



Biophysical Reviews: Publishing short and critical reviews written by key figures in the field

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Abstract

This Editorial for Issue 5 (Vol. 14 2022) of Biophysical Reviews begins with a short note of commemoration for the journal's founding chief editor Jean Garnier (1929–2022) who sadly passed away this month. Following this is a precis of the current Issue contents that begins with an introduction of the prizewinning article by Assoc. Prof. Miho Yanagisawa, winner of the 2022 Michèle Auger Award for Young Scientists' Independent Research. This Editorial concludes with a brief and somewhat subjective discussion of what features do and don't, help to make for a 'good journal'.

Jean Garnier (1929–2022)

It is with great sadness that I report that Dr. Jean Garnier, former President of the International Union for Pure and Applied Biophysics (IUPAB) (2002–2005) and founding Chief Editor of Biophysical Reviews (2009–2013), passed away this month at the age of 93.¹ Considered as one of the founders of the subject of bioinformatics this Issue contains two obituaries for Jean, one contributed by his former scientific collaborator Prof. Barry Robson (Robson 2022), the second by his former IUPAB colleague Prof. Cristobal dos Remedios (dos Remedios 2022). The ongoing project that is Biophysical Reviews was both established and launched by Jean with the following clearly stated goal (Garnier 2009),

'The International Union for Pure and Applied Biophysics (IUPAB) and Springer have joined forces to create a new review journal, Biophysical Reviews, as an official journal of the IUPAB. This is a challenging undertaking given the

current exponential growth of published scientific papers that is overwhelming many of us in the field through a surfeit of information. Being well aware of this trend, the IUPAB has taken a step forward in dealing with this tsunami of scientific papers by launching a review journal in Biophysics.

Biophysical Reviews is dedicated to publishing short and critical reviews written by key figures in the field. The aim of the Editorial board is that the subjects covered in these reviews will—over the long term—be representative of the entire field of biophysics, generally defined as the science of describing and understanding biological phenomenon using the concepts and techniques of physics. In other words, biophysics is to physics as biochemistry is to chemistry... The (aim is that these) reviews will be written by authors selected for their knowledge of the subject.'

Jean Garnier's combined efforts, as both an active top-level scientist and a conscientious science citizen (sacrificing some of his research time to establish beneficial scientific institutions), serves as an exemplary model of behaviour within the science community. In memory of Jean's scientific and society efforts, this first section of the Editorial concludes with the words of the American poet Henry Wadsworth Longfellow, (Longfellow, 1838).

... Lives of great men all remind us.
We can make our lives sublime,
And, departing, leave behind us.
Footprints on the sands of time;
Footprints, that perhaps another,
Sailing o'er life's solemn main,
A forlorn and shipwrecked brother,
Seeing, shall take heart again.

¹ I first met Jean at the US Biophysical Society conference in 2011 and found him to be kind and witty – I immediately liked him. He formally asked me to join the Editorial Board of Biophysical Reviews later that year and since then he has continually given wise counsel and much support and encouragement.

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Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait...

2022 Michèle Auger Award Winning Review

Each year, the Biophysical Review journal operates a single competition in honor of the memory of Prof. Michèle Auger, a French-Canadian biophysicist and former editorial board member who sadly passed away in 2018 (IUPAB 2019). Michèle was a genial and active scientist with an interest in applying solid state nuclear magnetic resonance techniques to the analysis of membrane proteins (Fillion and Auger 2015; Martial et al. 2018). Open to all biophysical scientists under the age of 40, the ‘Michèle Auger Award for Young Scientists Independent Research’ has been running since 2020 with previous winners shown in Table 1. The leading science article of the current Issue is the prize-winning contribution from, Assoc. Prof. Miho Yanagisawa, the recipient of this year’s award (Yanagisawa 2022). Miho is a physicist with an interest in how nano to micrometre-scale geometrical effects, typical of those encountered within cellular spaces, can distort physico-chemical phenomena, such as surface adsorption and phase transitions, from their classical (expected) behaviour observed in bulk solutions. She has termed such unusual behaviour seen under the confines of nano to micro-scale geometries as the Cell-Size space Effect (CSE) (Yanagisawa et al. 2022). As a working mother who combines an active research career with parenting responsibilities, Associate Professor Miho Yanagisawa is a particularly appropriate winner of this years ‘Michele Auger Award for Young Scientists’ Independent Research’ and the journal takes this opportunity to congratulate her on receiving this prize.

