



SIBPA on the crest of the Adriatic Sea wave: Introduction to the SIBPA XXIV (2018 congress) special issue



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HIGHLIGHTS

- Proceedings of the XXIV National Congress of the Italian Society for Pure and Applied Biophysics (SIBPA).
- SIBPA strengthens interdisciplinary aspects of biophysics.
- SIBPA awards young biophysicists and top-level scientists.

GRAPHICAL ABSTRACT



ARTICLE INFO

Keywords:

SIBPA
National Congress
Biophysics
Proceedings

ABSTRACT

The Italian Society for Pure and Applied Biophysics (SIBPA) held its XXIV National Congress in the beautiful seaside town of Ancona, Italy, on September 10–13, 2018. This special issue features a selection of contributions from the Congress in all areas of modern biophysics including molecular, cellular, applied, computational and nanoscale biophysics. SIBPA pursues its institutional tasks and carries on its successful promotion of biophysical disciplines at the national and international levels, also through the consolidation of its partnership with *Biophysical Chemistry* and Elsevier.

1. SIBPA: Aims and achievements

The current special issue, dedicated to the XXIV SIBPA 2018 Congress, is the fourth one in a successful series, and further strengthens the partnership between the Society and *Biophysical Chemistry*.

Faithful to its mission, over the years SIBPA has steadily increased its efforts in the dissemination and promotion of biophysics, in the organization of outreach initiatives, and in the support of young biophysicists.

One of the main events for SIBPA is the International School of Pure and Applied Biophysics, held yearly in Venice in the magnificent location of Palazzo Franchetti, and organized jointly with the Venetian

Institute for Science, Humanities and Arts (IVSLA). Confirming the role as an international asset of the Society, the XXI and the XXII editions of the school offered overviews on “Time resolved methods in biophysics” and on “Intracellular ion channels and transporters in plant and animal cells” to an audience of students coming from several European countries. SIBPA is also involved in the International school on Nanoscale Optical Microscopy, this year in its third edition, which is also held in Venice at the IVSLA premises. Several fellowships were offered to students attending the schools.

SIBPA fosters interaction with other scientific Societies in the organization of scientific meetings, workshops, and schools. Among the events co-organized or sponsored by SIBPA, it is worth recalling the 8th Regional Biophysics Conference, held in Zreče, Slovenia, the *National*

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<https://doi.org/10.1016/j.bpc.2019.106273>

Received 9 October 2019; Accepted 9 October 2019

Available online 18 October 2019

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Fig. 1. SIBPA Prizes. Left: Cristiano Viappiani, SIBPA President, awards the “Antonio Borsellino Prize” to Giuseppe Sancataldo (right). Right: Carlo Musio, SIBPA Past-President awards the “Gianfranco Menestrina Prize” to Denise Pezzuoli (left).

Sensors meeting, held in Catania (2018); the meetings *Biophysics@Rome* 2018 and 2019, both held in Rome; the workshop *Advances in Brillouin Light Scattering*, held in Perugia in 2018; the meeting *Membrane Biophysics of Exo-Endocytosis: from Model Systems to Cells*, held in Nice (France), in 2019; the workshop *Nanoengineering for Mechanobiology*, held in Camogli in 2019.

Among outreach activities, SIBPA has consolidated its involvement in the Science Festival of Genova, of which it is a cultural partner since 2016. The continued effort of SIBPA in the promotion of biophysics includes the events organized in several Italian venues (Ancona, Genova, Milano, Palermo, Pisa, Trento) within the frame of the Biophysics Week, an initiative promoted yearly by the Biophysical Society.

Several grants were awarded to post-docs and PhD students to attend the 2017 and the 2018 Meetings of the American Biophysical Society (2 travel grants), the EBSA 2019 Congress in Madrid (6 bursaries), the 2018 meeting *Membrane Biophysics of Exo-Endocytosis: from Model Systems to Cells* (2 bursaries), and the XXIV SIBPA Congress in Ancona (20 bursaries). Best poster prizes were awarded at *Biophysics@Rome*, at the workshop *Advances in Brillouin Light Scattering*, and at the National Sensors meeting.

