

## UGC-CARE initiative to promote research quality, integrity and publication ethics

*Bhushan Patwardhan and Archana Thakur*

Research and innovation involve rigorous scientific efforts in the search of truth, and creation of new knowledge contributing to socio-economic benefits for global good. Responsible conduct, academic integrity and publication ethics are central to education and scientific research. It is important to improve quality, safeguard ethics and prevent academic misconduct, including plagiarism. Serious concerns regarding fake science and knowledge crisis have been raised, appealing to faculty members, scientists and other stakeholders. The need to take a firm stand against any fakery and contradict those who promote it has also been stressed<sup>1</sup>. Increased incidence of compromised publication ethics and deteriorating academic integrity are a growing global problem contaminating all domains of research. And India is no exception.

To understand this problem, it is necessary to appreciate the vastness, diversity and complexity of the Indian higher education system. The University Grants Commission (UGC), New Delhi, is a statutory organization established by the Government of India (GoI) for the coordination, determination and maintenance of standards of teaching, examination and research in university education. India still follows the British-origin affiliating system where, by and large, over 40,000 colleges deal with undergraduate while over 900 universities are entrusted with postgraduate education and research.

According to the All India Survey on Higher Education (AISHE) 2018 data, about 1.285 million teachers are present in the system to train 36.6 million students, of which 4.14 million are in Master's programmes and 161,000 in doctoral programmes. In 2018, about 34,400 students were awarded Ph D degrees. The GoI awards nearly 10,000 research fellowships every year. According to Scopus data, about 147,537 articles are published from India. Majority of research articles published from the country are from over 100 institutes of national importance and a large number of national laboratories managed through

different research councils. Historically, a typical Indian affiliating university centres to degree education, whereas national institutes and laboratories are mandated for research. Except in a few cases, such bifurcation seems to be a major reason for poor research culture in most Indian universities. It has been observed that unethical/deceptive practices in publishing are leading to an increased number of predatory journals worldwide. We have closely observed rapid emergence of predators in India during the last decade. After October 2018, the UGC decided to take more firm steps to improve research quality, academic integrity and curb mushrooming predatory publishers.

Predatory journals and publishers are defined as 'entities that prioritize self-interest at the expense of scholarship and are characterized by false or misleading information, deviation from best editorial/publication practices, lack of transparency, and/or use of aggressive and indiscriminate solicitation practices'<sup>2</sup>. Predatory journals have severely compromised the integrity of scientific scholarship and polluted electronic databases. It is estimated that over 8000 predatory journals are churning out more than 400,000 items each year<sup>3</sup>. Predation and deception in scientific publishing has become pandemic, and there is an urgent need to take preventive steps. Educating the academic community and creating more awareness about how to evaluate the integrity of a journal is crucial in combating predators<sup>4</sup>. Akin to resistant microbes, predatory journals are becoming increasingly invasive and adept at appearing legitimate. We need systematic efforts to educate authors and warn them to stay away from such predators.

According to Nature Index analysis 2014, Indian science has shown a marked growth in high-quality scientific publications. However, it has also been reported that the percentage of research articles published in predatory journals is high in the country<sup>5</sup>. The study<sup>5</sup> showed that 51% of predatory authors were from affiliated colleges, followed by 18% in private universities and 15% in state

universities. The more worrying revelation is that 51% faculty members and 32% doctoral students were authors in predatory journals<sup>6</sup>. This indicates the sheer desperation to publish poor-quality research just by paying money for pseudo recognition, employment, promotions and doctoral degrees. Predatory journals and academic pollution along with some factors responsible for this state of affairs have been discussed earlier<sup>7,8</sup>. Serious concerns regarding increasing number of Indian authors in predatory journals and immediate need for regulating quality of Indian science and education have also been stressed<sup>6</sup>.

Taking due cognisance of the increasing menace of predatory publishing, UGC released a list of approved journals in 2017. Creating a white list was a well-meaning, proactive step by the Commission, however, due to some flaws during implementation, it faced severe criticism. Presence of a large number of poor-quality journals opened the floodgates for desperate authors. We at UGC were very much concerned about the rapid penetration of predators in Indian academic community. As a proactive step, we decided to take a critical look at the UGC list using a robust protocol developed with help of like-minded academicians. Our critical analysis of the UGC list showed that over 88% of journals from the university source were of poor quality<sup>9</sup>. The results attracted attention of media, the academic community and regulators. The efforts to curate the UGC list resulted in removing over 4000 predatory journals. But this was just a beginning. Subsequently, the UGC Journal Steering Committee was set up, where work of curating UGC-approved list of journals was accelerated on priority. These efforts of UGC to control predatory journals were appreciated. Also, UGC was the only one of the 10 most common funders, which provided guidance about journal selection on its website<sup>10</sup>.

