Biophysical reviews—providing an effective critique

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Received: 15 July 2021 / Accepted: 19 July 2021 / Published online: 6 August 2021

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Abstract

This Editorial for Volume 13, Issue 4 of Biophysical Reviews begins with an introduction to the invited Review contributed by the 2021 winner of “The Michèle Auger Award for Young Scientists’ Independent Research” (Assoc. Prof. Jorge Alegre-Cebollada). After providing a short summary of the other articles contained within the Issue, we discuss some additional matters important to the journal and its readers. In particular, this Editorial describes ongoing preparations for the upcoming IUPAB World Congress (October 4th–8th); it introduces two new Executive Editors from the UK and Spain; it describes the journal’s placement in the latest SCIMago journal rankings, and it explains a new feature of the journal—“The Biophysical Reviews Historical Top Five”. This piece closes with some thoughts about what might constitute a constructive critique of a manuscript.

The Michèle Auger Award winner for 2021

The “Biophysical Reviews” journal is the publishing instrument of the international philanthropic body IUPAB (International Union for Pure and Applied Biophysics). As such, Biophysical Reviews has a number of aims additional to those typically sought after by a commercial scientific publication. One of these “extra” aims is to facilitate the promotion and recognition of biophysics-based research and education on an international stage. In partial alignment with this goal, the journal operates one competition each year for young scientists currently performing biophysical research who, at the time of application, are under 40 years of age. The competition was initiated in 2019 to honor the memory of Prof. Michèle Auger, a well-liked and respected member of the Editorial Board who sadly succumbed to illness in late 2018 (IUPAB 2019). Tailored to Michèle’s genuine interest in the encouragement and promotion of young scientist’s research, to date, the competition has been successfully run twice, with two outstanding recipients receiving the prize in 2020 and 2021:

- Assist. Prof. Alexandra Zidovska (winner 2020) Web: <https://www.physics.nyu.edu>
- Assoc. Prof. Jorge Alegre-Cebollada (winner 2021) Web: <https://www.cnice.es/en/jorge-alegre-cebollada>

Each winner of the prize is presented with a plaque, a year’s free subscription to the journal, and an invitation to contribute a review article based on their research subject matter within the year of their award (with payment of the fees associated with gold-open access covered by the journal). The leading article of this Issue of Biophysical Reviews is the invited Review from the 2021 winner of the Michèle Auger Award for Young Scientists’ Independent Research—Assoc. Prof. Jorge Alegre-Cebollada (Fig. 1) (Alegre-Cebollada 2021). Jorge was selected by a panel of sixteen judges from a list of fifteen candidates¹. Based in Madrid, Jorge’s research is concerned with the elucidation of nanomechanical principles governing protein structure, function, and regulation. Building upon early speculations that the majority of proteins within the cell exist in some kind of semi-attached/tethered state (Clegg 1984; Luby-Phelps et al. 1988), the studies described by Assoc. Prof. Alegre-Cebollada which concern both, the effects of mechanical forces on protein structure, and the study of the mechanism(s) of transduction of such forces into biological function, represent a significant maturing of the field of protein—which just 50 years ago was principally concerned with reductive study of dilute aqueous

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¹ A description of details of the judging for this 2020 and 2021 can be found here (Hall 2020a; Hall 2021a).

Fig. 1 The winner of the “2021 Michèle Auger Award for Young Scientists’ Independent Research” (Assoc. Prof. Jorge Alegre-Cebollada). The picture shows Jorge holding his award plaque standing in front of his institutional sign (CNIC, Madrid). More can be read about Jorge and his research at the following web address <https://www.cnic.es/en/jorge-alegre-cebollada>

enzymatic suspensions (Rivas and Minton 2020). Attached as appendices to Jorge’s Review are two short biographies. The first details Jorge’s life and research while the second provides some insight into the life of Prof. Michèle Auger, to whom this award is dedicated (Cebollada, 2021). The reader is encouraged to read these to develop some understanding of the motivation behind this award.

