

# ESF RESEARCH CONFERENCES

## Rapporteur Report

Partnership:	ESF-EMBO
Conference Title:	Glutathione and Related Thiols in Living Cells
Dates:	4 - 9 September 2011
Chair:	Joris Messens, VIB Department Structural Biology, BE
Rapporteur:	Elias Arnér, Karolinska Institutet, SE

### General Comments

*Any general comments you might have concerning the conference, your role, the scientific area covered by this conference, etc.*

This conference was the second of its kind after a very successful meeting in Nancy (France) in 2008. The aim of this conference was to discuss cutting-edge developments in the field of redox processes in living cells, with the importance of thiols forming the central theme. Keywords describing the conference are redox, thiols, iron-sulfur, cysteine, thiol/disulfide exchange reactions, oxidative stress, antioxidant capacity, redox regulation and signaling, reactive oxygen species, glutathione, mycothiol, trypanothione, detoxification, peroxiredoxins, sulfenic acid, and oxidative protein folding. This research field is currently under rapid development and new groundbreaking findings are continuously reported, making this scope for a conference highly attractive to a wide range of researchers. This is illustrated by the fact that the conference was oversubscribed by  $\approx 60\text{-}70\%$  (there were approx. 250 applicants for the ca. 150 places available for attendees).

The conference was organized by an international (European) organizing committee with the following members:

Chair: Joris Messens, VIB Department Structural Biology, BE  
Co-Chair: Arne Holmgren, Karolinska Institute Stockholm, SE

Organising Committee: Grzegorz Bartosz - Lodz University, PL; Katja Becker - Giessen University, DE; Jean-François Collet - UC Louvain, BE; Arne Holmgren - KI Stockholm, SE; Claus Jacob - Saarland University, DE; Jean-Pierre Jacquot - Nancy University, FR; Pierre Leroy - Nancy University, FR; Joris Messens - VIB, Vrije U. Brussel, BE; Michel Penninckx - ULB, BE

### Quality of Scientific Programme, Presentations and Discussion

*Comments on the balance and scope of the scientific programme, the scientific quality of the presentations and discussions.*

The scientific quality of the programme was truly excellent and of outstanding quality. Both oral presentations and posters were generally at the very forefront of the international science on redox systems, with very few (only a handful) exceptions of medium- or low-quality presentations. The oral presentations also represented a very good mix of well established known researchers in the field with those younger scientists only starting their careers - these were not mixed by having separate sessions, but were intermingled within the program, which was a very good idea. The discussions upon each presentation were vital and open, with a good constructive atmosphere flavoured by the common interest in thiol redox chemistry evidently shared by all the attendees. Major discussions and themes were, among others, the development of new probes for measurements of specific redox states of thiols, development of Fe/S clusters among glutaredoxins, signalling pathways coupling redox with receptor signalling or transcription factor activities, and more. There were also researchers represented from all major fields of relevant research around thiol redox systems (mammalian, bacterial, plant and archaeal organisms; as well as bioinformatics, systems biology, molecular biology, crystallography, enzymology, proteomics and biochemistry).

The poster presentations were also highly successful, where the organizers took a new initiative that turned out to be very successful: each poster presenter was orally summarizing the major contents of the poster in a 30 sec presentation to the whole audience. This event was held every afternoon on three consecutive days and was most successful. The time allotted for posters was also generous - a couple of hours both before and after dinner (wine bar

during the latter session), which opened for many discussions and new collaborative initiatives among the participants.

### **Informal Networking and Exchange; Atmosphere**

*Was the schedule and the atmosphere conducive to an easy exchange of information? Was there time and space for an informal discussion? Were younger researchers integrated?*

The atmosphere of the meeting and the time allotted for discussions, informal mingling, poster presentations etc was excellent and most generous. There were very many opportunities for discussions, with the free wine bar in the evening serving as a most efficient catalyst. Both the younger and more senior participants were highly active in joint discussions during both lunch, dinner, poster sessions and late at night. Also during the oral presentations there were many questions and comments, arising from both younger and more established attendees. The relaxed and pleasant attitude of the Chair of the conference as well as the Chairs of each session helped to facilitate the open atmosphere of the meeting.

### **Balance of Participants**

*Was there an appropriate balance between young and senior participants? Was a balance of national groups and researchers from different (sub)fields achieved?*

As described above, the mix between young and senior participants was excellent - not only as attendees but also as presenting scientists. Many nationalities were also well represented and the participants were far from only European - many participants also came from Asia or US and some also from other continents, meaning that the conference was clearly fully international. In terms of research subjects that were covered, this was also as diverse as possible, as further described above.

