IUPAB
CONNECTING THE WORLD OF BIOPHYSICS

INTERNATIONAL UNION for PURE and APPLIED BIOPHYSICS

IUPAB NEWS
No. 63, June 2015

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Activities of the INTERNATIONAL UNION for PURE and APPLIED BIOPHYSICS

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EDITOR'S NOTE
June, 2015

After the excitement surrounding the 18th IBC in Brisbane last year, 2015 is more settled.

The Statutes and Rules have been updated on the website in accordance with the changes which were approved at the General Assembly in Brisbane.

Several new Councillors were elected at the General Assembly, to replace those whose terms had expired. I draw to your attention that the profiles of all the Councillors are on the IUPAB website under the heading *"About Us".*

There has also been a reorganization of *Biophysical Reviews.* The new Editor-in-Chief is Professor Cris dos Remedios, our Secretary-General, and his report on the journal and his plans for its future is on page 5.

IUPAB will again fund schools and workshops next year, and applications will be accepted from **June 1** and close on **JULY 31.** This is slightly earlier than in past years; the aim is to make the allocations and give organizers an earlier answer to their funding requests, to assist in their planning. The maximum allocation is Euros 10,000.

A notice to this effect has already been put on the website, and all Adhering Bodies and Councillors have also been notified.

The Treasurer, Professor Patrick Cozzone, has asked me to remind everyone that IUPAB operates using the Euro as its official currency to comply with French law, as the Union is incorporated in France.

Reports on the Workshops in the first half of the year for which IUPAB contributed funding are on pages 8 **–** 19.

The two Schools later in the year for which IUPAB has contributed funding are in Singapore in October and in Uruguay in late November.
Details of future meetings and workshops are posted on the IUPAB website under "Conferences". Soon to come are the 10th European Biophysics Congress in July at Dresden, Germany, and the Royal Society Discussion Meeting in London in October.

Please let me know of any items you would like included in the next issue of the *NEWS,* or of any way I can assist you.

With best wishes,
Louise Matheson, Editor mail@iupab.org

Report from the Secretary-General, Prof. Cris dos Remedios

Biophysical Reviews

In 2014, with the impending retirement of Professor Jean Garnier, the special position of Emeritus Editor was created that fittingly acknowledged his seminal contribution to the journal. The Executive of the IUPAB created an Editorial Committee charged with the difficult task of finding someone to step into his shoes, and in 2015 I was honoured to be given the task.

Biophysical Reviews (BREV) has now published over 170 articles in 7 volumes comprising 25 issues. Each volume contains four issues covering a wide range of short and critical reviews contributed by some of the most eminent biophysicists. Topics include: bioinformatics, biophysical methods and instrumentation, medical biophysics, biosystems, cell biophysics and organisation, macromolecular dynamics, structures and interactions, membrane biophysics, channels and transporters, computational biophysics, contractility and motor proteins.

Focus on Special Issues. *Biophysical Reviews* has adopted a policy of publishing two Special Issues each year. This strategy has been very successful, and now accounts for two thirds of the journal's most cited reviews. From 2015, it will produce two Special Issues in each volume, already producing issues, Biophysics of Human Heart Failure (13 articles), and the Role of Protein Dynamics in Allosteric Effects (11 articles). More are planned for 2016. With its policy of free use of colour and no page charges, the journal is significantly expanding the number of regular reviews in each volume.

For more information about publishing your reviews visit the journal website: http://www.springer.com/life+sciences/biochemistry+%26+biophysics/journal/12551

Cris dos Remedios
Editor-in-Chief

REPORT from Professor Marcelo Morales,
President-Elect

POSLATAM Support

In March I visited Argentina where an agreement was signed at the Brazilian Embassy amongst The Brazilian National Council for Scientific and Technological Development (CNPq), the Brazilian Biophysical Society and the Argentinean Biophysical Society.

In this agreement, the CNPq will offer 10 scholarships to students adhered to Latin American Postgraduate Program of Biophysics (POSLATAM) – the Program organized by Latin American Federation of Biophysical Societies (LAFeBS) and IUPAB.

CNPq will support 5 scholarships for POSLATAM PhD students from Latin American Countries to come to Brazil (period maximum of 2 years) to complement their thesis and to have training in science in Brazilian Centers of Excellence in Biophysics.

The other 5 scholarships are for Brazilian POSLATAM PhD students to have training in Centers of Excellence in other countries from Latin America (maximum 2 years) already adhered to POSLATAM.

