

Invitations received from potential predatory publishers and fraudulent conferences: a 12-month early-career researcher experience

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ABSTRACT

Purpose of the study This study aims to describe all unsolicited electronic invitations received from potential predatory publishers or fraudulent conferences over a 12-month period following the first publication as a corresponding author of a junior academician.

Study design Unsolicited invitations received at an institutional email address and perceived to be sent by predatory publishers or fraudulent conferences were collected.

Results A total of 502 invitations were included of which 177 (35.3%) had subject matter relevant to the recipient's research interests and previous work. Two hundred and thirty-seven were invitations to publish a manuscript. Few disclosed the publication fees (32, 13.5%) but they frequently reported accepting all types of manuscripts (167, 70.5%) or emphasised on a deadline to submit (165, 69.6%). Invitations came from 39 publishers (range 1 to 87 invitations per publisher). Two hundred and ten invitations from a potential fraudulent conference were received. These meetings were held in Europe (97, 46.2%), North America (65, 31.0%), Asia (20.4%) or other continents (5, 2.4%) and came from 18 meeting organisation groups (range 1 to 137 invitations per organisation). Becoming an editorial board member (30), the editor-in-chief (1), a guest editor for journal special issue (6) and write a book chapter (11) were some of the roles offered in the other invitations included while no invitation to review a manuscript was received.

Conclusions Young researchers are commonly exposed to predatory publishers and fraudulent conferences following a single publication as a corresponding author. Academic institutions worldwide need to educate and inform young researchers of this emerging problem.

INTRODUCTION

Publishing a manuscript in a scholarly medical journal with a peer-review process and presenting at a reputable conference are valued accomplishments during medical training and postgraduate studies. They remain the classic ways to inform healthcare provider communities of new scientific discoveries. Furthermore, the number of scientific communications frequently serves as a metric of productivity and is used to obtain academic promotions, grants and funding. Therefore, early career researchers and academicians are under intense pressure to publish.¹ Moreover, there is an increasing number of barriers to publication such as high rejection

rates, long delays and high costs.² In this context, choosing a suitable journal to publish their work is a decision requiring diligence, especially for junior faculty inexperienced in scholarly communications.^{3,4}

Recently, the phenomenon of predatory publishing has emerged.^{3,5} Using aggressive marketing campaigns⁶ that solicit potential authors to submit manuscripts to their journals, predatory publishers take advantage of the open access model and propose incentives such as rapid peer-review process and publication acceptance for any types of papers, often in a wide area of topics. However, they intentionally deceive authors and readers using falsified claims such as fake addresses and impact factor.⁷ Predatory publishers have also been reported to fail to adhere to the ethical guidelines published by the Committee on Publication Ethics (COPE) or the International Committee of Medical Journal Editors.⁸ Together with inappropriate or absent peer-review⁹ poor editorial services¹⁰ and rapid publication rates,¹¹ this state of affairs likely allows publication of inaccurate data that threatens the integrity of scientific communications and the foundation of evidence-based science.¹² Similarly, poor quality meetings, often called fraudulent or predatory conferences, represent a new emerging hazard that is rapidly expanding and has mislead hundreds of researchers.¹³ Organisers of these meetings, usually individuals or companies rather than an organisation or a scientific community, use names similar to reputable conferences and terms such as international or global but charge substantial fees to presenters and have little concern for scientific value.¹⁴

Predatory publishers and conference organisers are using electronic spams to actively court authors soliciting them to submit a manuscript or present at a conference. The number of invitations received is rapidly growing but few studies have tried to quantify and analyse the content of these unsolicited electronic invitations.^{15,16} Moreover, no study has specifically addressed the situation for a new career researcher even though they are attractive and vulnerable target to predatory entities. With this study, we aim to describe all unsolicited invitations received from potential predatory publishers or fraudulent conferences over a 12-month period following the first publication as a corresponding author of a junior researcher.



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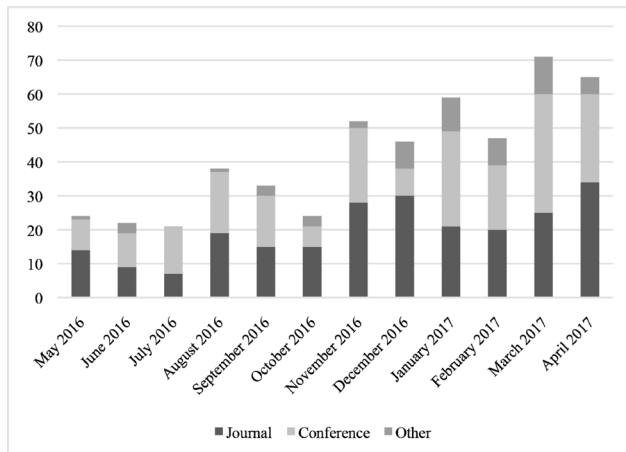


Figure 1 Number of electronic invitations from predatory entities received monthly.