Finally, this year the society sadly lost one of its co-founders, Arnaldo Vecchi, who passed away in March 2019. He was one of the pioneers in biophysics in Italy, and his legacy extends to the present through the many scientists who have been scientifically bound to him at some point in their carrier, and still consider him as an inspiring personality.

2. The SIBPA 2018 Congress venue

The XXIV SIBPA congress was held from September 10 to 13 in Ancona, a beautiful city and one of the most important harbors of the Adriatic Sea, placed in the Italian “Marche” region. The town was founded in 387 B.C. by the ancient Grecians coming from Syracuse (Sicily, Italy) and owes its name to the particular shape of its promontory (Conero mount), indeed Ἀγκών (pr. Ancon) in Greek language means “elbow”.

The town is characterized by its strong emotional connection to the sea and every year, during the first Sunday of September, the inhabitants celebrate the Sea Festival, consisting in a very animated participation of hundreds of boats going outside the port to honor their all-time sea victims.

The venue of the Congress was the 19th century Villarey building, in the past a Military barracks, capable to host more than 1200 soldiers. Assigned now to the Polytechnic University of Marche, it was the perfect place to meet colleagues and participate to the very interesting

seminars. The Ancona University, although relatively young (instituted in 1971), is a consolidated academic reality in Italy in terms of both didactic and scientific activities. It mainly possesses a scientific mission with a strong relationship between education and research, being both considered fundamental steps to promote the scientific knowledge and the human development.

3. The SIBPA 2018 scientific program

SIBPA 2018 has usually pursued the interdisciplinary approach across all sessions as successfully experienced in the previous editions. The program encompassed all aspects of modern biophysics, from molecular to cellular, computational and applied. The new topical session “nanoscale biophysics” introduced in 2016 Congress was renewed. Keynote addresses were delivered by internationally renowned scientists: Giancarlo Ruocco (Università Roma La Sapienza, Roma, Italy), Ivo Rendina (at that time IMM-CNR, Institute for Microelectronics and Microsystems, Napoli, Italy, currently ISASI-CNR Institute of Applied Sciences and Intelligent Systems, Pozzuoli, Napoli, Italy), Maria Antonietta Ricci (Università Roma Tre, Roma, Italy) and Rosangela Itri (Universidade de São Paulo, Brazil).

Five invited speakers opened their respective topical sessions. For the session on Molecular Biophysics (S1), Alberto Boffi (Università Roma La Sapienza, Roma, Italy); for Cellular Biophysics (S2), Giorgio Rispoli (Università di Ferrara, Ferrara, Italy); for Applied Biophysics (S3), Riccardo Cicchi (INO-CNR, National Institute of Optics, Firenze, Italy); for Theoretical-Computational Biophysics (S4), Matteo Ceccarelli (università di Cagliari, Cagliari, Italy); for Nanoscale Biophysics (S5), Sergio Moya (CIC biomaGUNE, Donostia-San Sebastián, Spain).

4. The SIBPA 2018 awards

The awards ceremony concluded the 2018 Congress, as for the past editions. The “Antonio Borsellino Prize” for the best PhD Thesis in biophysics was awarded to Giuseppe Sancataldo (Fig. 1, left) for his dissertation entitled “Fast and deep Imaging of 3D biological systems” (PhD in Bioengineering and Robotics, University of Genova, supervisors: Drs Marti Duocastella and Paolo Bianchini, IIT Genova, and Prof. Alberto Diapro, Università di Genova, IIT, Genova). The “Gianfranco Menestrina Prize” for the best M.Sc. thesis was awarded to Denise Pezzuoli (Fig. 1, right) for the dissertation entitled “Nanostructures based on serum albumin and hypericin for applications in photodynamic therapy and microscopy” (M. Sci. in Physics, University of Parma, tutors: Profs. Cristiano Viappiani and Stefania Abbruzzetti, University of Parma).

The 2018 Congress renewed the “Marina Diana Mercurio MDM –



Fig. 2. MDM-SIBPA Prize. Left: Enrico Di Cera introduces the 2018 “Marina Diana Mercurio – SIBPA Prize” recipient, Francesco Lenci. Right Francesco Lenci (left) and Settimo Termini (right), President of the “Associazione Marina Diana Mercurio – MDM”.