The Biophysical Reviews’ “Historical Top Five”

While science, due to its very nature, tends to chase new developments, it is often easier to make sense of a field with some appreciations of its past. Towards this line of thought, this Issue of Biophysical Reviews contains the first invited contribution of a new Letter-type format known as the “Biophysical Reviews Historical Top Five” (Ando 2021). Such “Top Five” contributions are requested from eminent scientists in a particular field, with the brief that they share their *opinion* about five particularly significant historical articles within their research area. The invited authors are instructed to approach their writing task from the point of view of advising a newcomer entering the field and to interpret the appellation of “historical” as representing the period from the recognized start of the field to 20 years prior from today. To start this series, the journal requested a “Top Five” contribution in the area of “biophysical investigations involving atomic force microscopy (AFM)” from Prof. Toshio Ando, one of the founding developers of the high-speed AFM technique (Viani et al. 2000; Ando et al. 2001; Ando et al. 2002). In a remarkably thoughtful piece, Prof. Ando first provides a digestible introduction to the development of the general AFM

field before focusing on five biophysical developments that have helped to advance biological understanding (Ando 2021). By virtue of the very fact that these “Top Five” requests are made within the strictures of a Letter format, they are intentionally not meant to be interpreted as comprehensive reviews of the literature. Rather instead, they should be taken as interesting perspectives, from an eminent researcher, on the historical development of a field—a period so easily forgotten in our attempts (as scientists) to build upon knowledge gotten from the very latest of discoveries. While the journal recognizes that the Top Five format holds potential as an academic hand grenade,² we trust that with suitably judicious selection of contributors, the benefits will outweigh any negative aspects and will, in the future, prove to be of lasting interest to the readers of the journal. Many thanks to Prof. Ando for his bravery on taking on this first assignment.

Precis of current Issue contents

Issue 4 contains 12 articles in total. With the first two (Alegre-Cebollada 2021; Ando 2021) just described, we now shift our attention to the remaining Letters, Commentaries, and Reviews. The next article by Aune et al. (2021) is a commemorative tribute to Prof. Serge Timasheff, submitted by his former research colleagues and daughter. Making a personal note, I particularly enjoyed this tribute piece. As one of the true giants of solution thermodynamics, this homage to the memory of Prof. Serge Timasheff holds much scientific and human interest. The caliber of the scientists contributing to the work³ and the nature of their commentary do great honor to Prof. Timasheff’s memory, marking him as the *rara avis* of scientists—those who are both scientifically respected and personally admired (Aune et al. 2021).

The next two articles (Cranfield et al. 2021; Solís et al. 2021) are announcement type Commentaries that respectively describe calls for contributions to an upcoming Special Issue on the Australian Society for Biophysics (ASB) and an Issue Focus on the Costa Rican Biophysical Society. The ASB Special Issue (Cranfield et al. 2021) is scheduled for 2022 and represents the journal’s next effort in the continuing national biophysical society partnership program series—a program meant to bring to international prominence the workings and research focus of a particular nation’s biophysical society (Hall 2020b; Komatsuzaki et al. 2020). The Commentary on the Costa Rican Biophysical Society [Solís et al. 2021] describes the journal’s first attempt at the production of an “Issue Focus”—a mini contiguous Special Issue contained within a

² With the potential for damage to those neglected/not cited in the field and to the author via generation of enmity from those colleagues not cited!

³ Literally the author list represents a collection of the scientists appearing in the reference lists of many of my own research papers.

regular Issue. This Issue Focus type format is particularly suitable for smaller groups or specialized topics for which raising the 10–15 articles required for a full Special Issue is not feasible. Readers with an interest in contributing to either of these Special Issue/Issue Focus monographs are requested to make contact with the Special Issue Editors listed within each of these respective commentary announcements (Cranfield et al. 2021; Solís et al. 2021) and also on the Biophysical Reviews home-page.

