## NEWS REPORT

# International conference on "Photosynthesis research for sustainability-2013: in honor of Jalal A. Aliyev", held during June 5–9, 2013, Baku, Azerbaijan

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**Abstract** In this brief report, we provide a pictorial essay on an international conference "Photosynthesis Research for Sustainability-2013 in honor of Jalal A. Aliyev" that was held in Baku, Azerbaijan, during June 5–9, 2013 (http:// photosynthesis2013.cellreg.org/). We begin this report with a brief note on Jalal Aliyev, the honored scientist, and on John Walker (1997 Nobel laureate in Chemistry) who was a

We are especially thankful to James (Jim) Barber for his excellent guidance during the preparation of the Program for this Conference. Further, we thank him for reading this NEWSREPORT, making valuable suggestions, and for approving this paper for submission for publication in Photosynthesis Research.

All photographs were provided by Irada Huseynova (Secretary of the conference) and Suleyman Allakhverdiev (Coordinator of the conference) and approved for publication by James Barber (Chairman of the conference) and by Jalal Aliyev.

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Department of Plant Biology, Department of Biochemistry, and Center of Biophysics and Computational Biology, University of Illinois, 265 Morrill Hall, MC-116, 505 South Goodwin Avenue, Urbana, IL 61801-3707, USA e-mail: gov@illinois.edu distinguished guest and lecturer at the Conference. We briefly describe the Conference, and the program. In addition to the excellent scientific program, a special feature of the Conference was the presentation of awards to nine outstanding young investigators; they are recognized in this report. We have also included several photographs to show the pleasant ambience at this conference. (See http:// photosynthesis2013.cellreg.org/Photo-Gallery.php; https:// www.dropbox.com/sh/qcr124dajwffwh6/TlcHBvFu4H?m; and https://www.copy.com/s/UD1xb9fgFXG9/Baku for more photographs taken by the authors as well as by others.) We invite the readers to the next conferences on "Photosynthesis Research for Sustainability-2014: in honor of Vladimir A. Shuvalov" to be held during June 2-7, 2014, in Pushchino, Russia. Detailed information for this will be posted at the Website: http://photosynthesis2014.cellreg. org/, and for the subsequent conference on "Photosynthesis Research for Sustainability-2015" to be held in May or June 2015, in Baku, Azerbaijan, at http://photosynthesis 2015.cellreg.org/.

Keywords Young investigator awardees: Emine Dinc (The Netherlands) · Stefan Köller (Germany) · Evgeny G. Maksimov (Russia) · Marikö Miyachi (Japan) · Atefeh Nemati Moghaddam (Iran) · Ateq ur Rehman (Hungary) · Franz-Josef Schmitt (Germany) · Nargiz R. Sultanova (Azerbaijan) · Kazuyuki Watabe (Japan)

### Introduction

The 2013 conference in Baku followed an earlier conference held in 2011 (for an account, see Allakhverdiev et al. 2012).

Both these conferences have honored Jalal Aliyev (see below). It was a great pleasure for the hosts of the 2013 conference to welcome nearly 350 participants from 32 countries in Baku (the capital city of the Azerbaijan Republic). This conference was held during June 5–9 and was a great occasion for discussions on past, present, and future research on photosynthesis, from molecular to global aspects of this process (see the program that was planned at http://photosynthesis2013.cellreg.org/Programme.php). The actual program was modified, and its details are available from one of us (suleyman.allakhverdiev@gmail.com).

Figure 1 shows the grand opening ceremony in the beautiful hall of Azerbaijan State Musical Theatre. Figure 2 shows a glimpse of the audience gathered for this ceremony.

Before we provide information on the committees and some of the participants, we provide a brief introduction of Jalal Aliyev and of one of our distinguished speakers, John E. Walker.

