



## Biophysical Reviews: Turning the page from 2022 to 2023

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### Abstract

This Editorial (vol. 15 issue 1—Regular Issue featuring an Issue Focus on the “100<sup>th</sup> Anniversary of Har Gobind Khorana”) first describes the issue contents before providing both, a look back at some journal highlights from 2022, and a look forward to what we can expect from 2023. The Editorial closes with a roundup of new journal access features and an acknowledgment of those supporting the journal.

As we take our first steps into the new year, we use this moment of transition to educate the readers of *Biophysical Reviews* about the journal, what we are trying to achieve, and how we are doing it.

### Biophysical Reviews—the IUPAB journal

The *Biophysical Reviews* journal is the single journal of IUPAB, the International Union for Pure and Applied Biophysics (IUPAB 2023). Along with its sister organizations such as IUPAC, IUPAP, IMU, IUMS, IUBMB, and IUBS (Table 1), IUPAB is a scientific affiliate of the ISC (International Science Council – ISC 2023). As the world’s largest non-governmental science policy organization, the ISC seeks to foster collaboration between scientific bodies at various levels across the social and natural sciences. The ISC, both by itself and through its affiliated unions, plays important roles in defining international norms (e.g., nomenclature and standards), providing independent advocacy/policy advice (through its response to various national and international calls for input and via the writing/dissemination of policy releases to news media) and the providing of independent funding initiatives (via the dissemination of

small and large grant schemes aligned with organizational/union goals).

IUPAB was established as an independent unit within the general ISC structure in 1961 (IUPAB 2023). The specific goals of IUPAB are as follows:

- (i) Facilitate international engagement and collaboration between various countries’ national biophysical associations by acting as a unifying central international body and by organizing a world biophysics congress every 3 years.
- (ii) Strategically promote new areas of biophysics by identifying and targeting key areas of research.
- (iii) Support the development and carrying out of biophysical research in all corners of the world by advocating for facility development, sponsoring research initiatives, and providing seed funding for meetings.
- (iv) Promote biophysics-related education through the establishment of free to access online teaching resources and the provision of traveling lectureships.
- (v) Provide/promote cost-effective mechanisms for the publication of biophysical research.

Established by IUPAB in 2009 as its single journal, the mandated goals of *Biophysical Reviews* are as follows:

- (i) To facilitate the publication, by experts in the field, of topical review articles in the general fields of biophysics, structural biology, and molecular biology.
- (ii) To promote biophysics as a discipline, by providing a mechanism for fostering biophysical education, research, and international collaboration.

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**Table 1** Some prominent scientific unions of the International Science Council (ISC)

Organization	Contact website
ISC—International Science Council	<a href="https://council.science/">https://council.science/</a>
*IUPAB—International Union for Pure and Applied Biophysics	<a href="https://iupab.org/">https://iupab.org/</a>
IUPAC—International Union of Pure and Applied Chemistry	<a href="https://iupac.org/">https://iupac.org/</a>
IUPAP—International Union of Pure and Applied Physics	<a href="https://iupap.org/">https://iupap.org/</a>
IMU—International Mathematical Union	<a href="https://www.mathunion.org/">https://www.mathunion.org/</a>
IUBS—International Union of Biological Sciences	<a href="https://iubs.org/">https://iubs.org/</a>
IUBMB—International Union of Biochemistry and Molecular Biology	<a href="https://iubmb.org/">https://iubmb.org/</a>
IUMS—International Union of Microbiological Societies	<a href="https://www.iums.org/">https://www.iums.org/</a>

- (iii) Act as a secondary source of revenue for IUPAB (alternative to funds raised through IUPAB membership fees).

With such a mixture of conventional and philanthropic publishing goals, *Biophysical Reviews* is a non-typical journal that seeks to be of genuine benefit to all members of the world biophysical community, irrespective of their country of origin.

## Precis of the current issue

The current issue is a “Regular Issue featuring an Issue Focus” which is a relatively new format first adopted by the journal in 2022 (Chaves et al. 2022; Hall 2022a). Meant to provide small groups with an avenue for publishing a limited collection of articles on a single theme (that does not require the typical 20–30 articles associated with a full Special Issue), the Issue Focus is a set of five or more articles published as a contiguous block within a regular issue, with the articles of the Issue Focus carrying their own unique letterhead and introduced by their own editorial. The current Issue Focus has been organized by Profs. Gopala Aradhyam and Naranamangalam Jagannathan and is a collection of articles paying homage to the memory of Nobel Prize winning scientist Har Gobind Korana on the 100<sup>th</sup> anniversary of his birth (Aradhyam and Jagannathan 2023). Here, we briefly discuss the articles appearing in both the regular and “focused” section of this Issue.