The remaining six articles in Issue 4 are a mixture of short- and long- format Reviews. First off the bat is an invited contribution from scientists based jointly in the USA and Israel that deals with the regulation of Ras-like small GTPase proteins (Nussinov et al. 2021). Found in all animal cells, Ras-like proteins are peripheral membrane proteins that are major players in the regulation of signal transduction pathways and the generation of intracellular signaling cascades. As such, they are regulators of cellular growth, differentiation, and, when defective or mutated, are involved in cancer development (Li et al. 2018; Prior et al. 2020). Nussinov et al. (2021) start their literature review with a summary of the sequence and structural differences existing among the different classes of Ras proteins, before then describing how various post-translational modifications (such as its palmitoylation, farnesylation, and phosphorylation) regulate the Ras-like proteins involvement with different internal membrane structures. After reviewing how the various Ras's differential involvement with the cell membrane can determine cell fate, the authors go on to review material discussing a potentially much broader regulation mechanism based on tying the extent and form of Ras expression patterns to the compactness of the chromatin in various cell types and various cell states of growth (Nussinov et al. 2021).

The next Review, submitted by a team of scientists from India, discusses what is known about the structural and cellular biology of MORC-2, a member of the nuclear protein superfamily found throughout the animal kingdom, which is also highly correlated with cancer development (Guddeti et al. 2021). Dovetailing nicely with the previous article, MORC-2 has been shown to be involved with chromatin remodeling, interacting through its DNA-binding zinc finger domain. As is typical for a nuclear protein possessing a coiled-coil protein-protein interacting domain, defects in MORC-2 are associated with a range of nucleus-specific functions such as cancer and DNA damage repair. However, less obvious is MORC-2's noted role in transcriptional regulation of glycolysis and lipogenesis (Guddeti et al. 2021). As understanding the nature of the basic components of the chemistry of life is an essential prelude to its biophysical modeling, this review article is a welcome addition to the growing collection on the biophysics of cancer that has appeared in the journal.

The third Review in this set was contributed by two scientists from Russia and deals with the theory and practice of

optical trapping in biophysical experimentation (Konyshev and Byvalov 2021). After first providing a well-structured description of the theory of radiation pressure for optically transparent particles that are either much smaller, much larger or comparable in size to the wavelength of visible light, the authors then go on to describe a set of empirical force laws useful for describing the interaction between living and non-living microscale components able to be optically trapped. This mixture of rigorous and utilitarian theoretical models should go a long way to improving our collective understanding of what is actually occurring in an OT experiment (Konyshev and Byvalov 2021).

The next review article is a single-author contribution from Japan that discusses very recent evidence concerning the self-assembly of Ras-like small GTPases in lipid vesicle membranes and the subsequent participation of these complexed Ras-like molecules in the formation of tethering linkages with other Ras-containing vesicles in a homo- or hetero-typic fashion (Mima 2021). Concentrating on a series of extremely elegant experiments that involve entirely chemically reconstituted protein-lipid systems that use different members of the Rab and Arf classes of the Ras family of proteins⁴, the Review argues that Ras-type proteins may, in addition to their traditional intracellular signaling role, play an active role in intracellular vesicle trafficking via their tethering ability. Due to the nature of the reviewed material (bottom up chemical biology-based in vitro reconstructions), the synthesized arguments carry considerable weight, and it is exciting to realize that this review article may help to initiate paradigmatic change in our understanding of small GTPase function (Mima 2021).

After some recent excellent contributions on the topics of individual cell mechanics, the fifth Review of Issue 4, contributed by a team of Russian scientists, examines why these mechanical properties change at the next level of spatial complexity associated with cell aggregate formation, such as is the case for tissue culture-derived cell sheets and cell spheroids (Efremov et al. 2021). The authors first describe experimental aspects, reviewing both various techniques for preparing cell sheets and spheroids, and different metrological procedures for probing their mechanical properties across the micro to macroscopic scales⁵. After careful recounting of the biochemical and cell-biology data accompanying the reviewed mechanical measurements, the authors conclude that observed changes in mechanical properties, as cells organize

⁴ One particularly clever feature of the discussed in vitro experiments is the use of various His-tagged Arf and Rab constructs made using a variable length linker sequence. The Rab-like proteins are inserted into vesicle bilayers via binding of the polyhistidine-tag to a phospholipid-nickel membrane component with this linkage meant to mimic the variable lipid anchor used in nature.