## Jalal Aliyev: a lifetime of research and achievements

Sixty-five years of dynamic research of Professor Jalal A. Aliyev has been devoted to the study of several aspects of photosynthesis, the fundamental process behind the productivity of crop plants. His research has focused mainly on a very important crop: wheat. Jalal Aliyev has been the initiator and the founder of the development, in Azerbaijan, of new directions of research, namely molecular biology, molecular genetics, gene and cellular biotechnology, mathematical and computational biology, and bioinformatics, as applied to crop productivity. His research has focused on an integrative approach that involved physiological, biophysical, biochemical, and molecular-genetic bases of plant productivity, as well as on the production processes at all levels of structural-functional organization of plants-from molecular to the whole plant. Under his initiative, about 300 doctoral students have been trained; further, under his personal supervision, 80 PhD and 11 Doctor of Science (Dr.Sci.) students have successfully defended their theses. At this moment, these former students are currently leading scientists in many research centers, and the universities of Azerbaijan and around the World (e.g., Australia, Canada, France, Israel, Japan, South Korea, Russia, the UK, and the USA).

Jalal Aliyev has authored or coauthored more than 600 scientific publications (including 25 monographs and books). A major contribution of Jalal Aliyev has been in the development of high yielding wheat (*Triticum durum* Desf (durum) and *Triticum aestivum* L (bread)): 7–8 tons per hectare. These have excellent grain quality, and are being cultivated widely in Azerbaijan. Jalal Aliyev has had many honors. He is a foreign member of the Russian Academy of Agricultural Sciences (1995), the Ukrainian Academy of Agrarian Sciences (1995),



Fig. 1 Opening ceremony of the conference "Photosynthesis Research for Sustainability-2013: in honor of Jalal A. Aliyev", June 5–9, 2013. Place: Azerbaijan State Musical Theatre. *Left to right*: Ali Abbasov (Conference co-chair from Azerbaijan, and Minister of Communication and Information Technology of the Azerbaijan Republic) at the podium, Suleyman Allakhverdiev (Coordinator of

the conference), Jalal Aliyev (Honorary chairman), John Walker (Nobel Prize in Chemistry 1997), and Bruce Osborne (Co-chair of conference, and President of Federation of European Societies of Plant Biology (FESPB)). The two large screens displayed Jalal Aliyev. *Foreground*: a section of the audience



Fig. 2 The audience in the State Musical Theatre Hall at the opening ceremony

and the Academy of Agrarian Sciences of the Republic of Belarus (1996). He has been honored with the Order of Independence of Azerbaijan (1998); the Order of Glory of the Republic of Georgia (2003); the Honorary diploma from the President of the Republic of Azerbaijan (2008); and the Order of Glory of the Republic of Azerbaijan (2013). In addition, he was elected as a Member of Parliament of the Republic of Azerbaijan four times (1995, 2000, 2005, and 2010), a rare honor. At present, Jalal Aliyev is the Head of the Department of Fundamental Problems of Biological Productivity at the Institute of Botany, Azerbaijan National Academy of Sciences, as well as the Head of the Department of Plant Physiology and Biotechnology at the Research Institute of Crop Husbandry in Azerbaijan.

Figure 3 shows Jalal Aliyev receiving the order of Glory of the Republic of Azerbaijan, and Fig. 4 (on the next page) shows him with others gathered to honor him at that occasion.



Fig. 3 Jalal Aliyev receiving the order of Glory of the Republic of Azerbaijan. *Left to right*: Suleyman Allakhverdiev, Ali Abbasov, and Jalal Aliyev

John E. Walker: Nobel Prize in 1997

The Baku Conference had many distinguished speakers. Among them was John E. Walker, from the UK, who gave a brilliant and the most enjoyable lecture at this conference about how ATP is made. Basically, how proton motive force is converted first into mechanical energy (rotation), which is then converted into chemical energy leading to the synthesis of ATP from ADP and inorganic phosphate. He had shared the 1997 Nobel Prize, in Chemistry, with Paul D. Boyer, for their "elucidation of the enzymatic mechanism underlying the synthesis of ATP". (The other half of this 1997 Prize was given to Jens C. Skou "for the first discovery of an ion-transporting enzyme, Na+, K+ -ATPase".) Walker continues his interest in the molecular mechanism of how ATP is made. His Nobel Prize lecture may be downloaded from http://www.nobelprize.org/nobel prizes/ chemistry/laureates/1997/walker-lecture.pdf. Further, his web site (http://www.mrc-mbu.cam.ac.uk/research/atp-syn thase) has much information on ATP synthesis including movies. A presentation on classic papers is available at his http://www.mrc-mbu.cam.ac.uk/sites/default/ web site: files/Classic%20paper-2013weblo.pdf.