At the time of this Issue’s publication (late October 2022) nominations for the ‘2023 Michèle Auger Award for Young Scientists’ Independent Research’ will just be closing (deadline set at October 31, 2022). Candidates for the award can be self-nominated or nominated via a colleague. Nomination requires submission of the candidates five best papers

and a one-page descriptive curriculum vitae. Details of the nomination process are given each year in the Issue 3 Editorial (Hall 2022a) and details of the winning candidates are provided in the Editorial for Issue 1 of the following year (e.g. see Hall 2022b).

Precis of the current Issue

The front matter for this Issue consists of the present Editorial (Hall 2022c), the two obituary Letters for Dr. Jean Garnier (Robson 2022; dos Remedios 2022) and four Commentaries (Daniel Peluffo et al. 2022; Ho et al. 2022; Anashkina et al. 2022; Olson et al. 2022). The first three of these Commentaries respectively describe announcement calls for Special Issues (SIs) scheduled for publication within Biophysical Reviews in 2023 that are associated with (i) the quantitative analysis of cellular heterogeneity—SI submission deadline January 2, 2023 (Ho et al. 2022), (ii) presentation of recent research activities of the Latin American Federation of Biophysical Societies (LAFeBS)—SI submission deadline March 25, 2023 (Daniel Peluffo et al. 2022) and (iii) a Special Issue devoted to the 7th Congress of Russian Biophysicists 2023—SI submission deadline June 15, 2023 (Anashkina et al. 2022). Each of these SI announcement commentaries describe the background and motivation for the SI along with containing the full contact details of the SI Editors. These announcements also act as open calls, with any interested parties invited to contact the pertinent SI Editors. The fourth Commentary in this front matter section is the latest edition of the continuing Editors’ Roundup series (Olson et al. 2022). This instalment of the Editors’ Roundup contains contributions from both an editor large and editors associated with Progress in Biochemistry and Biophysics (journal of the Chinese Biophysical Society), European Biophysics Journal (journal of the European Biophysical Societies Association), Biophysics (journal of the Russian Academy of Sciences and Biophysical Reviews (journal of IUPAB). Each contributing editorial board member was tasked with writing a short description of up to five articles they found interesting. A quite diverse range of biophysical articles have been presented as recommendations,

Table 1 Current and prior winners of the Michèle Auger Award for Young Scientists’ Independent Research

Year of award	Name of award recipient	Laboratory website
2022	Assoc. Prof. Miho Yanagisawa University of Tokyo, Japan	https://www.c.u-tokyo.ac.jp/info/research/faculty/list/mds/mds-bs/f021974.html https://sites.google.com/g.ecc.u-tokyo.ac.jp/yanagisawa-lab/ (Yanagisawa 2022)
2021	Assoc. Prof. Jorge Alegre-Cebollada CNIC, Spain	https://www.cnic.es/en/investigacion/molecular-mechanics-cardiovascular-system (Alegre-Cebollada 2021)
2020	Assoc. Prof. Alexandra Zidovska New York University, USA	https://as.nyu.edu/content/nyu-as/as/faculty/alexandra-zidovska.html (Zidovska 2020)

ranging from biophysics of deep lake ecosystems to the latest structural biology findings of the mechanism of ribosome action (Olson et al. 2022).

Following the front matter, we have seven scientific pieces (Yanagisawa 2022; Dornas 2022; Negi et al. 2022; Hofmann et al. 2022; Azbukina et al. 2022; Bhattacharjya 2022; Su et al. 2022) with the first of these seven being the already described Michèle Auger Award winning review article on the topic of physicochemical solution theory at small length scales (Yanagisawa 2022). For greater detail on this review article, please read the preceding section of this Editorial titled ‘Michèle Auger Award Winning Review’.