⁵ Concentrating on such techniques as AFM-based elasticity measurements, nanopipette-based aspiration, uniaxial and biaxial (plate-based) stretching and compression testing and solution-based osmotic pressure compression/expansion measurements.

to form aggregates, are due to the formation of significant amounts of extra-cellular matrix (ECM), the formation of intercellular junctions, and changes in intrinsic cellular contractility (associated with increased cytoskeleton-derived anchorage supporting junction and matrix attachment) (Efremov et al. 2021).

Contributed by a team of medical and physical scientists based in Portugal, the final review article of Issue 4 deals with a particularly important aspect of life, the ability to predict the initiation of labor among pregnant women—a situation with extraordinarily dramatic consequences when it leads to pre-term birth of the baby (Russo et al. 2021). Concentrating on the diagnostic signature of the Alvarez wave (a specific type of local rhythmic contraction of the myometrium displaying high frequency and low-intensity characteristics), the authors review literature examining the potential predictive power of Alvarez wave analysis in the assessment of the onset of labor among extremely large cohorts of pregnant women. Based on sheer weight of numbers, the authors conclude that Alvarez wave analysis is likely an effective indicator of the onset of labor, and they set out helpful analytical parameters for the practical utilization of this information stream in making decisions at the point of patient care (Russo et al. 2021).

Matters of interest for the journal's readers

Having provided a precis of the Issue's contents, we now direct the reader to some matters of possible interest that relate to the journal and its parent organization IUPAB (Morales 2021).

IUPAB Congress

Preparations for the upcoming 20th IUPAB World Congress (October 4th–8th) are well underway, and an exciting list of speakers has been assembled. More information on the program lineup and details regarding abstract registration and application for student fee waivers (virtual travel fellowships) can be found at the following websites:

- <http://iupab.org/>
- <https://iupab2020.sbbq.org.br/>

To be held in conjunction with the Brazilian Society for Biophysics (SBBf) and the Brazilian Society for Biochemistry (SBBq), registration of your virtual attendance at the meeting is a great way to support both IUPAB and Brazilian scientific colleagues⁶. A Special Issue of Biophysical Reviews will be

dedicated to the subject matter discussed at this year's IUPAB Congress (details included in Itri et al. 2021).

New Executive Editors

As part of Biophysical Reviews' continuing efforts for better representation of the biophysical community, we have appointed two new Executive Editors within the greater European area. On behalf of the journal, I would like to thank Prof. Stephen Harding (Nottingham University, UK) and Prof. German Rivas (CSIB, Spain) for taking on this duty. As awarded recipients of national biophysics prizes from their respective national societies, both Profs. Harding and Rivas are well-placed to help lead and coordinate the journal's activities within their individual geographic areas. We will hear more about these two Executive Editors in our upcoming "Meet the Editor Series" over the next year but for now, you can write to them for information about the journal (along with the other Executive Editors) at the contact details shown in Table 1.

Biophysical Reviews SCIMago ranking

Each year, the Elsevier SCIMago indexing system releases its assessment of journal performance. While one should always read the article rather than look at the journal metrics, it would be naïve to neglect the obvious truth that much of modern science is driven by citation metrics. With this qualifier in mind, we note that Biophysical Reviews has received a Q1 ranking in the biophysics section (SCIMago 2021a) and has risen to the 10th overall in the biophysics category (with a citation per document score over four years of approximately five) (SCIMago 2021b). Of course, more is left to be done to further improve the journal. Nevertheless, the receipt of a Q1 ranking is an important (and often necessary) requirement with regard to meeting institutional publishing rules.