Figure 5 shows John E. Walker with Govindjee (one of the authors) and Les Dutton (of the USA).

## The conference

#### The committees

The two organizing committees, international and local, are listed at http://photosynthesis2013.cellreg.org/Organizing-Committee.php. The first author (SIA) of this News Report was the coordinator of this conference; the second author



Fig. 4 A group photograph of some of the participants at the dias at the opening ceremony. *Left to right*: Samira Rustamova (Azerbaijan), Tarlan Mammadov (USA), Norio Murata (Japan), Irada Huseynova

(Conference secretary), Jalal Aliyev (Azerbaijan), John Walker (UK), Bruce Osborne (Ireland), and Ismayil Zulfugarov (Korea)



**Fig. 5** John Walker (on the *left*) with Govindjee (*middle*) and Les Dutton (*right*) during a trip to the city of Baku. The photo was taken during the city tour to the Caspian sea

(IMH) was the secretary and a member of the local organizing Committee; and the third author (Govindjee) was a member of the international organizing committee. The chairman of this conference was James Barber (from UK), one of the past presidents of ISPR, International Society of Photosynthesis Research (http://www.photosynthesis research.org/); unfortunately, he was unable to attend this conference (see his photograph in Allakhverdiev et al. 2012). Co-chairs were: Ali Abbasov (Azerbaijan), Minister of Communication and Information Technology of the Azerbaijan Republic; T. Nejat Veziroglu (USA), President of International Association for Hydrogen Energy (IAHE); Bruce Osborne (Ireland), President of Federation of European Societies of Plant Biology (FESPB).

#### The program

We had an exciting scientific program, which covered the breadth and depth of photosynthesis, and provided excellent opportunity to meet photosynthesis researchers from around the world. Also, this meeting provided a forum for students, postdoctoral fellows, and scientists from all over the world to deepen their knowledge and understanding, widen professional contacts, and create newer opportunities, including establishing new collaborations.

This exciting international conference covered all the important aspects of photosynthesis, especially their relationship to global issues as well as hydrogen production and artificial photosynthesis. Topics included Structure, Function, and Biogenesis of the Photosynthetic Apparatus; Photosystem II and Water Oxidation Mechanism; Energy Transfer and Trapping in Photosystems; Carbon Fixation (C<sub>3</sub> and C<sub>4</sub>) and Photorespiration; Biotechnological Aspects of Photosynthesis to Maximize Agricultural and Biomass Productivity and Utilization; Artificial Photosynthesis for Hydrogen- and Carbonbased Solar Fuels; Regulation of Photosynthesis and Environmental Stress; Systems Biology of Photosynthesis: Integration of Genomic, Proteomic, Metabolomic, and Bioinformatic Studies; Emerging Techniques for Studying Photosynthesis.



**Fig. 6** Group photographs of many of the participants during the conference at three different location: A(Top): At the grounds of the Crescent Beach Hotel, where all the scientific sessions were held;

There were 43 speakers in the Conference including (in alphabetical order) the following : Ali Abbasov, Seiji Akimoto, Jalal A. Aliyev (his talk was presented by one of us, Irada Huseynova), Suleyman Allakhverdiev, Eva-Mari Aro, Barry D. Bruce, Robert Burnap, Roberta Croce, Leslie Dutton, Julian Eaton-Rye, Arvi Freiberg, Thomas Friedrich, Gyözö Garab, Govindjee, Bruno Gronenborn, Kentaro **B** (*Middle*): At the front of the Research Institute of Crop Husbandry; and **C** (*Bottom*): During the tour to Gobustan Rock Art Cultural Landscape-Gobustan National Park