Immediately following the current Editorial are two commentaries (Clarke 2023; Sumikama et al. 2023). The first, contributed by the current Secretary General of IUPAB Prof. Ronald Clarke, is an opinion piece that discusses the role of government in choosing particular projects funded by national science schemes (Clarke 2023). Detailing a particular case from his own country of Australia the Commentary introduces the potential dilemma of ministerial veto of a formal assessment process organized and run by a national research science council. The piece discusses both the delayed versus immediate benefits of funding applied

versus basic research and the role of elected officials (the ultimate representatives of the people) in second guessing the deliberations of national scientific bodies. This Commentary is a suitably meaty bite (with lots of gristle to chew over) to start this year’s front matter section (Clarke 2023).

The second Commentary (Sumikama et al. 2023) is an open call for contributions to a 2023 Issue Focus on the topic of “The Computational Biophysics of Atomic Force Microscopy (AFM)”. Scheduled for volume 15 issue 6 (December 2023), this open call solicits contributions from interested scientists working in the area of computational physics/biophysics of machine control, experimental simulation, or experimental analysis of AFM experiments. Based on a 2022 IUPAB-funded workshop held at Kanazawa University, the Issue Focus has the potential to be a major resource in detailing the latest in computational developments in this emerging field. Interested authors are urged to contact the Issue Focus editors to discuss their potential contribution (Sumikama et al. 2023).

In addition to the two front matter commentaries, the regular part of this Issue carries three interesting review articles. The first of these is a joint contribution from groups located in Australia, the USA, and the Netherlands, that is concerned with the use of machine learning (ML) in the simulation, imaging, and analysis of fluid flow in the heart and surrounding vasculature (Moradi et al. 2023). As the authors point out, the simulation of fluid flow in complex geometries via numerical solution of the Navier–Stokes equations can be particularly computationally demanding, especially for certain classes of problems, such as turbulent flow (Sayma 2009). At their core, ML methods are an automated way of representing large data sets in terms of a finite number of simpler independent functions or objects—each individually defined by a set of parameters. The process of ML is achieving the best representation of the data using an adaptive algorithm<sup>1</sup> (Bishop 2006). In this review,

<sup>1</sup> As such, ML approaches can be simply pictured as a form of interpolative assessment, somewhat akin to a look up table (LUT) allowing for either rapid forward assignment of predicted behavior from the indexed values describing a particular combination of the basis

Moradi et al. describe the latest use of ML methods for (i) facilitating the simulation of fluid flow calculations (from ML trained on data gained from fluid dynamic simulations performed over a large parameter space), (ii) assisting with interpretation and analysis of images of fluid flow within the body (achieved from ML trained on simulations of images produced from complex fluid flow in tissue), and (iii) prediction of patient health, based on analysis of data gained from wearable sensors (from both ML models trained on data from patient health studies described in terms of correlated biometric health outcomes, and ML models trained on complex fluid flow simulations). While ML can be a buzzword that is frequently used, but less often understood, the review by Moradi et al. does a good job of providing the scientific foundations under the black box, as applied to cardiac medicine, and is well worth a read (Moradi et al. 2023).

The second review deals with the very practical, but important, topic of defining the inertial center of teeth when existing in place within gums (Kuruthukulam and Patil 2022). Contributed by dental medicine researchers from the Maharashtra region of India, the authors emphasize why manipulating the tooth along a line force projecting through a tooth's center of resistance, prevents unnecessary loading of torque onto the tooth (with possible breakage). This review article is divided into three different methods for estimating a tooth's center of resistance. Proceeding historically, the authors first review analytical methods based on geometric approximations of teeth (using such shapes as ellipsoids of revolution). They next reviewed experimental techniques for defining the center of resistance before finally discussing methods based on more modern numerical procedures (Kuruthukulam and Patil 2022).