Call for nominations for the 2022 MA Award

A description of the winner of the "2021 Michèle Auger Award for Young Scientists' Independent Research" was made at the start of this Editorial. The individual research essays of this year's winner (Alegre-Cebollada 2021) along with last year's winner (Zidovska 2020) have been published by the journal. Nominations for the upcoming 2022 award are open until October 31, 2021 (Hall 2021b). Candidates can be nominated (or self-nominated) by sending a collection of six pdf documents that include the candidate's one-page curriculum vitae, along with five of their best original published research papers. Documents may be submitted by email to either the Chief Editor, or any one of the Biophysical Reviews' Executive Editors. Results will be announced in late December, with the winner's single-author Review to be published in a later Issue, the following year.

⁶ During the current difficult circumstances.

Table 1 Biophysical Reviews Executive (newly appointed Editors shown in bold)

Name	Institute	Email Address
Stephen Harding	University of Nottingham, UK	steve.harding@nottingham.ac.uk
Joshua W.K. Ho	University of Hong Kong, China	jwkho@hku.hk
Rosangela Itri	University of Sao Paulo, Brazil	itri@if.usp.br
N. R. Jagannathan	Chettinad Academy of Research & Education, India	jagan1954@hotmail.com
Kuniaki Nagayama	National Institute Physiological Sciences, Japan	nagayama@nips.ac.jp
Wilma Olson	Rutgers–School of Arts and Sciences NJ, USA	wilma.olson@rutgers.edu
Germán Rivas	Centro de Investigaciones Biológicas -CIB, CSIC, Spain)	grivas@cib.csic.es

Making a constructive critique

For scientists, the receipt of a request for a manuscript reviewing duty can arouse many different types of emotions. It may (in some cases) instigate a feeling of professional pride that you have been recognized as being suitably knowledgeable in the field to be able to provide an expert opinion. In other cases (depending on one's stress levels at the time), it can provoke feelings of annoyance and resentment at the thought of the significant anonymous⁷ investment of personal time that is involved with making a critique of someone else's manuscript, with no firm guarantee that the Editor will even follow your recommendation! To round out this Editorial for Issue 4, I thought that it might be instructive to provide some thoughts on the beneficial and negative aspects of taking on a reviewing duty, I also provide some pointers as to what constitutes a useful critique of a scientific manuscript.

Benefits of providing a critique

There are four positive sides to providing a critique of a manuscript under consideration for publication.

- (i) Reading the literature—The formal assessment of a manuscript requires (at minimum) a careful reading of the article under consideration and also commonly, the careful reading of a number of articles cited within the background literature. This required engagement with the literature is almost always a good thing. It can expose the reviewer to new material in a guided fashion, bolstering scholarship muscles atrophying under teaching and experimental pressures.
- (ii) Collegial assistance—The providing of a careful well thought out critique can be of great assistance to the scientist whose manuscript you are assessing, sometimes helping them to improve their manuscript and sometimes saving them from an embarrassing/career damaging error.

Some people derive genuine pleasure from providing such help while others quite simply don't. Irrespective of the type of person you are, the provision of collegial assistance also provides many indirect benefits that accrue from improving the quality of your general research environment. These benefits stem from helping to shape the literature landscape, reducing the published noise and contributing to the maintaining of certain standards⁸.

- (iii) Sharpening of one's critical/analytical skills—While labelling someone, a critic is often considered in the perjorative sense, being a critic and thinking critically both lie at the cornerstone of scientific philosophy, whereby scientific hypotheses only become scientific "truths" after surviving repeated attempts at falsification. The chance to, with gusto, unleash your critical nature in the assessment of a manuscript (under the cloak of anonymous peer review) can be a very liberating scientific experience⁹. Practice can hone one's ability to make a cogent deconstruction of a manuscript's weaknesses—a valuable academic skill.
- (iv) Positive interaction with editors/virtual recognition within the community—If one chooses to do so, reviewing duties can be publicly recognized through the Web of Science Publons database (PUBLONS 2021) which may serve to raise one's prestige within a scientific community¹⁰. Particularly, good manuscript reviewers are valuable academic commodities who are genuinely appreciated by journal-handling editors. These handling editors are, in general, quite well connected to the various scientific communities that their journal represents. When this relationship is not abused (by too many requests from the editors), such appreciation can have positive downstream follow-on effects (e.g., Editorial Board

⁷ Many modern journals have signed up for the Publons reviewer credit system meant to provide anonymous recognition to scientists for their time spent. However, reviewers of relatively specialist topics providing strident reviews to boutique journals with low manuscript output should not depend upon their anonymity being 100%.