METHODS

Between 28 April 2016 and 27 April 2017, all unsolicited electronic invitations received from a potential predatory publisher or conference organiser were prospectively collected using a single email address which is run through the institutional firewall. The beginning of this 12-month period coincided with the online publication of a manuscript¹⁷ from a young faculty member (EM) as corresponding author for his first time. The recipient is a recently graduated emergency physician and a research fellow affiliated to a Canadian and an Australian academic centre.

Only invitations perceived as being from a predatory publisher or a fraudulent conference organiser were included. Hence, spam related to advertisements, presentation of new products, surveys, webinars, newsletters or employment offers were not collected. The criteria used to create Beall's lists of predatory journals and publishers (last updated 31 December 2016; removal of predatory publisher's content on the Scholarly Open Access website on 17 January 2017) were applied to help distinguish between predatory and legitimate publishers. This proposed framework for analysing scholarly open access publishers and journals is based on two documents published by the COPE: Code of Conduct for Journal Publishers and Principles of Transparency and Best Practice in Scholarly Publishing.¹⁸ Similarly, James McCrostie's criteria were used to assess if a conference should be considered as potentially fraudulent.¹³ In case of doubt, a discussion between two members of the research team was used to establish eligibility (EM, PAT). In the absence of consensus, the electronic invitation was excluded.

Data related to the invitation (date, sender, introduction, salutations, terms used, manuscript requested data, open access status, impact factor metric, deadline proposed, publication fees, journal and publisher names) or the conference (sender, main object, salutations, role offered, terms used, conference fees, conference site, organiser and conference name) were prospectively extracted. Data were entered directly into a study specific Microsoft Excel database (Microsoft Corporation, Redmond, Washington, USA). Only invitations received in English or in French were considered. During the whole year, no invitation was replied to and no request to unsubscribe was sent. Descriptive statistics were summarised using means with SD and medians with IQR where appropriate.

RESULTS

During the 12-month study period, a total of 512 electronic invitations were received and analysed. All unsolicited invitations reviewed were in English. Ten were finally excluded because it was unclear whether they were sent by a legitimate or potential predatory entity. Therefore, 502 invitations were included: 237 (47.2%) to submit or publish a manuscript, 210 (41.8%) to attend, speak or organise a conference, 1 (0.2%) to become editor-in-chief of a journal, 30 (6.0%) to become a member of a journal editorial board, 6 (1.2%) to become a guest editor of a journal special issue, 11 (2.2%) to write a book chapter, 3 (0.6%) to become a reviewer and 4 (0.8%) to publish in multiple journals from a single publisher. Complete sender's contact information including full name, address and telephone number was provided in 184 (36.7%) invitations. Included invitations often presented grammatical or punctuation errors (294, 58.6%). Overall, 177 (35.3%) invitations' subject matter was considered relevant to the recipient research interest, previous work or academic affiliations. **Figure 1** shows the monthly census of invitations received which ranges from 21 to 71 invitations per month (mean 42, SD 17.5). In the month prior to the start of this study (1 to 26 April 2016), no unsolicited invitation was received.

Among the 237 invitations to submit a manuscript, few disclosed information related to publication fees (32, 13.5%). There was mention that submission or publication fees applied (2, 0.8%), a special discount could be available (10, 4.2%), a complete waiver was offered for a limited period (12, 5.0%) or the full publication fee was presented (8, 3.4%) (range \$100 to \$495). Most invitations mentioned accepting all types of manuscripts (167, 70.5%) frequently promoting their acceptance of short communication, editorial and minireview. Twenty-five (10.5%) invitations were to publish in a special edition and 12 (5.1%) quoted the recipient previous work. These invitations came from 39 different publishers (range 1 to 87, median 2 (IQR, 1,6) invitations per publisher). Identical invitations, except for the contact information and the journal, from different publishers were frequently received. **Table 1** presents the characteristics of unsolicited electronic invitations to submit a manuscript. One hundred and three (43.5%) of the journals

Table 1 Characteristics of electronic invitations requesting to submit a manuscript received from potential predatory journals