The second science article of the current Issue is a short scientific letter contributed by Dr. Waleska Dornas from the Federal University of Sao Paulo Brazil (Dornas 2022). This Letter describes recently unearthed links between cancer and autophagy, mediated through the transcription factor Nrf-2 (nuclear factor erythroid-2-related factor 2) (Kang et al. 2021). Nrf-2 was initially identified as a transcriptional regulator of a suite of proteins associated with control of the intracellular redox state (Itoh et al. 1997). In his Letter, Dornas brings attention to a published study identifying how build-up of the autophagy linked receptor p62 leads to activation of Nrf-2 through its competitive displacement (and release) of Nrf-2 from the Keap1 regulatory binding protein, with elevated Nrf-2 levels resulting in induction of a cancerous cell fate (Kang et al. 2021). Although quite complicated, understanding the mechanistic pathway of cancer regulation is the first required step to its quantitative modelling and this short letter can be greatly appreciated in this light (Dornas 2022).

The next article in the main science section was submitted by a group from the Indian Institute of Technology (Kanpur) and is concerned with the topic of membrane attachment and cell entry of three different classes of viruses—the human immunodeficiency type 1 virus (HIV-1), influenza type A and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (Negi et al. 2022). Seeking to both emphasize and contrast the common/different aspects of the adsorption and fusion processes between these three virus types the authors establish a generic discussion mechanism involving universal spike proteins (proteins exposed on the outer viral face), universal receptors (proteins associated with the cell membrane that interact with the virus spike protein) and universal mechanisms of membrane fusion. Having established a method for comparison the authors then present a structural biology-focused tour d’horizon of the particular proteins involved in these processes for each of the three viruses (Negi et al. 2022). A good review should teach the reader something and this article has quite a lot to teach.

The fourth article represents a collaborative effort between researchers based at Bar Ilan University (Israel) and the University of Pittsburgh (USA) on the use of electron

paramagnetic resonance (EPR) for studying protein-nucleic acid association events both in vitro and in vivo (Hofmann et al. 2022). Focusing specifically on the interaction between the *E. coli* CueR copper transcription factor and its cognate DNA binding sequence the authors describe both theoretical and practical matters associated with performing EPR based distance measurements between various residues within the protein DNA complex. The practical areas covered include methods for introducing spin labels into proteins and DNA using either covalently attached ligands that incorporate paramagnetic metal ions or stabilized radical systems (such as nitroxide radicals) or direct complexation of paramagnetic metal ions using protein engineered chelate arrays based on sequential histidines. The theoretical areas discussed include the electronic Zeeman effect, relative benefits of continuous wave vs Fourier methods for investigating EPR spectra shape, Fourier-based pulse sequence design and analytical methods for deconvoluting the distance information and relative disorder from the measured spin relaxation rates (Hofmann et al. 2022).

Contributed by researchers working at Moscow State University and the Russian National Medical Research Center for Therapy and Preventative Medicine, the fifth article, discusses analysis of the effects of correlated point mutations within a single gene or genetic locus (Azbukina et al. 2022). Such correlated mutations define the field of mutational epistasis, with the effects of the second mutation classified as either positive, negative or neutral with respect to the general enhancement/suppression effects caused by the primary mutation. The authors note that the field of mutational epistasis acts as a link between the different areas of structural biology, protein function and molecular evolution due to the fact that in a large percentage of cases, any positive or negative effects are due to direct (or nearby) interaction between the mutated residues within the protein.² As the authors describe, the study of epistasis requires both systematic experimentation (in which all permutational space of possible pairs of mutations are created and the resultant protein function of all single and double mutants is analysed) and development of special statistical methods for the analysis of such data sets (generically described as deep mutational scanning) (Azbukina et al. 2022).