⁸ As a personal note, when my children were small, we often took bags and picked up rubbish in the park where we went to play, so that we could enjoy a slightly nicer environment! Such mandated "Emu" parades are a common part of many people's upbringing and early school life. Application of the same principles to the scientific realm tends to produce similarly positive outcomes.

⁹ Similar reviewing "gusto" should be applied with caution when personally requested to provide an assessment of your department chair's new manuscript!

¹⁰ Although doing so can lead to even more review requests!

Memberships, invited manuscript requests, and referred nominations for conference presentations)

Negative aspects of making a critique

As with all things, there are also a number of downsides associated with taking on a reviewing duty. These are also fourfold.

- (i) Loss of personal time—Good reviewing takes time which, at different stages and ages of one's personal and professional life, may not be in abundant supply. While performing a reviewing duty is a positive service to the community, a judicious sense of self-preservation should be exercised when agreeing to a request to act as a manuscript reviewer. Please remember that the scientific community will not collapse if you defer the request in order to finish your own paper or take a day off to play with your children. In lieu of acceptance, a helpful suggestion of an alternative qualified reviewer is always a sincerely appreciated alternative.
- (ii) The unintended consequences of doing too good a job—A general principle in life is that helpful people tend to accumulate the work of others who are less helpful and/or less competent. This can also be true for those who accept reviewing duties. Oftentimes, unscrupulous or overtaxed editors will send overly frequent requests to those reviewers they know will do a good job and submit in a timely fashion. In such cases, you should either reject the request or suggest that your close association with the journal should indicate an appointment to the Editorial Board!
- (iii) Potential for a conflict of interest—The acceptance of a reviewing duty often carries with it the tacit (or sometimes explicit) requirement that you will not abuse the privilege of access to, as yet, unpublished data. Science is filled with the stories of researchers who, after having their manuscripts rejected, see the same data published by another group just a few months later. Whether such circumstances are indicative of nefarious behavior or not, the mere suspicion that a reviewer may have acted in bad faith can set a dark course for any future relationship between scientists and/or scientific groups. To counteract any possible perception of a conflict of interest, it is important to honestly state in your specific remarks to the Editor, all potential conflict of interests involving similar work at the outset (either at the point of acceptance or the point of submission of your critique). Likewise, one should also state any pre-existing personal connection at the outset (again in your specific remarks to the Editor). If you honestly feel capable of providing a critique despite the potential conflict of interest, you can state as much after first making the potential for it obvious in your first

remark. Such statements can go a long way to preventing any future witch hunts and stamp out the burning tinders of impropriety before they become full-flamed raging infernos of damaging gossip.

- (iv) Sense of anger/futility if your recommendation is ignored—When requested to make a manuscript critique, it is important to realize that the Editor is asking for your scientific opinion in order to help him/her to make a decision on the manuscript under consideration. Oftentimes, the Editor will contact two or three reviewers and weigh their collective criticisms before making a decision. There is always the possibility that, in seeming spite of your strongly positive or negative recommendation, the Editor may ultimately decide oppositely. Such decisions can be quite upsetting to reviewers, especially when they have invested significant time and energy in making their review critique.

Some tips on making a helpful critique

After accepting a review duty, it is best for all involved to approach it from the perspective of actively trying (if possible) to improve the manuscript, so that when/if eventually published, it adds something to the existing literature. For those just starting out, I include a few suggestions on how to structure your manuscript critique in order to help improve its overall quality and effectiveness. These suggestions are based in part on my own experiences as a reviewer and Editor and in part from instruction received along the way¹¹.