The amount invested by CNPq in POSLATAM is approximately US$150.000,00 for the period of 2 years.

Just the beginning, but a big step where we start to support student mobility within POSLATAM with official support. We are in contact with other agencies in Brazil and Argentina to gather support for POSLATAM student mobility, but it is a little difficult.

I would be pleased to receie any ideas on how to improve the support from other International support Institutions once we have around 300 students adhered to POSLATAM. With more scholarships we could have more strong integration of Biophysics in Latin America.

The photographs below were taken at the Brazilian Embassy in Buenos Aires to commemorate the signing of the agreement.

Marília Meneses (Sector de Ceremonial – Brazilian Embassy in Buenos Aires), Dr Silvia Alonso (President of Latin American Federation of Biophysical Societies - LAFeBS), Marcelo Morales (IUPAB President Elect), Dr. Gerardo Fidelio - Past President of Argentinean Biophysical Society; Dr Gabriela Amodeo - Argentinean Biophysical Society President

Dr Silvia Alonso (President, Latin American federation of Biophysical Societies), Dr. Gerardo Fidelio - Past President, Argentinean Biophysical Society; Everton Vieira Vargas - Brazilian Embassador in Buenos Aires; Marcelo Morales (IUPAB President Elect)

***Report on Workshop* on Advanced Isotopic Labelling Methods for Integrated Structural Biology Grenoble, 2-5 February 2015**

Organizer

Name: Dr Michael Plevin Address: Department of Biology, University of York, U.K.

Co-Organizers

Dr Jérôme Boisbouvier, Institut de Biologie Structurale, Grenoble, France Dr Carine Tisné, Université Paris Descartes, Paris, France Dr Bruno Keiffer, IGBMC, Strasbourg, France.

The Venue & Location:

Institut de Biologie Structurale, Grenoble, France

AILM2015 was held at the Institut de Biologie Structurale in Grenoble between 2nd and 5th February 2015. The overarching objective of the conference was to bring together researchers with a shared interest in the production and exploitation of isotopically labelled protein and nucleic acid samples for structural and biophysical investigations. This field is applicable to a range of biophysicists and structural biologists, including those specialising in mass spectrometry, neutron diffraction and solution and solid-state NMR spectroscopy. The organising committee invited renowned experts in these fields from Europe, Asia and North America.

A principle focus of the meeting was the practical aspects of isotopic labelling and consequently all invited speakers were asked to include thoughts and experiences on sample preparation in their presentations. In addition, there were 17 abstracts selected for oral presentations and another 39 poster presentations.

Prizes were awarded to early career researchers for the best promoted abstract (M Casiraghi, Paris) and the two best posters (M Stavropoulou, Munich and S Grutsch, Innsbruck). The lectures covered a wide range of topics, ranging from the use of methyl-specific labelling for studying protein dynamics by NMR spectroscopy (Babis Kalodimos, Rutgers-USA) to producing isotopically-labelled glycosylated proteins using cultures of hairy root cells (Romain Trouillard, Rouen-France). The topics for individual sessions included the production of isotopically labelled proteins in eukaryotic cells, isotopic labelling for neutron studies, *in vitro* and segmental labelling, and isotopic labelling of nucleic acids. There were also a number of well-received talks about chemical synthesis of isotopically enriched

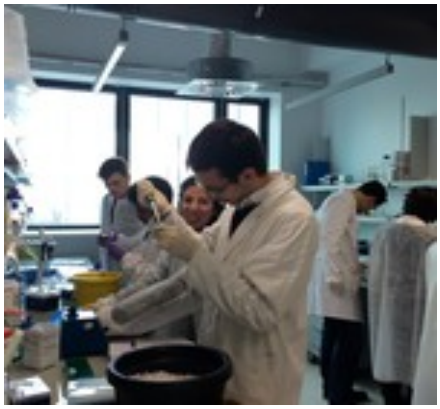
molecules for labelling proteins and nucleic acids. In total we welcomed over 120 people to Grenoble, including a large number of PhD students and post-doctoral researchers.

A generous level of support from the IUPAB allowed us to subsidize accommodation for early career researchers and offer 3 travel stipends to researchers working in emerging economy countries.

AILM2015 was the first international conference to focus on the practical aspects of isotopic labelling. Feedback was extremely positive with respondents overwhelmingly supporting a proposal to run the conference again in the future.

Problems: No major problems were encountered during the conference. The first day of the conference was greeted with about 20 cm of snow, which made the venue particularly pretty but caused a few travel problems.

