog in 2010. Not only does he now provide a <u>long list of the criteria</u> that land a publisher on the list, there is now a formal process for getting off it. The appeals are handled by an external board of advisers. Running this operation "has pretty much taken over my life," Beall notes, adding that his university has stuck by his side to defend him from a stream of lawsuits from publishers.

Controversial or not, Shen and Björk wanted some basic data about this predatory population. They started by simply counting the number of journal titles published by the 1030 publishers on Beall's list as of September 2014, which includes 416 single-journal publishers. They

identified 11,873 journal titles.

A full probe of all of those journals would have been a herculean task, so they devised a sampling method to estimate the features of the whole. First they divided the publishers into groups based on how many journals they published (more than 100, 10–99, 2–9, or 1). They then took a random sample of the publishers within each group, a random sample of each publisher's journals, and finally, they chose five random articles from those journals to gather data about the studies and authors.

The results show that the fake journal business is very robust. The team estimates that 420,000 articles were published in these journals in 2014 at an average price of \$178. Mirroring the results of a 2013 sting operation by this author, the team found that most of the publishers are based in developing countries in Asia, with India leading the pack with 27%. What's new is their finding that the authors who publish in these journals by and large come from the same regions: India leads with 35% of authors, and more than 75% hail from Asia or Africa.

"The breadth and growth of predatory journals are astonishing and concerning," says Jocalyn Clark, a public health researcher at the University of Toronto in Canada, and a veteran of scientific training and publishing in the developing world. "I remain convinced that the market for these fake journals is endless."

But dismissing this as a problem limited to the developing world is missing the point, she notes. "What is a nuisance for rich-country researchers (constant emails) is a major corruption for developing-country science—a corruption of the legitimate and vital open-access publishing model and a corruption of the vast funds, much of which are public, invested in global health research. That institutions and especially donors are not doing more to ensure their scientists' work is not lost to predatory journals is, to me, a scandal."