The sixth review article contributed by Assoc. Prof. Surajit Bhattacharjya (based at the Nanyang Technological University in Singapore) discusses the structural biology of β 2-integrins (Bhattacharjya 2022). Existing as obligate integral membrane proteins (which are also membrane

² Although one very interesting point raised by the authors was that secondary mutations either at the interior or exterior of the protein can exert an independent effect via general stabilization /destabilization of the protein structure.

spanning) each functional member of the integrin superfamily is a heterodimer that is composed of one of 18 different α proteins and one of 9 different β proteins thereby suggesting significant potential for combinatorial complexity of the heterodimer. Typically, integrins play major roles in attaching the cell to the extracellular matrix (ECM) and constituting a mechanism for bi-directional signal transduction between the ECM and the cell cytosol. The $\beta 2$ integrins, about which this review article is focussed, are a particular sub-class of the integrin superfamily, which play a special role in leukocyte immune cells by helping them to establish cell-to-cell linkages and aiding with their cell motility. Due to their membrane protein nature, the tendency for glycosylation of their exterior facing N-terminal extracellular regions, the general disorder of their cytosolic C-terminal ‘tails’ and the ubiquity of composition and choice of binding partners, expansive structural data about the integrins is, in general (and $\beta 2$ -integrins in the particular), hard to come by. In this review article, the author presents an up-to-date description of structural data obtained from whole length and domain fragments of the $\beta 2$ -integrins (both in isolation and in complex with their binding partners) derived from nuclear magnetic resonance (NMR), x-ray crystallography and molecular dynamics simulations (Bhattacharjya 2022).

Submitted as a collaboration between Chinese groups located in Hong Kong and Shenzhen the final scientific review contribution treats both quantitative and biological aspects of cell stiffness, first discussing how measurements of cellular stiffness are made and then exploring what a certain state of stiffness might mean with regard to the type, general health and differentiated state of the cell (Su et al. 2022). With regard to measurement of cell stiffness, Su et al. introduce in worded form the concept of characterizing stiffness via a scalar Young’s modulus parameter and using methodologies such as atomic force microscopy, micropipette suction based deformation, magnetic bead convolution, passive single particle diffusion measurements and active rheology measurements that involve passing a cell through a constricted or shear gradient affected channel. In their discussion of what cell stiffness means in a biological context, the authors review data that correlates measurement of cellular stiffness to a cell’s cancerous state, its pluripotency, its affliction by disease and its reaction to environmental stimulus. In the final section the authors discuss the biochemical effectors of changes in cellular stiffness with particular focus on changes in the cytoskeletal environment (Su et al. 2022).

Having presented a short summary of the contents of Issue 5, we finish this Editorial with a somewhat subjective discussion of what features are desirable within a journal from the perspective of choosing a publishing venue for one’s article.

What makes for a good journal?

Recently, I was approached by a colleague who was in the process of writing a review article. Although he wanted to talk to me specifically about Biophysical Reviews, he also asked a number of more general questions about what constitutes a ‘good’ journal and what are the things one should think about when choosing a journal for submission. We talked for about one hour and after our chat he mentioned that, even though he was a relatively established scientist, a lot of the topics we had discussed were new to him. This statement made me think that a summary of (some) of the points we had discussed may be of possible interest to junior (and perhaps some even some senior) scientists. So, to round out this Editorial I include a few things to consider in order to make an informed journal selection when publishing your next article.

(i) How much do you have to pay?

Firmly establishing how much a journal charges is one of the key first steps to consider prior to submission. Generally, journals operate in one of four modes.

- (a) Subscription-based: where the publication costs to the author are minor (or nothing) and the journal recoups its costs/establishes its profit via charging the reader either directly (via pay to read or individual subscription options) or indirectly (through subscription agreements born by the research institution).
- (b) Open access based: where the author pays directly (via an open access article page charge fee) or indirectly (via an institutional open access agreement) affording free access to the reader.
- (c) Hybrid mode: where the journal offers both subscription and open access arrangements and allows the author to select their preferred option.
- (d) Membership based: where the journal is run by a society and offers reduced publishing costs based on a prior existing membership to that society.