The third review article is a collaborative effort from researchers based in Canada and France which deals with a non-linear optical phenomenon known as second-harmonic microscopy (SHM) (Aghigh et al. 2023). The underlying principle of SHM is second harmonic generation (SHG) which involves the interaction of two photons of the same frequency with the dipole of a non-centrosymmetric material.<sup>2</sup> Mutual action of the two photons can excite the material to a virtual energy state of  $2hf_1$ , relaxation of which produces the emission of a single photon of double the frequency,  $f_2$ . Exploiting the SHG principle in SHM involves the application of a specific wavelength filter to light observed from an illuminated sample. SHM has been a popular topic within the journal, with a number of reviews

on related topics being published over the last 15 years (Cox 2011; Kato 2019; Mizuguchi and Nuriya 2020; Pallen et al. 2021). The current work describes the history of the SHM field and its use in examining various fibrous structures such as collagen and microtubules (Aghigh et al. 2023).

The next seven articles in this issue belong to the Issue Focus prepared in honor of the 100<sup>th</sup> anniversary of the Nobel Prize winning chemist Har Gobind Khorana (Aradhyam and Jagannathan 2023). Har Gobind Khorana (1922–2011) was an Indian organic chemist who spent the majority of his career working in the US (Ansari et al. 2011; RajBhandary, 2011). Khorana is most famous for his work in solving the triplet codon nature of the central dogma<sup>3</sup> based on his chemical synthesis of gene coding for homopeptides of particular amino acids (Khorana 1968). Har Gobind Khorana was jointly awarded the 1968 Nobel Prize in physiology and medicine together with Robert Holley and Marshall Nirenberg, for their collective efforts in deciphering the genetic code. Following the Issue Focus editorial (Aradhyam and Jagannathan 2023) are letter (Klein-Seetharaman 2023) and commentary (Subramaniam 2023) contributions that respectively describe what it was like interacting with Har Gobind Khorana as a student and postdoctoral fellow. These personal accounts are followed by four research reviews covering different aspects of the research topic of bacteriorhodopsin pursued by Har Gobind Khorana in the latter phase of his research career at the Massachusetts Institute of Technology (from 1970 to 2007). These four review articles respectively provide a historical perspective of expression methods useful for producing large amounts of bovine rhodopsin (Reeves 2023); application of vibrational spectroscopic procedures (such as Fourier transform infrared (FTIR) and Raman IR methods) to the elucidation of bacteriorhodopsin structure and mechanism (Rothschild 2023); biophysical approaches to the study of the bacteriorhodopsins based on site-directed mutagenesis (Fahmy and Sakmar 2023); and a review of numerous studies conducted on a specific peptide regulated G-protein coupled receptor (GPCR) known as the Apelin receptor (Murali and Aradhyam 2023).

Having provided this short summary of the current Issue's contents, we now use our vantage point from the beginning of the new year to take a look back at what happened with the journal over the previous year.

Footnote 1 (continued)

sets or rapid reverse prediction of the values of the underlying basis functions from observed data (Bishop 2006).

<sup>2</sup> Meaning that the repeating molecular unit does not have a single point of symmetry.

<sup>3</sup> The central dogma, which describes how information is stored and accessed in biology, was first postulated by Francis Crick (Crick 1958; 1970). Initially described as sequential information transfer from DNA to RNA to protein, it was the work of Khorana, Holley, and Nirenberg that solved the specifics of how this information was coded, i.e., that a linear grouping of three nucleotides in DNA and mRNA code for a single amino acid upon translation into protein by the ribosome (Khorana 1968; Holley 1968; Nirenberg 1968).

## A look back at 2022

Since 2017, each yearly volume of *Biophysical Reviews* has been built around a six-issue structure, and 2022 saw the successful release of volume 14 of the journal. In this section, we examine some of the highlights of each Issue.

### Volume 14 issue 1

A Special Issue (SI) that featured the second installment of the *Biophysical Reviews* “National Biophysical Society Partnership Program”—this time focused on the Australian Society for Biophysics (ASB) (dos Remedios et al. 2022; Hall 2022a, b, c, d). First featuring the Biophysical Society of Japan in 2020 (Komatsuzaki et al. 2020; Hall 2020), the aim of the society partnership scheme is to place the spotlight on a single country’s biophysical research allowing them to highlight their society structure and research strengths. The ASB SI contained a number of commentaries from the society President (Hill 2022) and prominent members (Martinac 2022) along with a large bevy of review articles playing to Australia’s biophysical research strengths in the areas of (i) advanced bioimaging and spectroscopy (e.g., Zhang et al. 2022), (ii) next generation sequencing (e.g., Mohammadi and Bavi 2022), (iii) membrane proteins and receptors (Henderson et al. 2022), (iv) cancer structural biology (e.g., Hibino and Hiroaki 2022), and (v) cardiovascular and muscle physiology (e.g., Li et al. 2022). In all, the issue featured 31 contributions that taken together provide a good understanding of the type of biophysical research areas pursued in Australia.