- Section 1: A short summary stating the nature of the review request (name of submitting authors, title of submitted work, format of the submission, and name of the journal for which it is being considered). (*This lets the Editor know that you have actually read the work—sometimes a very real suspicion*)
- Section 2: A conflict of interest statement included in your comments to the Editor, pointing out your relationship to the field, your relationship to the authors, and any direct overlap you have with the submitted work. (*This is as much to protect your own interests as it is for the benefit of the manuscript authors*)
- Section 3: The inclusion of a summary (in your specific remarks to the Editor) that describes the general importance of the work, the major take home points, a short positive description of the good aspects of the work, and a short negative description of the bad features. Finish this section

¹¹ These comments are shaped in part by training I received from my first postdoctoral supervisor, Dr. Allen Minton, who spent significant time with younger scientists, impressing upon them (often quite loudly) the responsibilities associated with the receipt of public monies.

with a closing sentence stating your general recommendation (usually accept/reject or revise). (*This type of executive summary is genuinely appreciated by the Editor*)

- Section 4: In this section, detailed criticisms of the manuscript can be made. It is helpful to divide the criticisms into the following sections:
- General exposition/typographical errors—Is the manuscript sufficiently well-structured to best convey the authors points? Is the length appropriate? Could it benefit from more/less/better figures? Could some of the information be better conveyed within a table? If the manuscript is difficult to read, don't just state that the English is poor. Provide some helpful pathway to possible redemption with concrete suggestions and examples. If inclined to do so, list the typographical errors by line number.
- Scientific errors of fact (commission)—Point out any errors of fact contained within the manuscript with literature support to make your case as required.
- Scientific errors of omission—Describe any major facts or developments in the field that have not been mentioned by the authors with literature support as required.
- Literature base—Is the cited literature appropriate? Are there too many or too few citations? Are the authors missing any key references? Does the cited literature sufficiently cover modern developments and does it sufficiently pay homage to the historical key discoveries? Do the authors seem to self-cite beyond what is appropriate to their level of contribution?

To close out this somewhat meandering discussion of the peer-reviewing duty, it is important to point out that all¹² journals depend on high-quality assessments of manuscripts to produce superior scientific content and, in this respect, Biophysical Reviews is no different to any other journal. However, one advantage that Biophysical Reviews does possess is an Editorial Board made up of members of the world's various national biophysical societies who have an active interest in lending their support to authors who publish within the Biophysical Reviews journal. However, despite our excellent Editorial Board, the journal still frequently needs to turn to outside sources for a second or third opinion. Biophysical Reviews sincerely hopes that, if you are contacted with a request to provide a critique of a submitted manuscript, you will give that request your most serious consideration.

Concluding remarks

If you would like to submit an article to Biophysical Reviews, you are encouraged to first broach the matter with either the

¹² Nearly all! Not considering here the vast swath of pay for play predatory journals from which most scientists receive ~50 request invitations per day.

Chief Editor or a close-by Executive or Editorial Board Member. Information about the journal is available at its official Springer-Nature website and social media pages on Twitter and YouTube:

- Web: <https://www.springer.com/journal/12551>
- Twitter: @BiophysicalRev1
- YouTube: www.youtube.com/channel/UCzG_5MWmnrB2UBibtxs2DuA

After a discussion concerning the appropriateness of your suggested topic, a general timetable for the submission of your article (usually about 4 to 6 months following the official invitation) will be arranged in conjunction with the professional officers of the journal.

Acknowledgements I would like to thank Dr. Meran Lloyd-Owen, Prof. Kuniaki Nagayama, Prof. Rosangela Itri, Prof. N.R. Jagannathan, Prof. Wilma Olson, Assoc. Prof. Joshua Ho and Prof. Adam S. Foster for comments made on an earlier draft of this manuscript. DH acknowledges funding associated with the receipt of a “Tokunin” Assistant Professorship carried out at the WPI-Center for Nano Life Science, Kanazawa University. DH also acknowledges the University of Aalto, for an appointment to their Affiliated Researcher Program carried out within the Department of Applied Physics.

Declarations

Conflict of interest The author declares no competing interests.

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