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Opportunistic Journals in the Clinical Pharmacology Space:

A Policy Statement From the Publications and Public Policy Committees of the American College of Clinical Pharmacology

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"Predatory journal" is the customary term, but "opportunistic journal" is more accurate. The situation that we face is a product of economic opportunity in a free-market economy. Profit is to be made through business enterprises founded to fill a need for a product or service that people are willing to pay for. In addition, an awards system has been put into place by some foreign governments based only on having a publication in a journal.[1] Entrepreneurs of predatory journals have stepped forward to fill these "needs," apparently with substantial success. The problem is that the legitimate biomedical publication process, and the system of merit-based peer-review used by academic medical and scientific journals, are collateral damage.

The opportunistic journal system is well documented and chronicled, starting with the pioneering work of Jeffrey Beall of the University of Denver.[2–6] At least 1000 companies are now involved in opportunistic biomedical publishing, and the number increases continuously. Estimates of the number of individual journals range from 2000 to 8000, and an estimated 400,000 papers are published annually in these journals. Many of the identified journals have published only a few issues, and in many cases an "issue" contains only one or two scientific papers. Some of the journals are now inactive or closed down, and some have never actually published an issue. Many of these journals will accept manuscripts with little or no peer review, no documentation of human subjects protection, and even overt falsification of data.[7]

The business model for opportunistic publishers is also well-documented. The majority of publishers maintain offices and telephone numbers in the United States. The offices can be tracked to storefronts in cities or suburban malls. However the actual publishing operations are for the most part located in Asian nations where labor costs are low. Sadly, it is not only opportunistic publishers that are involved in publishing these journals, but more mainstream publishers are involved as well.[7,8]

The process of promoting an opportunistic journal involves aggregation of E-mail addresses of potential author recruits, acquired through scans of legitimate biomedical publications. Mass electronic mailings aggressively solicit submissions of manuscripts, promising rapid peer-review, rapid open-access publication of accepted manuscripts, and extensive exposure of "your esteemed research" to the biomedical community.[9] The undersigned authors (DJG and JSB) typically receive as many as 20 such solicitations *per day*, with the text of the communications bearing the mark of unedited writing by an individual whose native language is not English or Western. Manuscript solicitations often include invitations to join the Editorial Board as well. Individual publishers operate multiple journals – sometimes numbering in the hundreds – thereby expanding the profit opportunity with minimal additional operating cost. Individual scientists may end up being listed on one of these journal web sites without their approval or knowledge, as a lack of response to an invitation may be taken as a positive response.

After acceptance, authors are expected to pay an "article processing cost" or "handling fee," often in the thousands of U. S. dollars. The costs are generally

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scaled to match the World Bank economic classification of the author's country of origin.

The Reality

The solicitation promises are not realized. Most opportunistic journals list numerous editorial board members, but a scan of the names reveals few who are recognized for academic or research accomplishment. Peer-review is weak or non-existent, leading to published articles that are of poor scientific quality – sometimes appallingly so. There are well-publicized reports of "sting" operations in which opportunistic journals readily accept "scientific manuscripts" containing absurd, unintelligible content,[7] or accept for their Editorial Boards phony individuals with phony names and absurd credentials.[10,11] Finally, very few of the opportunistic journals are indexed by the National Library of Medicine, and are not listed by PubMed. As such, exposure of the published work to the scientific community is virtually certain to be minimal or negligible.

Opportunistic Journals in the Clinical Pharmacology Space

Tables 1 and 2 show a representative listing of opportunistic publishers and journals in the clinical pharmacology realm. Many have what is termed "hijacked" titles that closely resemble titles of legitimate journals (Table 3), thereby inviting confusion of content and quality.[12] Some journals disclose their publication costs on their web sites; others do not, but most will provide the cost on request. In any case, the costs range as high as $3619. Some journals offer "memberships" or "sponsorships" – for an annual fee in the range of $3000, an author can publish as many papers as they wish for no additional cost.