SIBPA Prize”, jointly sponsored by SIBPA and the “Associazione Marina Diana Mercurio - MDM”, Palermo. The prize, awarded biannually, is meant to recognize scientists whose work has been noticeably interdisciplinary.

During a session chaired by Profs Enrico Di Cera and Settimo Termini, respectively the first co-recipient of the Prize in 2016 and the “Associazione Marina Diana Mercurio – MDM” President, the 2018 prize was assigned to Francesco Lenci (IBF-CNR, Institute of Biophysics, National Research Council of Italy) “for his outstanding capacity of intertwining, along many decades, frontier scientific results, in biophysics and sensorial photobiology, with a strong and creative planning effort both in various scientific institutions and in international organizations for disarmament and peace studies” (Fig. 2).

Sadly, we take here the opportunity to address the last goodbye to the late Leone Montagnini, the co-recipient of the first MDM-SIBPA prize in 2016, who suddenly died in early 2019.

5. The SIBPA 2018 special issue of Biophysical Chemistry

This special issue collects nineteen peer-reviewed papers which exhaustively represents the topics and the research fields presented at the Congress. Considering the number of papers, twenty-three, of the previous SIBPA2016 issue [1,2], the present issue confirms the appeal that SIBPA and its Congress exert on members of the biophysics community. The special issue offers a cross section of the current interdisciplinary nature of SIBPA, and specifically the nanoscale [3,4], molecular [5–9], cellular [10–12] and computational [13,14] approaches being used in pure and applied biophysics [15–20].

Finally, the special issue ends with a brief contribution by Francesco Lenci, recipient of the 2018 “Marina Diana Mercurio – SIBPA Prize”, who summarizes his lecture delivered at the Congress retracing the scientific and sentimental journey of his brilliant career [21].

6. The next SIBPA 2018 Congress

The 2019 SIBPA Congress will be held in Parma, a historical town which hosts one of the oldest University in the world and will be the Italian Capital of Culture for 2020. Information on the Congress will become available on the SIBPA official website www.sibpa.it in due course.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

We warmly and greatly thank Paolo Mariani, Francesco Spinozzi and Maria Grazia Ortore (Marche Polytech. Univ., Ancona), and all supporting staff – in particular Francesco Impallari (IBF-CNR, Palermo) and Mario Pergolini, Marche Polytech. Univ., Ancona) - for the organization of the 2018 Congress. We acknowledge the precious support from academic institutions (Univ. Politecnica delle Marche, Ancona; Istituto di Biofisica CNR, Genova; Dipartimento di Scienze della Vita, Univ. Politecnica Marche, Ancona) and corporate sponsors (3Brain, Alfatest, Biofotonica, Chimica Centro, Hamamatsu, Immagina, Nikon, Riviera del Conero). We would like to thank all Authors for their excellent contributions and the production staff of Biophysical Chemistry (Elsevier) who made the special issue possible. Finally, we wish to recognize members of the SIBPA Executive Committee who finished their term: Ranieri Bizzarri (CNR-NANO, Pisa), Armando Carpaneto (CNR-IBF, Genova), Valeria Militello (Palermo), Velia Minicozzi (Roma Tor Vergata Univ., Roma).

Cristiano Viappiani was renewed for his second and last term as SIBPA President, so the SIBPA Executive Committee, elected at the Congress for 2018-2020 term, consists of: Cristiano Viappiani (Parma Univ.), President; Massimo Vassalli (CNR-IBF Genova), Treasurer; Carlo Musio (CNR-IBF, Trento), Past-President; Paolo Bianchini (IIT, Genova), Silvia Caponi (CNR-IOM, Perugia), Vincenzo Martorana (CNR-IBF, Palermo), Valeria Rondelli (Milano Univ.), Antonella Sgarbossa (CNR-NANO, Pisa), Francesco Spinozzi (Marche Polytech. Univ., Ancona), Lorenzo Stella (Roma Tor Vergata Univ., Roma), Councillors.

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