Training aspect:



A residential practical school was run in the week preceding the main conference in which 16 students (both EU and non-EU) were introduced to advanced isotope-labelling methods (both protein and RNA). These students also attended the main conference.

“Lunches with the Speakers” were organised during the main conference. Small groups of students selected invited speakers to have lunch with. Speakers included, Kalidimos, Sprangers, Gossert and Williamson.

Geographic distribution of participants

participants from Europe & Turkey: **105**

participants from USA & Canada & South America: **16**

participants from Australia: **1**

participants from Asia: **5**

participants from Africa: **0**

The Scientific Presentations Comprised

4 invited plenary lectures

17 selected talks or student presentations of 20 minutes

39 poster presentations

The Scientific Presentations Comprised

4 invited plenary lectures

17 selected talks or student presentations of 20 minutes

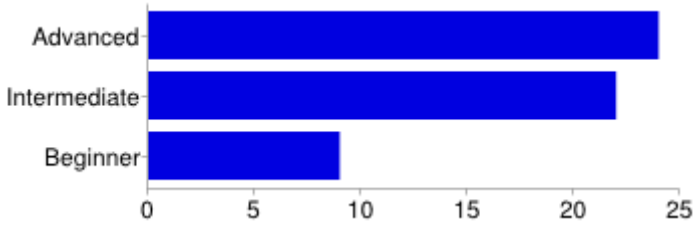
39 poster presentations

Satisfaction Survey

AILM Workshop - - Google Forms
https://docs.google.com/forms/d/1hpaqCQny32gecuuy2xQjSz...

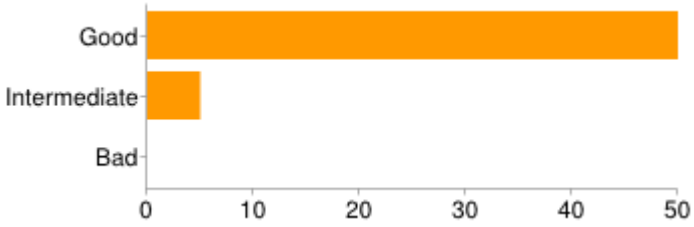
[redacted]

56 réponses
Afficher toutes les réponses Publier les données analytiques
Résumé
What is your initial knowledge in isotopic labelling methods to attend this workshop?
carinetisnevicrobeck@gmail.com



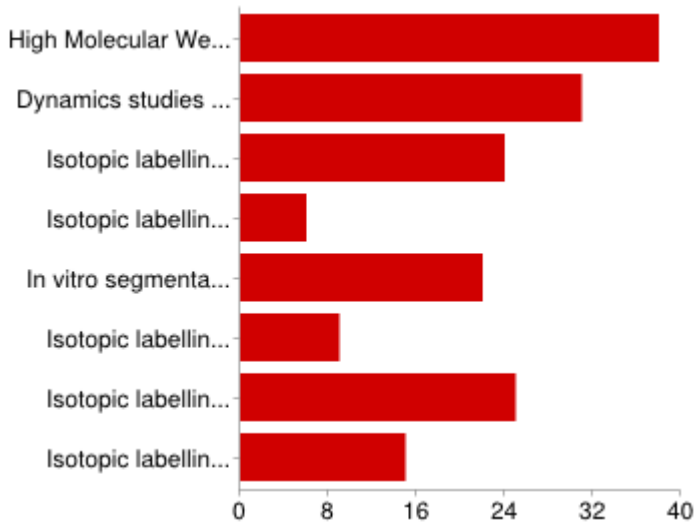
Advanced **24** 43 %
Intermediate **22** 39 %
Beginner **9** 16 %

Quality of the program regarding the topic



Good **50** 89 % Intermediate **5** 9 % Bad **0**0%

Sessions of most interest for you



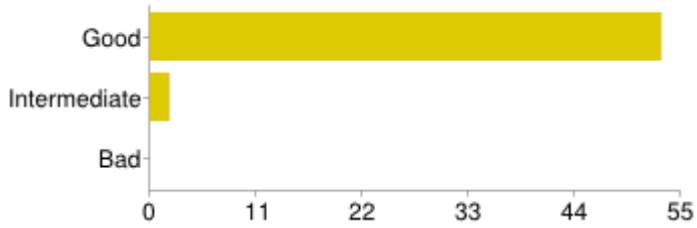
High Molecular Weight proteins	**38**	68%
Dynamics studies of large proteins	**31**	55%
Isotopic labelling in eukaryotic cells	**24**	43%
Isotopic labelling for Mass spectrometry	**6**	11 %
In vitro segmental labelling	**22**	39%
Isotopic labelling for neutron studies	**9**	16%
Isotopic labelling for integrated structural labeling	**25**	45%
Isotopic labelling of nucleic acids	**15**	27%