Omics International (The Omics Group) is the well-developed prototype of the opportunistic publisher.[13,14] By their own count, they publish in excess of 700 journals, several of which are in the clinical pharmacology space (Table 2). The U. S office location is listed as Westlake Village, California, though the telephone number tracks to Nevada. The telephone number for all journals is identical, but with a different "extension" for each individual journal. Omics, with its 2000 employees, is actually located in Hyderabad, India.[13]

In November, 2017, following a request by the Federal Trade Commission (FTC), a federal court issued a preliminary injunction against Omics International and Insight Medical Publishing (iMedPub), halting their deceptive practices.[15] The specific practices cited by the FTC were: 1. The publishers' assuring authors of rigorous peer review when in fact there is little or no peer review; 2. Claiming that editorial boards are

Table 1. Representative Publishers in the Clinical Pharmacology Space Reported to Be Opportunistic (Predatory)

Publisher	Address	Journals Published
Allied Academies	London, UK	124
Applis Publishers LLC	Scottsdale, Arizona	10
Austin Publications LLC	Jersey City, New Yersey	210
Avens Publishing Group LLC	Elicott City, Maryland	46
ClinMed International Library	Wilmington, Delaware	71
ECronicon Open Access	London, UK	30
Gavin Publishers	Lisle, Illinois	136
Herald Scholarly Open Access	Herndon, Virginia	74
Insight Medical Publishing (iMedPub)	Wilmington, Delaware	173[a]
Jacobs Publishers	Austin, Texas	75
Juniper Publishers Inc.	Ontario, California	80
MedCrave Group	Edmond, Oklahoma	133
MedText Publications LLC	Dover, Delaware	10
Medwell Journals	Dubai, United Arab Emirates	35
Noble Research Group	Northenden, Manchester, UK	18
Open Access Text (OAT)	London, UK	160
Omics International	Westlake Village, California[b]	>700
Ommega Publishers	Plainsboro, New Jersey	25
Pulsus Group	London, UK	91
Remedy Publications	Belmont, California	101
Scholarena	Warrensburg, Maryland	76
SciDoc Publishers	Lewes, Delaware	51
Scientific Open Access Journals	Wilmington, Delaware	24
Scientific Synergy LLC	Miamisburg, Ohio	7
SciRes Literature LLC	Middletown, Delaware	82
SM Group	Dover, Delaware	151

[a]Biomedical publications.
[b]Listed telephone number has a Nevada area code.

Table 2. Representative Opportunistic Journals in the Clinical Pharmacology Space[a]

Journal Name	Publisher	Publication Cost for U. S. Authors	Number of Issues Published	Members on Editorial Board	Indexed by PubMed ?
American Journal of Pharmacology and Therapeutics	SciRes Literature	Not available[b]	1	58	No
American Journal of Pharmacology and Pharmacotherapeutics	iMedPub	$919	12	18	No
Annals of Clinical Pharmacology and Therapeutics	Remedy	$1,800	0	31	No
Applied Clinical Pharmacology and Toxicology	Gavin	$1,360	1	21	No
Austin Journal of Pharmacology and Therapeutics	Austin	$1,820	18	192	No
Clinical Pharmacology and Biopharmaceutics	Omics	$2,039	20	40	No
Clinical Pharmacology and Toxicology Research	Pulsus	$919	2	13	No
Clinical Pharmacology and Translational Medicine	Applis	$650	3	21	No
EC Pharmacology and Toxicology	Ecronicon	$499	28	>150	No
International Archives of Clinical Pharmacology	ClinMed	$956	71	39	No
International Journal of Clinical Pharmacology and Toxicology	SciDoc	$1,500	7	135	No
Journal of Bioequivalence and Bioavailability	Omics	$3,619	61	78	No
Journal of Clinical and Experimental Pharmacology	Omics	$2,019	30	81	No
Journal of Clinical Pharmacology and Toxicology	Noble	$560	2	25	No
Journal of Clinical Pharmacology and Toxicology	MedText	$1,800	0	42	No
Journal of Pharmaceutics and Pharmacology	Avens	$1,020	6	71	No
Journal of Pharmacokinetics and Experimental Therapeutics	Omics	$519	1	14	No
Journal of Pharmacology and Clinical Research	Juniper	$199	21	98	No
Journal of Pharmacology Research and Therapeutics	Herald	$650	1	35	No
Journal of Pharmacology and Therapeutic Research	Allied	$519	1	47	No
Pharmacology, Drug Development, and Therapeutics	OAT	$3,380	1	13	No
Journal of Pharmacology Studies Open Access	Scientific Synergy	$989	0	10	No
MOJ Bioequivalence and Bioavailability	MedCrave Group	$989	15	63	No
SM Bioequivalence and Bioavailability	SM Group	$850	1	81	No
SM Journal of Pharmacology and Therapeutics	SM Group	$950	2	123	No

[a]Data as of February 2018.
[b]Publisher did not respond to requests for cost information.

made up of prominent academics when many editors have not agreed to be affiliated with the journal; 3. Not allowing authors to withdraw articles from submission, thereby making the papers ineligible for publication elsewhere. The FTC complaint also points to the publishers' misrepresentation of citation index numbers, and incorrect claims of journal indexing by PubMed when in fact they are not indexed. Omics and iMedPub continue to operate in the United States, though their web sites now have disclosed the publication costs.