Ifuku, Hiroshi Ishikita, Ernst-Walter Knapp, Eldar Kasumov, Agu Laisk, Evgeny Maksimov, Tarlan Mamedov, Shinji Masuda, Johannes Messinger, Aidyn Mouradov, Norio Murata, Garib Murshudov, Nathan Nelson, Hiroshi Nishihara, Bruce Osborne, Jorg Pieper, Jean-David Rochaix, Andrey B. Rubin, Asaf Salamov Fumihiko Sato, Franz-Josef Schmitt, Alexey Yu. Semenov, Vladimir A. Shuvalov, Miwa



Fig. 7 Photographs of smaller groups: A Left to right: Suleyman Allakhverdiev (Russia), George C. Papageorgiou (Greece), Marja Yatkin (Finland), Rajni Govindjee (USA), Atefeh Nemati Moghaddam (Iran), and Govindjee (USA). B Left to right: Eva-Mari Aro (Finland), Roberta Croce (The Netherlands), and Rajni Govindjee (USA); in the background, Gyozo Garab (Hungary) and Emine Dinc (The Netherlands). C Left to right: Nathan Nelson (Israel), Alexander Ivanov (Canada), Bruce Osborne (Ireland), and Julian Eaton-Rye (New Zealand) at a coffee break. D Sitting (Left to right): Aziza Feyziyeva (Azerbaijan), and Yashar Feyziyev (Azerbaijan) (member local organizing committee); standing (Left to right): Zsuzsanna Deak (Hungary), Govindjee, and Johannes Messinger (Sweden)

Sugiura, Tatsuya Tomo, Mario De Tullio, Imre Vass, and John E. Walker (The Nobel Prize in Chemistry 1997).

In addition, we had about 68 posters, presented by both established and young scientists from 32 countries.

Most of the talks at this conference dealt with the stateof-the-art research, starting with a brief review of the current knowledge, and the relevance of the topic to global issues, followed by a balanced presentation of the latest research results, concluding with views on the future course of research including the outstanding global issues and challenges facing us all. Further, the chairpersons emphasized the key points of the talks, steered the discussions by providing additional thoughts, and introduced related ideas. The conference dinner was elegant and sumptuous; it also included great music and dancing.

Figure 6 (see previous page) shows three group photographs taken at three different places; it gives a glimpse of most of the participants. On the other hand, Fig. 7 shows photographs of four different smaller groups gathered at different locations, and Fig. 8 shows the young Awardees (see the next page).

Fig. 8 (See facing page for the photographs) Young investigator► awardees. A Franz-Josef Schmitt (Germany) Schmitt is wearing a red T-shirt; others in the photo are: Bruce Osborne (who presented the Award); Eva-Mari Aro (Finland); Suleyman Allakhverdiev (Russia); and Tatsuya Tomo (Japan). B Stefan Köller (Germany); Köller is wearing blue jeans; others in the photo are Bruce Osborne; Suleyman Allakhverdiev; Tatsuya Tomo; and Govindjee (who presented the Award). C Marikö Miyachi (Japan); Miyachi, wearing a black outfit, is receiving the Conference Tee-shirt from Allakhverdiev; others in the photo are Bruce Osborne (who presented the Award); and Tatsuya Tomo. D Left to right: Atefeh Nemati Moghaddam (Iran; Award was presented by Osborne) and Ateg ur Rehman (Hungary; Award was presented by Govindjee); photo taken outside the conference building. E Kazuyuki Watabe (Japan) wearing black shirt; others in the photo are Suleyman Allakhverdiev; Tatsuya Tomo; and Govindjee (who presented the Award). F Evgeny G. Maksimov (Russia), giving his lecture at the conference; Award was presented by Osborne. G Nargiz R. Sultanova (Azerbaijan), in the foreground, shown in a laboratory setting; Award was presented by Govindjee. And, H Emine Dinc (The Netherlands) with friends at a dinner; Award was presented by Govindjee. Standing (Left to right): Rupal Singh-Tomar (India); Eva Kiss (Hungary), and Abhay Pratap Vishwakarma (India); sitting (left to right): Marja Yatkin (Finland); Emine Dinc and Rudi Berera (The Netherlands)





For other photographs of this conference, see the following websites: http://photosynthesis2013.cellreg.org/Photo-Gallery. php and http://www.lfife.illinois.edu/govindjee/g/Photo/Baku. html.

