Highlight:

Strong ERC presence in Lindau with young scientists and Nobel laureates

1 July 2013

During the first week of July, the 63rd Lindau Nobel Laureate Meeting gathers 34 Nobel Prize winners and the next generation of leading researchers. The European Research Council (ERC) participates for the fifth consecutive year; this time with a bigger presence than ever before. In addition to ERC President Prof. Helga Nowotny and four Nobel Prize-winning ERC grantees, a strong contingent of young scientists is also present, consisting of one ERC Starting grantee and 13 ERC team members. This year's edition of the renowned gathering at the Lake Constance in Germany puts the spotlight on chemistry.

ERC President Helga Nowotny comments: "*The prestigious Lindau Nobel Laureate Meeting is about fostering the best budding talent - a mission that also lies at the heart of the ERC. In Lindau, this happens through intense scientific encounters with the Nobel laureates. That's why we are delighted to be present here again. In addition to the ERC grantees, a sizable group of promising young scientists, who are ERC team members, is present today. This underscores an important additional impact of the ERC grants; over 12,000 young researchers are part of the ERC-funded teams, led by over 3,400 funded grantees. The ERC thereby contributes to fostering the next generation of leading scientists. There will also be considerable transfer of knowledge not only across generations, but also within the younger generation of researchers.* "

Amongst the Nobel laureates present at the meeting, there are four ERC grant holders, namely Theodor Hänsch, Serge Haroche, Jean-Marie Lehn and Ada Yonath. More than 600 young scientists, both undergraduate and postgraduate students, from almost 80 countries have been selected to participate in this year's edition. The ERC is represented by Starting grant holder Dr Daniela Wilson and 13 young researchers who are part of various research teams funded through ERC grants. They come from all over Europe and further afield, and all perform research in the field of chemistry. With the theme "catalysts as keys to sustainable development", this year's central topics are Green Chemistry, chemical energy conversion and storage, as well as biochemical processes and structures.

Activities with ERC involvement:

- Monday 1 July (8:00-8:45): Gathering of ERC's group of young scientists and Marie Skłodowska-Curie fellows, hosted by the European Commission with Director General Robert-Jan Smits, and co-hosted by ERC President Helga Nowotny.
- Tuesday 2 July (17:00-18:00): European Commission joint career session 'Opportunities for Research Excellence in Europe' with two Marie Skłodowska-Curie fellows and one ERC Starting grantee as speakers, as well as Helga Nowotny.
- Lectures by four Nobel Prize-winning ERC grantees (T. Hänsch, S. Haroche, J-M. Lehn, A. Yonath). See programme

Note to the editors

Lindau Nobel Laureate Meeting

Since 1951, Nobel laureates in Physiology or Medicine, Physics and Chemistry have gathered in Lindau, Germany, every year to mentor and inspire the next generation of outstanding scientists. Starting as a European initiative of post-war reconciliation, the Lindau Nobel Laureate Meetings have evolved into an international forum for scientific debate on issues of global importance, following the leitmotif "Educate. Inspire. Connect". The meetings originate from the initiative of two Lindau physicians, Franz Karl Hein and Gustav Wilhelm Parade, and Count Lennart Bernadotte. The Lindau Meeting provides a unique opportunity for scientists to exchange knowledge and ideas, to share their enthusiasm for science and to establish new contacts. The 63rd Lindau Nobel Laureate Meeting takes place from 30 June to 5 July 2013.

European Research Council (ERC)

Set up in 2007 by the European Union, the ERC aims to stimulate scientific excellence in Europe by encouraging competition for funding between the very best, creative researchers of any nationality and age based in Europe. Since its launch, the ERC has funded over 3,500 individual scientists and their frontier research projects. It has also become a "benchmark" of the competitiveness of national research systems complementing existing funding schemes at national and European levels. The ERC operates according to an "investigator-driven", or "bottom-up" approach, allowing researchers to identify new opportunities in all fields of research.

The ERC funds young, early-career top researchers ('Starting Grants'), already independent excellent scientists ('Consolidator Grants'), and senior research leaders ('Advanced Grants'). The funding gives new impetus to frontier research. It also allows grantees to set up their own teams; on average they employ around six team members each. Overall, estimates show that by the end of 2013 the ERC will have provided support to over 16,000 doctoral and postdoctoral researchers as part of the ERC research team. The ERC, part of the EU's Seventh Research Framework Programme, has a total budget of €7.5 billion from 2007 to 2013. The European Commission proposed a substantial increase in the ERC's budget for 2014 to 2020 under the new framework programme 'Horizon 2020'.The ERC, led by President Prof. Helga Nowotny, is composed of a Scientific Council and an Executive Agency. The Scientific Council sets the ERC scientific strategy and consists of 22 top scientists and scholars.

ERC participation in the 63rd Lindau Nobel meeting

- 14 young ERC researchers, including one ERC Starting grantee:
  Dr Daniela Wilson, Radboud University Nijmegen, Netherlands. Her ERC project (StomaMotor) started in 2012 and is titled 'Stomatocyte Nanomotors: Programmed Supramolecular Architectures for Autonomous Movement'.

- Four Nobel Prize-winning ERC grantees as speakers:

  Theodor W. Hänsch received the Nobel Prize in Physics in 2005 together with John L. Hall, "for their contributions to the development of laser-based precision spectroscopy, including the optical frequency comb technique". He received ERC Advanced Grant for a project hosted by the LM University Munich, to explore new spectroscopic methods called "laser frequency combs" to precisely characterize molecules.

Serge Haroche and David J. Wineland were jointly awarded the 2012 Nobel Prize in Physics for ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems. Prof. Haroche received an ERC Advanced Grant in 2009 for his project, which explores the 'decoherence' of light in cavities, based at Centre National de la Recherche Scientifique (CNRS, France). This project studies the process of decoherence and can thereby open the way to create, as well as to maintain access and to use pure quantum steady states.

Jean-Marie Lehn was awarded the Nobel Prize in Chemistry in 1987 jointly with two colleagues for "their development and use of molecules with structure-specific interactions of high selectivity". This work led to the emergence of a new field of chemistry - supramolecular chemistry - a term coined by Jean-Marie Lehn himself. It focuses on the interaction between molecules (intermolecular) as opposed to the study of bonds within a particular molecule (intramolecular). His ERC Advanced Grant allows Prof. Lehn's group, working at the University of Strasbourg, to further research the scope of 'constitutional dynamic chemistry', a term which refers to the ability of supramolecular entities to undergo constitutional variation in response to external stimuli by component selection.

Ada E. Yonath received the Nobel Prize in chemistry in 2009, together with Venkatraman Ramakrishnan and Thomas A. Steitz for their studies on the structure and function of ribosome. Solving the ribosome's structure gives scientists unprecedented insight into how the genetic code is translated into proteins. Prof. Yonath and colleagues made no less than 25,000 attempts before they succeeded in creating the first ribosome crystals, in 1980, which was just a beginning of their work. Prof. Yonath's studies, which have stimulated intensive research worldwide, have now gone beyond the basic structure. She has revealed in detail how the genetic information is decoded, how the ribosome's inherent flexibility contributes to antibiotic selectivity and the secrets of cross-resistance to various antibiotic families. Her findings are crucial for developing advanced antibiotics. In 2012, Ada Yonath, Weizmann Institute of Science, Israel, was awarded an ERC Advanced Grant for her project 'Novel Insights into Multi-drug Resistance to Antibiotics and the Primordial Ribosome'.

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