Commentaries

membrane proteins and spin labeling
The program has been spectacular and relevant to all our research activities
outstanding breadth of coverage overall, well done
some more NMR tecchnical talks would have been nice
Excellent!
Talks were interesting from a science perspective but I had hoped for more technical Information and less “background” information about the speakers’ particular scientific

Interests.
The program was outstanding with good coverage of the important topics

Quality of the sessions

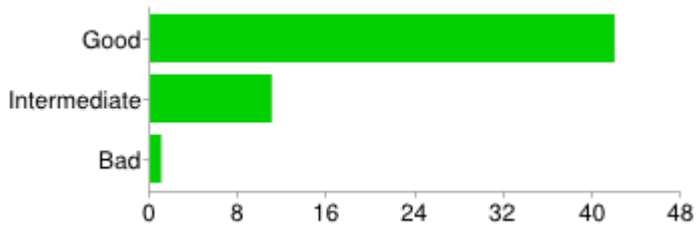


Good **53** 95 % Intermediate **2** 4 % Bad **0**0%

Commentaries

Nice to see a lot of things, nice to have time to discuss with the speakers (the discussions were always interesting)
There was a good mixture of topics. I think the support and encouragement of young scientists is especially important. The organizers did a good job here and I encourage this to remain a strong component of the future workshops.
As was mentioned, I would like to see more equilibrium between men and women when presenting talks.. there weren't almost women presentation though women won the poster and presentation talks.
the first session was too long (7 talks)
Excellent!

Duration of the workshop



Good **42** 75 % Intermediate **11** 20 % Bad **1**2%

Commentaries

It could be half a day longer and less dense
The days were very long and intense, perhaps spreading the sessions out for an extra day would have been more comfortable.
The day was quite long. I would recommend extending by a half a day to make the meeting more relaxed.
first session on monday was a little bit long
Slightly later start time might be nice (9:00AM?); attendance at earliest talks was light
too many talks, too dense
perhaps too much talks a day
First afternoon is obviously too long

Long enough, but not too long. They avoided getting too much coverage and getting boring.

Maybe too long days

a bit densely packed ...

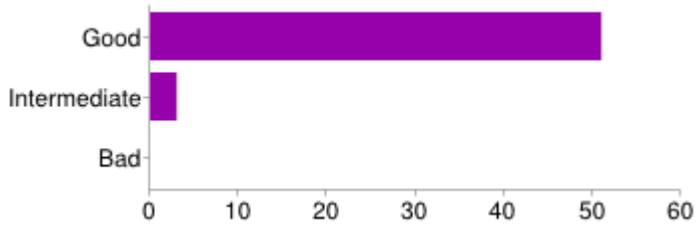
Did not attend

Monday to Wed, would be more practical in my opinion

perhaps 1/2 day too long

très long le lundi! Journées très longues en général. Peut être rajouter 1/2 journée pour étaler un peu plus les conférences

Duration of the talks

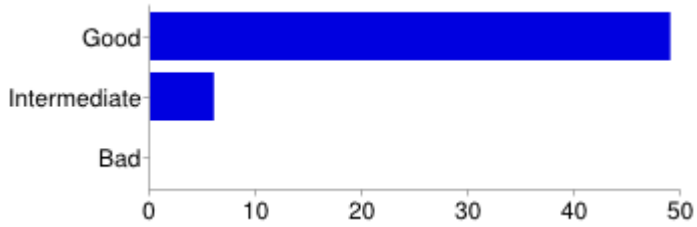


Good **51** 91 % Intermediate **3** 5 % Bad **0**0%

Commentaries

All speakers respected the imposed time and questions were stopped to avoid going over-time, very appreciable with already packed days.
very good!
I found it very good that there were no very long talks. 30 min and 15 min talks is in my opinion a very good model.
nice to have "plenary" long and 20 ' talks
Some of them was unnecessary long
1 long talk 30-40 min and 3 shorter talks of 15 min by session
The speakers did a good job of keeping to time, and there was adequate time for discussions. The discussions were generally very good!
the mixture of shorter and longer talks was very good. The talks enabled introduction of the topic and speaker, and there was sufficient time in the breaks and poster sessions to enable people to find the speaker and get further information.