Collateral Damage

Individual authors, the scientific community, legitimate biomedical journals, academic institutions, and the

Table 3. Representative Established, Indexed Journals, and Opportunistic Journals Having Closely Similar Titles

Established, Indexed Journal Name	Look-Alike Opportunistic Journal Name(s)
Journal of Pharmacology and Experimental Therapeutics (ASPET)	Journal of Pharmacokinetics and Experimental Therapeutics (Omics) Journal of Pharmacology Research and Therapeutics (Herald) Journal of Pharmacology and Therapeutic Research (Allied)
American Journal of Therapeutics (Wolters Kluwer)	American Journal of Pharmacology and Therapeutics (SciRes) American Journal of Pharmacology and Pharmacotherapeutics (iMedPub)
Clinical Pharmacology and Therapeutics (Wiley)	Clinical Pharmacology and Biopharmaceutics (Omics) Annals of Clinical Pharmacology and Therapeutics (Remedy)
Journal of Pharmacy and Pharmacology (Wiley)	Journal of Pharmaceutics and Pharmacology (Avens)
International Journal of Clinical Pharmacology and Therapeutics (Dustri)	International Journal of Clinical Pharmacology and Toxicology (SciDoc)
Journal of Clinical Pharmacology (Wiley)	Journal of Clinical and Experimental Pharmacology (Omics) Journal of Clinical Pharmacology and Toxicology (Noble, MedText)
Clinical Pharmacology in Drug Development (Wiley)	Pharmacology, Drug Development, and Therapeutics (OAT)

public health in general all are adversely affected by the growth of opportunistic publications.[2–6,16–18] In principle, authors now are at liberty to expand their publication resume, essentially without limit, through rapid publication of manuscripts unencumbered by customary peer review ("pay-to-publish").[19] The hijacked titles of opportunistic journals may complicate and burden the process of evaluation of an individual scientist's merit and accomplishments by universities or granting agencies. If evaluators look in depth at specific listed publications and find many non-indexed opportunistic journals, the applicant might not be helped with respect to the evaluation outcome. Meanwhile, legitimate peer-reviewed and indexed biomedical publications, whether open-access or not, face an exploding denominator of journal-related E-mail communications, complicating invitations to potential peer-reviewers accustomed to pressing the delete key. Finally, non-peer-reviewed papers appearing in opportunistic journals might contain incorrect scientific data or dangerous clinical recommendations.

Opportunistic Biomedical and Scientific Conferencing

Many of the opportunistic publishers also organize scientific conferences. The E-mail campaigns are equally aggressive – scientists are recruited to present a paper, be a conference organizer, or serve as a keynote speaker at a meeting that is generally at an international site. The profit-maker for the opportunistic conferencing company is the registration fee, which can run in the thousands of dollars. Attendees might arrive to find a sparsely attended meeting at an obscure location, or no meeting at all – their monetary loss being the registration fee, as well as the travel and lodging costs. The FTC complaint against Omics and iMedPub extended to their promotion of scientific conferences, which deceptively used the names of prominent scientists as conference presenters who in fact had never agreed to participate. One of us (JSB) has replied to such E-mail invitations suggesting that he can attend and present if "all costs of travel, expenses, and registration are paid for." The usual response is negative.

What Can Be Done?

The cause is economic, and the solution will be economic. When opportunistic journals and conferences cease to be profitable, they will disappear.

The responsibility falls to each of us as individual scientists and clinicians, and as members of scientific organizations such as the American College of Clinical Pharmacology and sister professional groups, to inform and teach our colleagues, our trainees, and institutional officials. Examples of steps that we can take immediately include:

- Do not submit manuscripts to opportunistic journals, or attend conferences organized by opportunistic conferencing organizations.
- Do not agree to review manuscripts from opportunistic journals.
- Do not agree to serve on an Editorial Board of an opportunistic journal. If you now serve, resign as soon as possible.
- Be cautious in the use of data published in opportunistic journals. With poor adherence to good publication practices, conclusions in published papers may not be justified.

A complete listing of opportunistic predatory journals and publishers, updated monthly, is needed. Unfortunately, Mr. Beall's web site, titled *Scholarly Open Access,* was closed down in January of 2017. No explanation was given, but it is speculated that threats of civil litigation by one or more opportunistic publishers might have been a factor.[20] The last version of Mr. Beall's list is still available on other sites,[8] but an organization or individual to maintain and update the list has not emerged. Groups such as the Council of Scientific Editors, or a group of reputable publishers, could take on this task and continue to inform the scientific community of these unsavory publishers and journals.

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