Another important aspect of issue 1 was the announcement of the winner of the “2022 Michèle Auger Award for Young Scientists’ Independent Research”—Associate Prof. Miho Yanagisawa. The Michèle Auger Award is an annual competition run by *Biophysical Reviews* to honor the memory of Prof. Michèle Auger, a member of the editorial board who unfortunately passed away in late 2018 (Auger Obituary, 2019).

### Volume 14 issue 2

As a regular Issue featuring an Issue Focus on “Costa Rican biophysics,” this Issue contained two editorials (Hall et al. 2022a; Chaves et al. 2022) which respectively introduced the contents of the regular and Issue Focus aspects. The regular Issue presented the first in the Editors’ Roundup series (Shearwin et al. 2022) a journal commentary feature in which members of various biophysical journals’ editorial boards provide a short personal recommendation of up to five articles appearing within their journal. The regular Issue

also carried a ‘Meet the Editors’ piece, introducing new editorial board member Sabrina Leslie (Leslie 2022) and five diverse review articles that included among them an interesting description of the structural differences observed between  $\alpha$ -amylases obtained from various types of extremophilic bacteria (Ahmad and Mishra 2022). The Issue Focus on Costa Rican biophysics did an excellent job of highlighting the research strengths of that country by presenting a series of articles from scientists both working at home and abroad (Pinto et al. 2022; Brenes 2022; Céspedes-Camacho and Matysik 2022).

### Volume 14 issue 3

Issue 3 was one of the two regular Issues for 2022. As for previous years, the Editorial for Issue 3 announced the call for nominations for the next year’s Michèle Auger Award for Young Scientists’ Independent Research’ (Hall 2022c). Included within the front section of the Issue were interesting scientific biographies of journal Executive Editor Stephen Harding (Harding 2022) and a scientist featured in the remarkable women in the science section of the 2021 IUPAB congress, Thailand’s Prof. Pimchai Chaiyen (Chaiyen 2022). The front section also included another Editors’ Roundup piece featuring recommendations from representatives of the *European Biophysics Journal*, *Biophysics and Physico-biology*, *Cell Biochemistry and Biophysics*, and *Biophysical Reviews* (Nagayama et al. 2022). In the main section of the Issue, there were six interesting scientific contributions, with two of particular note concerning the biophysical basis of proteins that recognize and bind to a new type of functional DNA structural motif known as a DNA quadruplex (Meier-Stephenson 2022), and the phase diagram particular to the interaction of phospholipid, sphingomyelin, and cholesterol with emphasis on the potential biological function of the formation of ~nanometer sized domains (Murata et al. 2022).

### Volume 14 issue 4

This was an SI dedicated to highlighting work presented at the 9<sup>th</sup> Congress of the Russian Society for Photobiology (Tsygankov et al. 2022). The Issue contained 28 articles roughly split into three sections: (i) front matter material discussing the meeting and society which included an editorial and a commentary outlining the society’s history (Tsygankov and Tsuchin 2022; Koppel and Krasnovsky 2022), (ii) a series of session commentaries that summarized the talks presented in the different thematic sections (e.g., Proskuryakov and Semenov 2022), and (iii) review articles (twenty in total) discussing physical aspects of the interaction of light with biomolecules in areas as diverse as plant photosynthesis (Kochetova et al. 2022; Terentyev

2022) and photodynamic therapy in human patients (Feldman et al. 2022; Grin et al. 2022).

### Volume 14 issue 5

This second regular Issue for the year contained 14 articles in total and was notable for two reasons. The first was the announcement of the sad passing of Jean Garnier (1929–2022), the founding Editor of *Biophysical Reviews* (Robson 2022; dos Remedios 2022; Hall 2022d). As described (Robson 2022), Jean was an early leader and developer of “bioinformatics,” publishing several leading papers in this field (Garnier et al. 1978; 1996). After finishing a term as IUPAB president, he served from 2009 to 2014 as the first editor of *Biophysical Reviews*. Both prior to and during this time Jean conceived the review format, launched the journal, formed the academic editorial board, commissioned a large number of articles from experts in the field, and penned the journal’s initial set of editorials (Garnier 2009). The journal is definitely poorer without him, and once again, we note the sad loss of this remarkable scientist.