### **Outlook and Future Developments**

*Will new collaborations emerge from this conference? (How) could the conference outcomes be utilized further? Are there suitable (ESF) programmes or instruments to further the work of the conference?*

It is my firm belief that very many new collaborations emerged from this conference (for myself and my group alone, I can list five new collaborative initiative resulting from this meeting). All attendees were in full agreement that the conference should be repeated, if possible, and if the ESF can help facilitating this it would clearly be a very good investment for research in the field, in Europe and globally.

### **Follow-up**

*What immediate and long term follow-up would benefit collaborations and dialogues that may have begun at the conference?*

It is possible that initiatives were taken at the conference that could lead to new grant applications for collaborative research teams in the field, which would be an excellent added-value result of the conference. Most important, however, is that another, third, conference in the series will be possible to organize within 2-3 years. A chair was elected for the purpose of pursuing that goal and the help of ESF to make that happen would be most appreciated by many scientists in the field.

### **Organisation and Infrastructure**

*Were venue, catering and accommodation appropriate for this conference? Were participants satisfied with the on-site administration and support?*

The ESF staff member present throughout the meeting, Ms. Alessandra Piccolotto, was extraordinary helpful and professional in her assistance at the meeting. She was furthermore very efficient in all the correspondence and preparations prior to the meeting. The Chair of the conference personally told me that without the ESF and Ms. Piccolotto, he would clearly not have been able to organize this meeting as successfully as was now done.

The venue, Hotel Eden Roc, Sant Feliu de Guixols, Spain, was a most pleasant and good venue for a scientific conference in terms of its location by the sea, remote situation (without distracting city facilities around the corner) and thus helped facilitate the many good discussions at the meeting. The manager of the hotel was also very helpful.

A few issues need to be mentioned as less successful and should be improved for any new meeting based upon the present one: i) pick-up buses at the airport were not well organized, whereby some people did not find them and others could not get a seat in spite of having registered for the buses, ii) lunch and coffee lines at the hotel were simply too long - the hotel tried to increase their efficiency, but were hardly able to handle 150+ participants at once, iii) the posters could not be up throughout the meeting because there was not room enough for all posters at once, which was unfortunate. Except for these (minor) logistic issues, I wish to emphasize that scientifically, the meeting was a tremendous success. If these issues of disturbances can be dealt with sufficiently for the next meeting in the series, I am certain that the next meeting will approach the optimal organisation that any scientific meeting can have.

### **Summary & Overall Assessment**

*Was the conference successful; were its aims achieved?*

This meeting was clearly a tremendous success - in my mind I dare to say even beyond expectations. The scientific quality was as good as can be and at the very forefront of the field. Several of the presentations mediated cutting-edge knowledge at a before-official published stage and the number of new collaborations expected to arise from the meeting should be many. We can only hope that the next conference in the series will indeed be organized as hoped for within 2-3 years, and that it shall be as successful as this one.

## About ESF Research Conferences

### The Scheme

This conference is part of the European Science Foundation's (ESF) Research Conferences Scheme. The Scheme aims to promote scientific excellence and frontier level research throughout Europe and the rest of the world. Conferences aim to provide leading scientists and other participants, including young researchers, with a platform to present their work, to discuss the most recent developments in their fields of research and to network.

### Conference Format

The core activities should be based on lectures by invited speakers, who are leaders in their respective fields, followed by extensive discussion periods. An informal exchange of ideas, both inside and outside the lecture room, should be encouraged, and the number of sessions in the daily timetable should be limited in order to allow sufficient time for interaction between the participants. Time should be reserved for a 'Forward Look Plenary Discussion' about future developments in the field.

Participants can take all their meals together to encourage further contact and networking, which can be particularly beneficial to younger researchers who may be less outspoken in the formal lecture room setting. In order to gain optimum benefit from the conference, both the speakers and the participants are asked to stay for the whole duration.

### Division of Tasks

The Conference Chair is responsible for ensuring the quality of the scientific programme through the selection and invitation of speakers, and through the selection of participants.

The ESF Conferences Unit is responsible for managing all the logistical aspects of the conference organisation, including the provision of an on-site secretariat.

Further information: [www.esf.org/conferences](http://www.esf.org/conferences)