Prospective authors should carefully check with both the journal (to clearly establish the range of costs for the different publishing options), their funding body (some funding bodies require particular modes of publication, e.g. exclusively open access whilst some funding bodies put a limit on the amount that can be used to assist with publication costs) and their institute (many institutes have institutional agreements with various publishers and/or particular journals which can substantially reduce costs whilst some institutes offer special publication top up grants to facilitate high impact publications by their

employees). Publication costs can typically range from a few hundred euros at the low end up to around 10,000 euros at the high end with 2000 to 3000 euros being typical. Authors should also check carefully with regard to split payment options that involve a non-redeemable upfront payment component that is lost if the manuscript is rejected. Additionally, some society-based journals that offer membership-based payment rates require a waiting period between membership and submission in order to receive the reduced page charge rate.

(ii) Is the journal associated with a society?

Although science is an international endeavour and scientific truth hopefully transcends all borders, it would be foolish not to recognize that researchers tend to be primarily based in a single geographic region (at least for a few years) and also tend to restrict their research activities to a particular field. Such realities mean that scientists exist within communities and so often choosing to publish within a society journal, which is read and discussed by your immediate colleagues, can offer benefits that offset one's preconceptions when considering that society journal in isolation. By way of example, I offer the following anecdote. When I rushed back to Japan just prior to the pandemic lockdown I wanted to both support my local biophysical society and also establish strong links with its members. This led to me submitting two papers (Hall 2020; Hall and Foster 2022) to the Biophysical Society of Japan's English language journal known as 'Biophysics and Physicobiology'. My experience with the journal was in both cases scientifically very positive (the reviewing was first class and extremely rigorous with the second paper going through four rounds of high-quality critique!), and it allowed me to interact with the journal's academic editors and professional editorial staff. At this year's meeting of the Biophysical Society of Japan (held in person), I got to talk with many of these society members with some even commenting on my publications in BPPB in order to break the ice. Aside from creating personal links, supporting relevant society journals is also a good way of supporting those around you, with any paid publication fees constituting an effective way of contributing/giving back.

(iii) Journals with and without a long history

The rate of creation and release of new journals is genuinely astounding with many well-established³ commercial publishing houses actively engaging in strategic journal specialisation and naming in order to better capture particular research

niches. Whilst there can be advantages in publishing in new journals, one should understand that journals with a longer history offer prospective authors a number of benefits which include the following,

- (a) Positive kudos derived from association with the large number of famous publications that have previously appeared within the journal.
- (b) A mature and well-developed readership with a genuine investment/connection to the journal.⁴
- (c) A demonstrated continuous record of regular and on time publication which strongly suggests that the journal will not suddenly collapse.
- (d) Well-established and experienced editorial team with defined governance protocols and scientific connections derived from handling a large number of manuscripts.

Of course, in some cases, a long history can work against a journal if it carries with it a large number of negative associations (e.g. retractions, scandals and/or low quality publications).

(iv) Quartile scores, impact factor, h-index etc.

A hard to escape aspect of the modern research enterprise is the general and rapid recourse during scientific discussion of a new paper to querying 'where was it published' rather than 'what was it about'. Whilst somewhat odious this phenomenon is nevertheless extant and so practicing scientists must be at least cognizant of journal reputation when choosing a platform for publication of their article. Journal prestige depends on both the database used for generating comparison and the type of journal/article metric applied. With regard to biophysics related science, the four major databases in common use are PubMed (PubMed 2022), Google Scholar (Scholar 2022), Scopus (Elsevier) (Scopus 2022) and the combined Web of Science/Journal Citation Reports (Clarivate Analytics) (WOS/JCR 2022). A particularly convenient and free to use online journal locator and comparison generator is that provided by the SCIMAGO group (SCIMAGO 2022) based in Madrid Spain.⁵

A few of the common metrics used to define a journal are as follows,

- (a) Quartile ranking: which as the name suggests divides all journals grouped with a single field into four groups with quartile one (Q1) reflecting the top 25% of journals ranked according to the adopted comparator. This

³ This is also the case for less well-established commercial publishers (and also the ubiquitous downright predatory ventures).