The second notable aspect of this Issue was the prize-winning review article by Assoc. Prof. Miho Yanagisawa—the 2023 recipient of the Michèle Auger Award for Young Scientists’ Independent Research’ (Yanagisawa 2022). Written on the topic of how  $\mu\text{m}$ -sized encapsulation can influence the physical chemistry of adsorption and phase transition events from their normal behavior observed in bulk liquid, the review also serves to introduce the author’s research theme of “cell-sized space effects” and provides much food for thought to readers on the chemistry operating within the crowded interior of the cell (Yanagisawa 2022).

### Volume 14 issue 6

The final issue of the year was a festschrift in honor of the 70<sup>th</sup> birthday of Prof. Haruki Nakamura—the former Director of the Japanese Protein Data Bank (PDBj) (Hall et al. 2022). Based on the theme of “Computational biophysics and structural biology of proteins,” this SI featured 28 articles, with five descriptive commentaries/letters on different aspects of Prof. Nakamura’s life in science (e.g., see Nagayama 2022; Nakamura 2022; Okada 2022) and twenty-two scientific review articles/scientific letters appearing in the main section. Among the large number of excellent scientific contributions, some particular standouts include a revisit of the protein folding problem (Finkelstein et al. 2022), a review of the use of similarity in enzyme catalytic mechanism as an additional classifier of protein evolution (Ribeiro et al. 2022), and a look at recent advances in protein structural biology afforded by the large number of recently determined protein and nucleic acid structures solved using cryo-electron tomography methods (Burley et al. 2022).

## A look ahead to 2023

With three SIs and one Issue Focus, 2022 was a busy year for *Biophysical Reviews*. In the coming year, the journal’s schedule features three SIs and two Issue Focuses; and so 2023 promises to be another full year, with the highlights as follows.

### Volume 15 issue 1

Regular issue featuring an Issue Focus “100<sup>th</sup> anniversary of Har Gobind Khorana” (Current Issue—(Aradhyam and Jagannathan 2023; Hall 2023).

### Volume 15 issue 2

Regular issue.

### Volume 15 issue 3

Special issue “Quantitative methods to decipher cellular heterogeneity—from single-cell to spatial-omic methods” (Ho et al. 2022).

### Volume 15 issue 4

Special issue “LAFeBS—highlighting biophysics in Latin America” (Daniel Peluffo et al. 2022).

### Volume 15 issue 5

Special issue “VII Congress of Russian Biophysicists 2023” (Anashkina et al. 2022).

### Volume 15 issue 6

Regular issue featuring an Issue Focus “Computational biophysics of atomic force microscopy” (Sumikama et al. 2023).

## Improving access to the journal

Among the many things to think about when contemplating the writing of a review article, one of the most important, from a practical perspective, is the cost (see Hall 2019). In the modern era, science publication can be expensive with costs reaching, in some cases, the €10,000