#### Young researchers and the awardees

At this conference, nine awardees were selected from among the young researchers who had presented their research papers at this conference. The awards/prizes were presented to these researchers who had done and presented outstanding research in the field of "photosynthesis for sustainability." These young researchers included Ph.D. students as well as post-docs. The chairpersons of poster viewing and discussion were Julian Eaton-Rye (New Zealand), Roberta Croce (The Netherlands), Kentaro Ifuku (Japan), Ernest-Walter Knapp (Germany), Bruce Osborne (Ireland), and Tatsuya Tomo (Japan), who selected and nominated the names of young researchers for the awards.

The winners were finally chosen by another committee: Bruce Osborne (Co-chair of conference, and President of Federation of European Societies of Plant Biology (FES-PB) from Ireland), Gyozo Garab (Hungary), Tatsuya Tomo (Japan), Eva-Mari Aro (Finland), Mario de Tullio (Editorin-Chief of the Journal of Plant Physiology and Biochemistry, from Italy), Govindjee (USA), and Suleyman Allakhverdiev (Coordinator of the conference, Russia).

#### The awardees

The following received either monetary awards or book awards for their outstanding research:

- Emine Dinc (The Netherlands). Title of research: Lifetimes of photosystem I and II proteins in the *Chlamydomonas reinhardii* RR5 transformant under different growth light conditions.
- Stefan Köller (Germany). Title of research: Mediterranean oaks-an option for drought-prone oak stands in southern Germany under climate change scenarios?
- Evgeny G. Maksimov (Russia). Title of oral presentation: Non-photochemical quenching of fluorescence and energy transduction in phycobilisomes of *Synechocystis sp. PCC6803*.
- Marikö Miyachi (Japan). Title of research: Photoelectrochemical properties of photosystem I modified with viologen derivatives.
- Atefeh Nemati Moghaddam (Iran). Title of research: A mathematical model for manganese oxide-coated clay as catalysts for water oxidation.
- Ateq ur Rehman (Hungary). Title of research: Detection and characterization of superoxide production in

Fig. 9 (See facing page for the photographs) Dinner at the confer-▶ ence. A Dancing during dinner in the Art Garden restaurant-Emine Dinc (Netherlands), Rajni Govindjee (USA) and Marja Yatkin (Finland). B Left to right: Suleyman Allakhverdiev (Russia), Elvin Suleymanoglu Allakhverdiev (a 15-year-old participant, Russia), Bruce Osborne (Ireland) and John Walker (UK). C Left to right (standing): Asaf Salamov (USA), Shahvalad Mammadov (Azerbaijan), Vagif Amikishiyev (Azerbaijan), Aytan Aghayeva (Azerbaijan), Farida Guliyeva (Azerbaijan), Tarlan Mammadov (USA), Shahniyar Bayramov (Azerbaijan), Rafiga Masmaliyeva (Azerbaijan), Garib Murshudov (UK). Left to right (sitting): Fazila Gasimova (Azerbaijan), Irada Huseynova (Azerbaijan), Gulnara Balakishiyeva (Azerbaijan) and Govindjee (USA). D Left to right: Norio Murata (Japan), Abhay Pratap Vishwakarma (India), Rupal Singh-Tomar (India) and Kyoko Okuzono (Japan). E Left to right (standing): Agu Laisk (Estonia), Arvi Freiberg (Estonia); Left to right (sitting): Ernst Walter Knapp (Germany), Nathan Nelson (Israel), and Jean-Davide Rochaix (Switzerland); F Left to right: Mubariz Ismailov (Azerbaijan), Vladimir A. Shuvalov (Russia) and Alexey Yu. Semenov (Russia); we note that the next conference in this series of "Photosynthesis Research for Sustainability" will be held in Russia to celebrate Shuvalov's 70th birthday

isolated photosystem II membrane particles by oxygen uptake measurements.