The expansion of predatory publications from India seems to be mainly due to overemphasis on quantity rather than quality of research publications as an academic performance indicator and

mandatory requirement to publish at least two papers prior to submission of a doctoral thesis. We believe in the basic principle that good publications need very good research<sup>11</sup>. Although well meaning, the regulatory provisions of UGC seem to have triggered a sudden spurt in predatory journals giving way to 'publish or perish' culture<sup>12</sup>. The ineffective monitoring of research quality coupled with desperation to publish for regulatory compliance have led to massive growth of predatory publishing in India.

The Indian academic community, including teaching faculty, scientists and research scholars need to ensure that the journals/conferences they choose follow standard ethical policies. They need dependable and credible guidance. Also, unethical practices leading to 'pay and publish trash' culture in India need to be thwarted immediately.

To bring these ideas to reality, UGC has established the 'Consortium for Academic Research and Ethics' (CARE) to promote academic integrity, publication ethics and to improve the quality of research in Indian universities. UGC has appointed an Empowered Committee to steer the entire activity of CARE. We invited over 30 statutory councils and government bodies across disciplines as members of the Consortium to identify, continuously monitor and maintain a reference list of quality journals across disciplines. Proposals of new journals for consideration of inclusion in the UGC-CARE list can be submitted only through CARE members, or any one of CARE universities, including Jawaharlal Nehru University, Tezpur University, Maharaja Sayajirao University of Baroda and University of Hyderabad. The journals received are analysed according to vali-

dated protocol at the UGC Cell established at Savitribai Phule Pune University, Pune. The UGC-CARE list is dynamic and will be updated every quarter. The first edition of UGC-CARE Reference List of Quality Journals has been released accompanying a 'Public Notice on Academic Integrity'. In addition, the CARE website provides useful resources as relevant publications, audio-visual materials, videos, weblinks, etc. It also provides FAQs, feedback and grievance redressal mechanism.

We hope that these decisions would discourage authors from choosing predatory publishing as an easy way to earn academic benefits, and should result in cutting-off article flow to predators. It is hoped that UGC-CARE will create more awareness and help the cause of promoting academic integrity and ethical publishing.

UGC has recently proposed a new 'Scheme for Trans-disciplinary Research for India's Developing Economy' (STRIDE) for research capacity building in universities and colleges. As a result of systematic efforts by the government to promote inter-institutional collaborations and transdisciplinary research, the situation is expected to change for good.

Thus, UGC's efforts to weed out deceptive journals is just a beginning. Active involvement of the academic community coupled with strong support from the government shall remain key drivers for success to promote research quality, academic integrity and control predatory publishing in India.

1. Hopf, H., Krief, A., Mehta, G. and Matlin, S. A., *R. Soc. Open Sci.*, 2019, **16**(5), 190161 (1–7).

2. Moher, D. *et al.*, Predatory Journal Summit, University of Ottawa, Canada, 17–18 April 2019.
3. Shen, C. and Björk, B. C., *BMC Med.*, 2015, **13**(1), 230.
4. Cobey, K., *Nature News*, 2017, **549**(7670), 7.
5. Priyadarshini, S., *Nature India*, 2017; doi:10.1038/nindia.2017.115, published online 6 September 2017.
6. Seethapathy, G. S., Santhosh Kumar, J. U. and Hareesha, A. S., *Curr. Sci.*, 2016, **111**(11), 1759–1764.
7. Patwardhan, B., *J. Ayurveda Integr. Med.*, 2013, **4**, 129–131.
8. Lakhotia, S. C., *Curr. Sci.*, 2015, **108**(8), 1407–1408.
9. Patwardhan, B., Nagarkar, S., Gadre, S. R., Lakhotia, S. C., Katoch, V. M. and Moher, D., *Curr. Sci.*, 2018, **114**(6), 1299–1303.
10. Moher, D. *et al.*, *Nature News*, 2017, **549**(7670), 23.
11. Patwardhan, B., *J. Ayurveda Integr. Med.*, 2015, **6**(2), 73.
12. Lakhotia, S. C., *Proc. Indian Natl. Sci. Acad.*, 2017, **83**(3), 513–515.

ACKNOWLEDGEMENTS. We thank the Ministry of Human Resource Development (Secretary R. Subrahmanyam), Government of India and the University Grants Commission (Chairman Prof. D. P. Singh) for supporting CARE initiative. We also thank UGC-CARE Councils members, CARE Universities and Empowered Committee members. We specially acknowledge help and guidance from Professors V. S. Chauhan, S. R. Gadre, S. C. Lakhotia and Shubhada Nagarkar.

*Bhushan Patwardhan\* and Archana Thakur are in the University Grants Commission, New Delhi 110 002, India.  
\*e-mail: bpatwardhan@gmail.com*