Information included in the electronic invitation	n=237 (%)
Deadline to submit a manuscript	165 (69.6)
Peer-review process	81 (34.1)
Submission guidelines or relevant internet link	45 (20.0)
Options to submit the manuscript	
Online website only	144 (60.8)
Email only	53 (22.4)
Online website or email	16 (6.8)
None reported	26 (11.0)
Types of manuscript accepted	167 (70.5)
Option to narrate the manuscript	1 (0.4)
Open access business model	55 (23.2)
Misleading impact factor	22 (9.3)
Publication fees or discount available	32 (13.5)
Option to unsubscribe	138 (58.2)
Mention that the email received is not a spam	114 (48.1)
Complete sender's name and correspondence	71 (30.0)

Table 2 Characteristics of electronic invitations received from potential fraudulent conference organisers

Information included in the electronic invitation	n=210 (%)
Proposed role	
Speaker	168 (80.0)
Track mentor	3 (1.4)
Conference chair	1 (0.5)
Delegate	38 (18.1)
Conference-related fees	26 (12.4)
Option to unsubscribe	178 (84.8)
Mention that the email received is not a spam	83 (39.5)
Complete sender's name and correspondence	95 (45.3)
Country where the conference was presented	
USA	63 (30.0)
UK	29 (13.8)
Italy	20 (9.5)
Spain	18 (8.6)
United Arab Emirates	17 (8.1)
Netherlands	13 (6.2)
Thailand	9 (4.3)
Singapore	6 (2.9)
Austria	5 (2.4)
Germany	5 (2.4)
China	4 (1.9)
France	3 (1.4)
Scotland	3 (1.4)
Canada	2 (1.0)
Czech Republic	2 (1.0)
India	2 (1.0)
Japan	2 (1.0)
Malaysia	2 (1.0)
Australia	1 (0.5)
Brazil	1 (0.5)
Ireland	1 (0.5)
Taiwan	1 (0.5)
Unknown	1 (0.5)

proposed were considered related to the recipient academic affiliation or previous scientific communications.

Among the 210 invitations related to potentially fraudulent conferences or meetings, 26 (12.4%) disclosed at least some information about the conference fees by mentioning the fees to submit a poster (16, 7.6%), a potential discount that could be available (6, 2.9%), the student registration fees (1, 0.5%) or the complete registration fees based on the researcher academic status (3, 1.4%). These conferences were held in 43 different cities located in Europe (97, 46.2%), North America (65, 31.0%), Asia (20.4%) or other continents (5, 2.4%). London (26, 12.4%), Dubai (17, 8.1%), Rome (14, 6.7%), Amsterdam (13, 6.2%), Barcelona (12, 5.7%) and Las Vegas (12, 5.7%) were the cities where the conferences were held the most frequently. The terms international, global or world were used in 178 (84.7%) meeting names. The invitations came from 18 different meeting organising groups (range 1 to 137 conferences per organiser). Table 2 illustrates the characteristics of unsolicited invitations by fraudulent conference organisers. Fifty-one conferences (24.2%) were associated with the author's affiliations or research interests.

Among the 30 invitations from a journal to become an editorial board member, 15 (50%) were related to the recipient's previous work or research interests. The invitation to become

a journal editor-in-chief was received from a journal on medical oncology which is different from the recipient's previous work. Three invitations to become a reviewer were received but no invitation to review a specific manuscript from a potential predatory publisher was received during the study period.

DISCUSSION

This study confirms that unsolicited invitations from potential predatory publishers and conference organisers received by early career academicians are common, even following a single publication as a corresponding author. The recipient received more than 500 invitations during a year including 237 to submit manuscript while no invitations to review a manuscript from a potential predatory journal was received. With respect to the invitation relevance, only 177 (35.3%) were related to the author's research interest, previous scientific communications or academic affiliations.

The recipient received less spams (average 42 monthly) than other experienced academicians. From a 2013 cohort, five mid-career and experienced researchers¹⁹ reported having received on average 60 invitations monthly. In 2015, a well-established researcher received an average of 26 invitations to submit a manuscript per month¹⁵ and recently, in 2017, an academic medical oncologist reported receiving about 100 monthly spams by predatory publishers or meeting organisers over a 3-month period.¹⁶ Interestingly, the characteristics of invitations to submit a manuscript for publication were similar between Clemons *et al*¹⁶ and the recipient's cohort, notably regarding the peer-review process (34.0% vs 34.1%), the reporting of publication fees (7.9% vs 13.4%) and the attributed relevance to the recipient previous work and research interest (34.6% vs 35.3%).