**Table 2** 2023 *Biophysical Reviews* editorial board

Chief editor	
Damien Hall	Nano Life Science Institute Kanazawa University, Japan
Emeritus chief editors	
Cristobal dos Remedios	Victor Chang Cardiac Research Institute, Darlinghurst, NSW, Australia
Jean Garnier (1929–2022)	International Science Council, France
Executive editors	
S. Harding	Department of Bioscience, University of Nottingham, England
J.W. K. Ho	Li Ka Shing Faculty of Medicine, The University of Hong Kong, China
R. Itri	Institute of Physics, University of Sao Paulo, Sao Paulo, Brazil
N. R. Jagannathan	Chettinad Academy of Research & Education, India
K. Nagayama	National Institute for Physiological Sciences, Okazaki, Japan
W. Olson	Department of Chemistry and Chemical Biology, Rutgers University, USA
G. Rivas	Centro de Investigaciones Biológicas -CIB, CSIC
Special issue guest editors 2023	
Issue Focus: Celebrating the works of Prof. Har Gobind Khorana—100 <sup>th</sup> anniversary of his birth (issue 1)	
Gopala Krishna—Indian Institute of Technology Madras, India	
N.R. Jagannathan—Chettinad Academy of Research & Education, India	
Special issue: Quantitative methods to decipher cellular heterogeneity—from single-cell to spatial-omic methods (issue 3)	
Joshua W. K. Ho, The University of Hong Kong, Hong Kong, China	
Xi Chen, Southern University of Science and Technology, Shenzhen, China	
Mu He, The University of Hong Kong, Hong Kong, China	
Yuanhua Huang, The University of Hong Kong, Hong Kong, China	
Jessica C. Mar, The University of Queensland, Brisbane, Australia	
David J. H. Shih, The University of Hong Kong, Hong Kong, China	
Angela R. Wu, Hong Kong University of Science and Technology, Hong Kong, China	
Special issue: LAFeBS—highlighting biophysics in Latin America (issue 4)	
R. Daniel Pelufo, Universidad de la República, Salto, Uruguay	
Silvia del V. Alonso, Universidad Nacional de Quilmes, Buenos Aires, Argentina	
Rosangela Itri, Universidade de Sao Paulo, Sao Paulo, Brazil	
F. Luis González Flecha, Universidad de Buenos Aires—CONICET, Buenos Aires, Argentina	
Leandro R. S. Barbosa, Universidade de Sao Paulo, Sao Paulo, Brazil	
Special issue: VII Congress of Russian Biophysicists 2023 (issue 5)	
Anastasia A. Anashkina, Engelhard Institute of Molecular Biology, Moscow, Russia and First Moscow State Medical University (Sechenov University), Moscow, Russia	
Andrey B. Rubin, Lomonosov Moscow State University, Moscow, Russia	
Nikita B. Gudimchuk, Lomonosov Moscow State University, Moscow, Russia	
Anatoly F. Vanin, Semenov Research Center of Chemical Physics, Moscow, Russia	
Anatoly A. Tsygankov, Institute of Basic Biological Problems, Pushchino, Russia	
Yuriy L. Orlov, First Moscow State Medical University (Sechenov University), Moscow, Russia	
Issue Focus: Computational biophysics of atomic force microscopy (issue 6)	
Takashi Sumikama, Nano Life Science Institute, Kanazawa University	
Damien Hall—Nano Life Science Institute Kanazawa University, Japan	
Holger Flechsig—Nano Life Science Institute, Kanazawa University	
Editorial board members	
J. Alegre-Cebollada	Centro Nacional de Investigaciones Cardiovasculares, Spain
T.W. Allen	Royal Melbourne Institute of Technology, Australia
A.A. Anashkina	Russian Academy of Sciences, Moscow, Russia
G. Amodeo	Universidad de Buenos Aires and Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina
M. Baker	University of New South Wales, Australia
J. Baenziger	University of Ottawa, Canada
G. Basu	Bose Institute, India
E. Baulieu	Institut National de la Santé et de la Recherche Médicale Le Kremlin-Bicêtre, France
A. Benedetto	University College Dublin, Ireland