Did the workshop meet your expectations?



Good **49** 88 % Intermediate **6** 11 % Bad **0**0%

Commentaries

I think the meeting was excellent, however, I would have expected the speakers to mention

in just a little bit more detail how they actually did the labeling and how they chose the

labeling scheme that they had used.

This was a very excellent meeting. This is the only meeting of its kind to really focus on the

technology of isotope labeling. The science presented was very diverse, with the common

thread of exploiting isotopes for biophysical measurements. There were clear themes

present. For my own talk, it was nice to be able to present some of the technical details to

an interested audience, that I usually do not present in broader meetings on structural

biology. Overall, this was an outstanding meeting, and i would encourage a second

meeting in 2 years time.

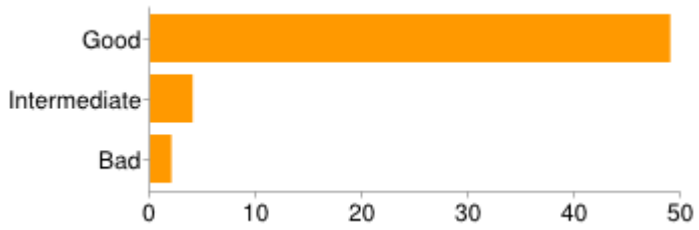
This was and is an excellent concept for a meeting. It is good to keep it rather small, as it

was. Exactly as the organizers pointed out early in the meeting, these topics are often

relegated to small segments of a paper or not mentioned in talks a other meetings.

However, these tools are essential to present and future advances in the application of NMR and other techniques to integrated structural biology. In discussions, it seems appropriate to repeat this workshop perhaps every two years. It is also important to continue the practical. In fact, the Practical could possibly benefit from annual operation. It is only possible to have a small number of people in the Practical, so an annual event would provide a broader impact. Then, the Workshop with lectures and discussion of advances could be every two years. This would be an outstanding contribution to the global structural biology community.
Bravo Jerome! That was really well done. Thanks, vlado
Unfortunately, the gap between the sample prep and spectroscopy is still clear during many talks... More integrated view on how to develop both sides simultaneously is required.
It would be useful to have more time between talks to contact people and share the experiences. Nice speciality of the workshop would be a viewing of the research nuclear reactor and other facilities. The better time for the workshop would be summer or autumn. Many people were sick at the end.
the schedule is maybe too tight, with relatively limited periods for informal discussions.

Do you believe it will be useful for your research expectations?



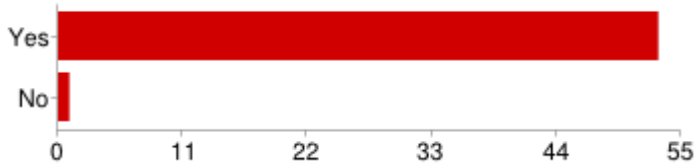
Good **49** 88 % Intermediate **4** 7 % Bad **2**4%

Commentaries

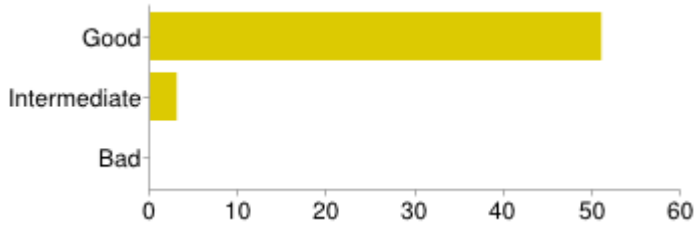
The various talks gave some good ideas of new things to try, also having new contacts is always useful.
We are anyway using many of the methods shown on the workshop at the moment. And many info can already been obtained from many other sources/meetings... There are a bit new "lead parameter" one may use as a starting point but generally a fair comparison between different methods/systems is lacking in many talks so it is difficult to judge whether the info provided on the meeting is reliable. The content on using spin-labeling for high-field PELDOR long-distance measurement is also lacking...
Without question. There were numerous new concepts or development of concepts that came into my thinking during the meeting. The stimulation of thinking about new approaches and the ability to immediately talk with people that have expertise is the mark of an excellent meeting.
Thank you for the very good workshop!
Excellent program. First afternoon a bit long..
A very nice choice of topics. In almost every talk I could recognize

something relevant to what we do.
It was very good but I wish many of speakers would focus more on the practical and technical methods aspects of labeling. Some speakers did do that but those talks were rare.
Thank you very much for organizing this very nice meeting! Hope that you are motivated to repeat such a meeting again.
Certains talks étaient hors sujet

Would you recommend the worshop if we organize a second one?