- Franz-Josef Schmitt (Germany). Title of oral presentation: Multiparameter imaging of specially designed fluorescence proteins for the monitoring of the chemical environment in living cells.
- Nargiz R. Sultanova (Azerbaijan). Title of research: Histochemical evidence for generation of reactive oxygen species and antioxidant response to viral infections of vegetable crops.
- Kazuyuki Watabe (Japan). Title of research: Development of highly-frequent in vivo transposon mutagenesis system for *Synechocystis sp. PCC6803*.

Figure 8 shows photographs of all the nine awardees. Bruce Osborn presented the monetary prizes, whereas Govindjee presented book prizes; these books were the most recent volumes of the Series "Advances in Photosynthesis and Respiration Including Bioenergy and Related Processes" (Springer, Dordrecht) (http://www.photosynthesisresearch. org/).

In addition, posters of the Z-scheme of electron transport from water to nicotinamide adenine dinucleotide phosphate, NADP, which had been designed by Govindjee and Wilbert (Bill) Veit were given to young researchers at the conference (courtesy of Bill Veit). Further, the organizing committee, mostly the local committee, provided financial support to many researchers attending this conference.

In addition to the cutting-edge academic sessions, we had the opportunity to have wonderful dinners with live music and dancing. Many participants participated in dancing as well. Figure 9 shows some of the participants at the dinner.



# **Concluding remarks**

We end this News Report by paying special tribute to Jalal Aliyev for his pioneering contributions to the growth and support of Science in Azerbaijan, especially to this conference. The participants had the opportunity to visit the wheat fields where the success of the research of Jalal Aliyev is visible. Figure 10(A) shows some participants in the wheat field of the Department of Plant Physiology and Biotechnology of the Institute of Crop Husbandry. On behalf of the entire international participants, one of us (Govindjee) thanked Jalal Aliyev for all what he has done for Azerbaijan and the Photosynthesis Community around the World (see Fig. 10B).



Fig. 10 Final tribute to Jalal Aliyev. A Some participants of the conference visiting wheat field where the research of Jalal Aliyev and his coworkers is in action. *Left to right:* Mohtesim Ahmadov (Azerbaijan), Eva-Mari Aro (Finland), Rajni Govindjee (USA), Julian Eaton-Rye (New Zealand), George C. Papageorgiou (Greece), *Kostas* Stamatakis (Greece), Govindjee (USA), and Rupal Singh-Tomar (India). **B** Govindjee expressing thanks, on behalf of all the international participants, to Jalal Aliyev

Appendix 1 shows some of the messages received by one of the authors (SIA).

The 2013 conference on photosynthesis in Baku provided leading and up-and-coming researchers an opportunity to present the latest developments in our field; it provided a wonderful environment for socializing with colleagues both old and new. Many attendees happily await the conference in 2015, in the same place, in the same Hotel, and in the same city. However, we hope to see everyone at the next conference in 2014 in Russia. We wish all success to the persons who will serve as the chairman and the co-chairman, of both the international and local committees at the conference in Baku, Azerbaijan—''Photosynthesis Research for Sustainability-2015"-to be held in May or June, 2015. However, before that we will have our next conference "Photosynthesis Research for Sustainability-2014: in honor of Vladimir A. Shuvalov'' to be held during June 2-7, 2014, in Pushchino, Russia.