⁴ Generally older scientists are the ones judging your grant proposal or tenure application!

⁵ SCIMAGO uses the free to access Scopus database.

comparator can obviously vary with database and the terms used to establish a grouping. Quartile ranks can be important with regard to allowable use of grant funds assigned for publishing (some specify Q1 ranked journals only) and student graduation (some universities specify a minimum number of first author Q1 ranked articles prior to submission of a PhD).

- (b) **Impact factor:** The impact factor (IF^{TM}) of a journal describes on average how many times an article published in the preceding two years will be cited in the third year. The IF^{TM} is a trademarked term exclusively generated by Clarivate Analytics in relation to their proprietary database (entry to which is also controlled by Clarivate). However, the general formula from which it is calculated is easy to understand (Eq. 1)

$$IF_{Y3} = \frac{C_{Y3}}{N_{Y1} + N_{Y2}} \quad (1)$$

where IF_{Y3} is the impact factor calculated in year 3, N_{Y1} and N_{Y2} respectively specify the number of articles published in the journal in year 1 and 2 and C_{Y3} is the number of citations received in year 3 (to articles published in years 1 and 2). The same (or similar) formula is used to generate impact factor equivalent values from different databases and are described as Cites/Docs (SCIMAGO 2022) and CiteScore (Scopus 2022). As has been mentioned previously (Callaway 2016), article citation distributions are typically significantly skewed as well as often being multimodal in nature, making the calculation and use of single parameter descriptors (such as an average impact factor) potentially misleading (Callaway 2016). Such reductive features mean that large journal impact factors can be generated on the basis of just a few articles, thereby making a high citation future for your prospective article much less likely than you might think.

- (c) **h index:** Introduced as a tool for assessing individual theoretical physicists (Hirsch 2005) the h-index is now used as both an individual and journal level metric for quantifying the relative ‘worth’ of the articles published by both individual scientists and journals. For an author/journal who has published N total articles, the h index describes the highest number assignable to the set $[1 \leq h \leq N]$, such that a h number of articles have each received at least h number of citations. Used in conjunction with information on the total research output, the h index can inform upon the nature of the most highly cited portion of the article distribution. However, the h index loses sensitivity as a predictor for distributions featuring a large number of papers, examined over long time periods. To combat this deficiency a slightly different rolling measure of the h

index, restricted to calculation over the previous 5 years (known as the h_5 index) is applied for journal ranking purposes (Scholar 2022).

- (d) **SJR and SNIP:** A range of alternative measures of journal quality are available with two of particular note being the SCIMAGO Journal Ranking (SJR) index (SCIMAGO 2022) and the Source Normalized Impact per Paper (SNIP) (Scopus 2022). Both of these measures apply different forms of weighting functions to an article’s recorded citations, to lessen the importance of lower value citations (such as from self-citations and articles appearing in predatory journals) and correct for variable citation patterns between fields that demonstrate either over-exuberant or more austere levels of citation.

(v) How many articles does the journal publish?

It was previously estimated that the world passed a collective total of 50 million scientific publications in 2009 (as recorded from the start of the world’s first modern journal *Le Journal des Savans*, in 1665) (Jinha 2010). More recently, analysis of four large science databases (Dimensions, Microsoft Academics, Web of Science and Scopus) showed that the time dependence of the number of publications could be modelled using a piecewise series of exponential equations—with the doubling time of the most recent piecewise component being estimated as between 12 and 14 years (Bornmann et al. 2021). Such modelling suggests that we will likely reach our next 50 million articles, i.e. surpassing 100 million total science articles within the next year (Fig. 1b of Bornmann et al. 2021).⁶

The reasons behind why there are so many publications are many and varied and perhaps worthy of their own separate discussion. However, from a practical standpoint of deciding upon an appropriate journal to submit your article to one might inspect prospective journal practices in the light of the following points,