**Table 2** (continued)

F. Braet	University of Sydney, Australia
A. Chattopadhyay	CSIR-Centre for Cellular & Molecular Biology, India
P. Ciancaglini	Universidade de São Paulo, Brazil
D. Crossman	University of Auckland, New Zealand
P.J. Cozzone	Université de la Méditerranée, Marseille, France
E.M. De La Cruz	Yale University, USA
D. Devaurs	INRIA, Grenoble, France
E.J. Dufourc	University of Bordeaux, France
E. Ehler	University of London King's College, London, England
L. Finzi	Emory University, Atlanta, Georgia, USA
H.J. Galla	Institute for Biochemistry, Westfälische Wilhelms Universität Muenster, Germany
K. Gehmlich	University of Birmingham, England
J. C. Gómez-Fernández	University of Murcia, Spain
A.M. Gronenborn	University of Pittsburgh, USA
J. Higo	University of Hyogo, Japan
T. Iskratch	Queen Mary University of London, UK
N. Ito	Tokyo Medical and Dental University, Japan
P. Karthe	CAS in Crystallography and Biophysics, University of Madras, India
A.R. Kinjo	Department of Mathematics, Universiti Brunei Darussalam, Brunei
J. Kozelka	University Paris Diderot, France & Masaryk University, Czech Republic
T. Kraft	Hannover Medical School, Germany
K. K. Kim	Sungkyunkwan University, Republic of Korea
A. Li	Latrobe University, Australia
S. Leslie	McGill University, Canada
B. Maggio	Universidad Nacional de Córdoba, Argentina
B. Martinac	Victor Chang Cardiac Research Institute, Australia
J.W. McNamara	University of Cincinnati, USA
M.M. Morales	Cidade Universitária, Brazil
H. Nakamura	Institute of Protein Research, Osaka University, Japan
T. Nishizaka	Gakushuin University, Japan
H. Noji	The University of Tokyo, Japan
R.D. Peluffo	University of the Republic, Uruguay
P. Pohl	University Linz, Austria
M. Prietto	University of Lisbon, Portugal
K. Radotic	University of Belgrade, Serbia
C.M. Rao	Centre for Cellular and Molecular Biology, India
Z. Rao	Tsinghua University, China
F. Separovic	University of Melbourne, Australia
B. T. Sewell	University of Cape Town, South Africa
C. Sizun	Centre National de la Recherche Scientifique, France
K. Shearwin	Molecular and Biomedical Science, University of Adelaide, Australia
A. Shonhai	University of Venda, South Africa
C.M. Soares	Universidade Nove de Lisboa, Portugal
A.H. Squires	University of Chicago, USA
D. Szczesna-Cordary	University of Miami, USA
J. Tame	Yokohama City University, Japan
S. del Valle Alonso	Universidad Nacional de Quilmes, Argentina
J. van der Velden	VU University Medical Center, The Netherlands
M. Vassalli	University of Glasgow, Scotland
G. Viero	Institute of Biophysics, CNR, Italy

**Table 2** (continued)

A. Watts	University of Oxford, UK
M. Williams	Massey University, New Zealand
G.J.L. Wuite	VU University Amsterdam, The Netherlands
K. Yasuda	Waseda University, Japan
B. Zapotoczny	Institute of Nuclear Physics, Polish Academy of Sciences, Poland
A. Zidovska	New York University, USA
G. Zucchelli	Università degli Studi di Milano, Italy

level (Hall 2022d). Because of its philanthropic nature stemming from its association with IUPAB, the *Biophysical Reviews* has purposefully adopted a hybrid format with regard to publication costs, with this hybrid approach encompassing three different choices:

- (i) Free to publish subscription format: Authors pay nothing but the copyright remains with the journal and the article remains behind a paywall for a limited time (6 to 12 months depending on the country) before becoming freely available in PubMed Central at the following website <https://www.ncbi.nlm.nih.gov/pmc>.
- (ii) Open access format: Authors pay an open access page charge of about €2500. The article copyright is then held by the author under a creative commons (CC) agreement, and the article is available for free download to any person with an internet connection.
- (iii) Institutional agreement format: The commercial partner to IUPAB is the Springer Nature group. Springer Nature operates a number of agreements that provide access and publishing rights to various journal catalogs. These can exist at the institutional, national, and international levels. To see if your institution exists under the umbrella of such an agreement able to provide free access and free publishing, please check the following website: <https://www.springernature.com/gp/open-research/institutional-agreements>.

The latest such free-to-publish and free-to-access agreement has been signed with members of the Research University Consortium (RUC) of Japan which includes the University of Tokyo, Tokyo Institute of Technology, Tohoku University, Osaka University, Waseda University, Tokyo University of Science, Yokohama National University, Kobe University, Okayama University, and University of Fukui.

## Thanks to the Editorial Board

A journal can only be as good as the members from which it is comprised. As we take our first steps into 2023, on behalf of the journal, I take the opportunity to thank the *Biophysical Reviews* editorial board members (Table 2) for the generous donation of their time in reviewing and editing manuscripts over the past year. I would also like to welcome a number of new editorial board members, who have joined as permanent members in 2022 notably Assoc. Prof. Filip Braet (University of Sydney, Australia), Prof. Gautam Basu (Bose Institute, India), and Prof. Nobutoshi Ito (Tokyo Medical and Dental University, Japan).

## Concluding remarks

Those interested in submitting an article to *Biophysical Reviews* should discuss the matter with either the chief editor or a close by executive or editorial board member. More information about the journal is available at its official Springer Nature website and social media pages on Twitter and YouTube.

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**Data Availability** All data associated with this Editorial are available from the author.



## Declarations

**Conflict of interest** The author declares no competing interests.

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