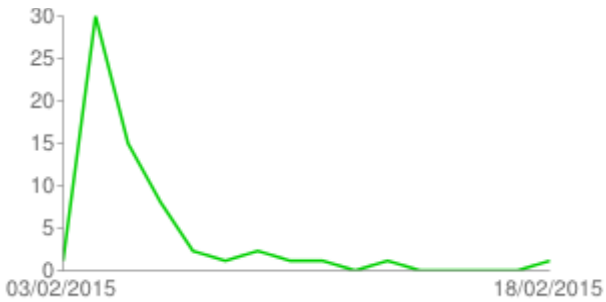


How did you find the atmosphere of the workshop?



Good **51** 91 % Intermediate **3** 5 % Bad **0**0%

Nombre de réponses quotidiennes



Report on Gordon Research Conference in Newry, Maine, USA

Muscle: Excitation/Contraction Coupling Gordon Research Conference
Advancing Research and Leadership in EC Coupling

Sunday River Resort, Newry, ME

The 2015 Gordon Research Conference (GRC) and Gordon Research Seminar (GRS) on Muscle: Excitation/Contraction Coupling (ECC) was held at the Sunday River Resort in Newry, ME from 5/30/15-6/5/15. The Muscle: ECC GRC once again brought together established leaders and new investigators from around the globe to present their latest unpublished research, as well as engage in meaningful scientific and social interactions. The Muscle: ECC GRC is the premier meeting of basic and translational scientists interested in the molecular mechanisms of ECC and how defects in this process lead to debilitating and life-threatening muscle disorders.

Scientific sessions focused on structural studies of the ECC molecular machinery, newly identified components in the molecular mechanism and regulation of ECC, molecular mechanisms of junction formation, the impact redox modifications of ECC proteins on muscle, fatigue, aging, and disease, emerging evidence for the importance of ECC in muscle metabolism and metabolic disease, and the pathophysiological mechanisms and development of novel therapeutic targets for diseases associated with dysfunction of the ECC process.

For the first time, this GRC was preceded by a two-day GRS exclusively for graduate students and postdoctoral fellows. In addition, innovative program elements (including joining senior and junior investigator as Session Discussion Leaders, "Poster Preview" and "Late-Breaking" Poster Highlight speaker slots) were used during the GRC to maximize poster session visibility, as well as enhance the integration and exposure of promising young investigators in the field. In this way, the conference provided a forum for young and established investigators to meet, interact and exchange opinions on the various topics of the meeting.

By bridging basic science, translational and clinical studies related to the mechanism of muscle diseases, this meeting fostered new research directions and scientific collaborations. The outcomes of this GRC were to both stimulate new directions in ECC research and to promote the development and advancement of early stage investigators in the field.

ABA2015 held successfully in China

The 9th Asian Biophysics Association Symposium (ABA2015) was successfully held during May 9-12 in Shangyu, China. Almost 400 delegates from 11 countries and areas attended the conference. The symposium was sponsored by the Chinese Association for Science and Technology (CAST) and Chinese Academy of Sciences (CAS), and co-organized by The Biophysical Society of China (BSC) and Institute of Biophysics, Chinese Academy of Sciences (IBP, CAS).

Prof. Zihe Rao, president of the International Union for Pure and Applied Biophysics (IUPAB) and fellow of Chinese Academy of Sciences, Prof. Young Kee Kang, president of ABA, Ms. Donghong Cheng, vice president of CAST addressed the audience during the opening ceremony on May 9, which was chaired by Prof. Xiyun Yan, president of ABA2015.

During the symposium, 2 plenary lectures were delivered by Prof. Chris Xu from Cornell University and Jonathan Lederer from University of Maryland, and 143 speakers including 10 academicians reported their latest research progress. As well, there were more than 110 poster presentations during the poster sessions. Fifty Young Scientist Travel Awards were awarded to recognize and encourage the younger generation of biophysicists. Delegates found the plenary lectures enlightening and the parallel sessions interactive and informative.

During ABA2015, Prof. Xiyun Yan was elected as the president of ABA. The 10th Asian Biophysics Association Symposium will be held in Melbourne, Australia in Dec 2018.

Prof. Xiyun Yan cnaired the Opening Ceremony

Workshop for Women in Biopjysics during ABA 2015