- (a) **Journals with a fixed publication limit:** Some journals set a limit to the number of articles they publish each year with this number being decided by the editorial team as one they can responsibly manage and properly review. The *Annual Review of Biophysics* (ARB 2022) is a good example of this kind of journal, carefully inviting and publishing between 20 and 30 articles each year. Some journals maintain a fixed publication limit by allowing for free submission but pair down the total number via critical reviewing of both fact and

⁶ Although the Dimensions database lists that it already houses over 130 million publications so we may have already moved well beyond this point (Dimensions 2022).

relevance. Nature magazine is an example of this type of journal, with an estimated rejection rate of ~93% of all submitted articles (Nature 2022). Critical reviewing can substantially lengthen the time that your manuscript is held by the journal meaning that your article can be kept under review for up to 6 months (or longer). Generally speaking, not all journals reject such a high percentage of articles and the potentially superior reviewing associated with fixed article limit journals can help to raise the quality of both your and other articles and may even help to bestow a sense of achievement upon publication.

- (b) Journals without a fixed publication limit: The rise of online only (no print copy) publications along with the emergence of very large open access journals such as the Public Library of Science series (PLOS 2022) has ushered in the concept of article centric publishing in which articles are issued all requisite digital identities and then listed via study section or acceptance date on the publishers' website. This process means that the publishing journal has no fixed Issue structure and therefore no defined limit to the number of articles that can be handled and published. Good examples of this type of publication strategy can be seen with PLOS ONE and Scientific Reports, with both each individually publishing somewhere between 20,000 and 40,000 articles a year. Such journals feature lower rejection rates, faster manuscript handling and, in some cases, lower publication costs.

As discussed, both types of journals (fixed and non-fixed article limits) offer their own unique advantages and disadvantages. Journals with a fixed Issue structure and set publication limit usually feature an Editorial that introduces the articles appearing within the Issue in a manner that affords the reader a sense that proper prior assessment and scrutiny has been exercised. Similarly, such types of journal are usually small enough that they can have an editorial board meeting each year in which problem articles can be collectively discussed and solutions decided upon. For all types of journals, (i.e. those with either fixed or non-fixed article limits) a general awareness of the state of a journal can be lost at large scale and so very large enterprises have to maintain regulatory measures to stop non-optimal practices from emerging.⁷

⁷ One interesting byproduct of the fixed vs non fixed article limit nature of a journal is the potential to affect citation measures through publication number. Arranging for a year on year increase in the total number of published documents can allow a journal to positively manipulate measures like the IF and CiteScore –in a manner similar to a Ponzi scheme arrangement (in the world of business, a Ponzi scheme is a form of fraud that leads investors in a company to believe that company profits are legitimately generated, not realizing that a constant stream of new investors are the actual source).

(vi) Do board members publish in journal?

A potentially good test of a journal's general suitability involves examining the level of involvement of its editorial board. A quick combined author/journal check in the search bar at the journal home page will establish whether the journal's editorial board members publish within their own journal. Similarly, the type of reply you receive from a letter of inquiry addressed to the senior editorial board members about the suitability of your suggested topic should help a great deal in deciding on whether or not the journal is a good place for you to submit your article.

Concluding remarks

In preparing this Editorial, I was touched to reread some of Jean Garnier's original correspondence regarding his aims for Biophysical Reviews. As a bioinformatician, Jean was intensely interested in data analysis and data reduction methodologies and frequently opined that sifting through the literature and extracting helpful information was one of the next great challenges in science. He firmly hoped that Biophysical Reviews could play a role in this filtering and extraction process.

More can be learnt about the journal at its official Springer-Nature website and also from its social media pages on Twitter and YouTube.

Web: <https://www.springer.com/journal/12551>

Twitter: @BiophysicalRev1.

YouTube: www.youtube.com/channel/UCzG_5MWmnrB2UBibtxs2DuA

Potential authors interested in submitting an article to Biophysical Reviews are encouraged to first raise the matter with either the Chief Editor or their local Executive or Editorial Board Member. After discussion on the suitability of their article, a timetable for their submission will be arranged in conjunction with the professional officers of the journal.

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Declarations

Conflict of interest D.H. reports no conflict of interest. No humans or animals were harmed during the writing of this article.

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