**Acknowledgments** We express our appreciation to all the attendees for valuable discussions on various aspects of photosynthesis at the

Baku conference. We thank all the members of the International organizing committee, especially the Chairman, Professor James Barber, for their help with the various sections, and the committees, mentioned in this report for the selection of the Awardees; further, we are grateful to all the chairpersons of the poster sessions for their help; and thank all the sponsors: The Ministry of Communications and Information Technologies of Azerbaijan Republic; State Oil Company of Azerbaijan Republic; The Ministry of Ecology and Natural Resources of Azerbaijan Republic; Azerbaijan National Academy of Sciences; Institute of Botany of Azerbaijan National Academy of Sciences; International Society of Photosynthesis Research (ISPR); BioLogic Science Instruments-Rapid Kinetics and Spectroscopy Instruments/Photosynthesis; Agrisera-Antibodies for Plant Sciences, and Hansatech Instruments: Instrumentation for Photosynthesis and Respiration Studies. We also thank the International Association for Hydrogen Energy (IAHE), and the local organizers for providing funds for the awards given to young investigators; and Jacco Flipsen (and Ineke Ravesloot) of Springer, for mailing books to Irada Huseynova (in Baku) for awards for the best posters. All of us thank Yashar Feyziyev, Saftar Suleymanov, Karim Gasimov, Shahniyar Bayramov, Alamdar Mammadov for their wonderful help in Baku that made this conference a memorable event, and Dmitry A. Los for the creation and support for the conference Web site.

# Appendix 1: Messages received by one of the authors (SIA) and the National Organizing Committee

Agnieszka Wojtania, Seiji Akimoto, Jim Barber (who could not attend the meeting), Les Dutton, Thomas Friedrich, Győző Garab, Alex Ivanov, Anjana Jajoo, Watabe Kazuyuki, Ernst-Walter Knapp, Mahir Mamedov, Norio Murata, Bruce Osborn, George Papageorgiou, Jörg Pieper, Fumihiko Sato, Tatsuya Tomo, Tohru Tsuchiya, Imre Vass, John Walker, and many others, sent messages.

We reproduce here just a few. All other messages can be obtained by writing to one of us (SA).

**Jim Barber wrote:** "Dear Suleyman, I heard from John Walker and Les Dutton, and also Jean-David Rochaix, that the meeting was a great success. Congratulations. So all your hard work paid off and appreciated by the photosynthesis community. Les Dutton made the point that the programme was a bit short on "sustainability" He also told me in an email "At the beginning ceremony—honoring Jalal Aliyev at the opera house I praised him for his interest and bringing this meeting to Baku and suggested that the city could become the world center for research seriously pitched toward sustainability from solar energy conversion.150 years ago the first/leader in oil as an energy source—the future a leader in solar energy conversion...Good idea don't you think".

Les Dutton wrote: "Dear Suleyman, the meeting that you and Irada organized in Baku was important and a joy. I thank you a lot for that, but I also wish to thank you for your hospitality and kindness before and during the meeting; ever present and concerned. And extra thanks for the gift of the two days sight-seeing in and around Baku; that was a lot of fun and a great opportunity to see more than the conference room".

The above sentiment was echoed by many including Thomas Friedrich.

**Anjana Jajoo** wrote: "My student Rupal is back from Baku conference and was telling me that it was a very well organized conference. She was very happy to attend it. Thank you very much for all your support."

**Agnieszka Wojtania** wrote: "I have just returned to work. Thank you for the Baku meeting, for the high level of lectures, fantastic atmosphere, and hospitality. It was a magic conference for me."

**Norio Murata** wrote: "Your Baku Conference was wonderful and successful. I enjoyed it and am sure that all the participants felt the same. You made and will make such a forum for the exchange of information among many researchers who appreciate your effort and input so much. Your contribution to our scientific field is invaluable." **George C. Papageorgiou** wrote: "I take this opportunity to congratulate you for the highly successful international photosynthesis conference in Baku, and also to thank you personally for enabling me to attend it."

**Tatsuya Tomo** wrote: "Thank you very much for the wonderful conference and your great organization and hospitality. Talks were big help for my future work. I was excited by poster presentations too. I also thank local organizing committee. I had a great time during conference due to their help. I am looking forward to participate at the next meeting!"

#### Reference

Allakhverdiev SI, Huseynova IM, Govindjee (2012) International conference on "Photosynthesis research for sustainability-2011", July 24–30, 2011, Baku, Azerbaijan. Photosynth Res 110:205–212