The identification of communications received from predatory entities is critical but can be challenging. Misleading impact factors and false conference accreditation are among the methods used to deceive researchers as it was the case in our cohort.²⁰ Recently, evidence-based characteristics of invitations from predatory journals have been proposed.⁴ In our study's cohort, invitations from potential predatory entities were frequently characterised by the presence of grammatical errors, the absence of sender's contact information, the absence of publication or conference fees and the use of generic terms such as global, international or world. Doctors and health sciences researchers need to develop the ability to recognise and avoid scams.²¹ Experienced researchers play a key role and trustworthy publishers should be a deliberate topic of conversation between supervisors and trainees.

Junior faculty members might be particularly vulnerable to predatory invitations in a system oriented towards productivity and scientific output.²² One could be tempted to grab the opportunity following a personally addressed invitation with flattering terms, which were other common traits in the communications received. Moreover, some of these invitations seemed professional and could likely contribute to enhance one's academic resume including opportunities to become an editorial board member and even an editor-in-chief. However, the mean number of articles published in each predatory journal is small, as reported by a recent study¹⁶ and suggest that many of these journals have only recently been created and they have released few issues. In addition, these journals are rarely indexed or searchable through recognised medical database (such as EMBASE, Medline or CINAHL) and have small readerships. In this study, 23.2% of the electronic invitations to publish a manuscript in a

potential predatory journal promoted their use of an open access business model.

Finally, publishing in a predatory journal or presenting in a fraudulent conference, either voluntarily or by lack of knowledge, can have dramatic consequences for a junior researcher. The time and funding money wasted on publishing a manuscript in a journal with reduced exposure is considerable and raises ethical and academic concerns as warned in recent editorials of reputable journals.^{7–11} Exposing study participants to potential risks or wasting their time is problematic if study results remain unknown due to their being published in an unrecognised or non-indexed journal. Moreover, given the importance of one's academic resume regarding the publish or perish pressure, using funding money to publish in a predatory journal potentially precludes advancing healthcare through wide knowledge translation and favours unethical endeavour.³ Under these conditions, competing « fairly » for grants becomes more challenging and increases inequalities, especially for junior faculty as well as researchers of developed countries, where most victims of predatory publishers come from.²³ As was recently stressed, funders and institutions may benefit from developing policies against publishing in predatory journals.¹⁶ However, this should not preclude the possibility for these journals to enhance their standards and be promoted to legitimate publications.²⁴

LIMITATIONS

Our study has some limits. Although unlikely, we could have included invitations from legitimate but new publishers,^{25–26} identification of predatory entities can be challenging.⁴ Also, the generalisability to other medical fields is unknown as this study is based on the experience of a single early career researcher who has previously worked on emergency medicine, trauma and

geriatric acute care researches. However, it is recognised that predatory entities have infiltrated multidisciplinary fields and no biomedical discipline is exempted. Moreover, our analysis was limited to electronic invitations. More information would have been obtained if the publisher or conference websites were reviewed. Finally, institutional spam filters block a significant number of spams, making our results a likely underestimation of the true burden.

CONCLUSION

Young researchers are commonly exposed to predatory publishers and fraudulent conferences following a single publication as a corresponding author. Invitations to submit or publish a manuscript, to present in a potential fraudulent meeting and to sit on a journal editorial board are the most frequent opportunities offered. Academic and funding institutions worldwide need to educate young researchers and to develop policies aiming to minimise the potential impact of this emerging phenomenon.

Contributors EM has had the original idea. EM, P-AT and NL conceived the study's design and protocol with support, input and oversight from LM and PAC. EM performed the data extraction. P-AT prepared the data for statistical analysis with oversight from LM and PAC. EM and P-AT wrote the manuscript first draft. All authors contributed to the manuscript revision and they all approved the final submitted version. EM is accountable for all aspects of this study.

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Data sharing statement Unpublished data regarding the name of the potential predatory publishers, journals, conferences and conferences organising groups included in our study are available upon request to the corresponding author.

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Main messages

- ▶ Predatory publishers and fraudulent conferences are new threats to scientific knowledge dissemination. They use aggressive electronic marketing campaigns to solicit researchers and clinicians' contribution to their journal or meeting.
- ▶ Electronic invitations from potential predatory entities are frequent following the first publication of a young researcher as a corresponding author.
- ▶ Electronic spams received were most frequently invitations to submit a manuscript in a potential predatory journal while other invitations were to write a book chapter, sit on an editorial board, become the editor in chief or present at a potential fraudulent conference.
- ▶ Academic institutions and funding agencies need to acknowledge the phenomenon of predatory entities and educate researchers early during their medical and research curriculum.

Current research questions

- ▶ What are the impacts of predatory entities on young researchers?
- ▶ What is the optimal way to educate novice researchers and increase awareness regarding predatory entities?
- ▶ Which type of young investigators are prone to publish in predatory journals or present in fraudulent conferences?

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