

ERA-Chemistry

European Research Area (ERA)-Chemistry is a network of funding agencies that supports international collaborative approaches to chemical research and facilitates the flow of ideas from scientists to funding institutions.

To broaden the traditional national-level scope of chemistry research efforts across Europe, the Sixth European Union Framework Programme (FP6) funded ERA-chemistry, in January of 2004 in response to a proposal by Dr. Karlheinz Schmidt (Deutsche Forschungsgemeinschaft, Germany). Dr. Schmidt, founding coordinator of ERA-Chemistry and recently deceased, launched the network to coordinate chemistry research initiatives across the European Union. Another initial objective of the network was to facilitate dialogue between scientists and funding agencies to ensure that initiatives reflect the ideas and needs of the chemistry community. A discussion in Italy this month—"Chemistry Funding in Europe: Where Do We Stand?" held in conjunction with the 2nd European Association for Chemical and Molecular Sciences (EuCheMS) Chemistry Congress—provides an opportunity for this type of conversation.

According to Coordinator Markus Behnke, "EuCheMS is the umbrella organization of all chemical societies in Europe. ERA-Chemistry can be seen as the mirror group for research funding organizations in chemistry." He adds, "There wasn't an active dialogue between researchers and funding organizations, policy makers and ministries, so programs were created without asking researchers what they needed. We have tried to create a program that is influenced by the ideas of the researchers."

ERA-Chemistry is currently supported through two distinct mechanisms. The European Commission provides financial support for management, and 14 funding partners from 12 European nations support the network's other activities. Though ERA-Chemistry has met with early success, it is a young network and its joint funding initiatives, while growing, are small compared with other European initiatives. In 2006, ERA-Chemistry received another two years of support from the European Commission, and Behnke expects them to continue independently after the renewed funding is exhausted. They are already planning their next call for proposals, which Behnke expects will be issued in 2011. Because the research money distributed through ERA-Chemistry is provided by distinct institutions, often national ministries, movement of money across national borders remains a challenge. "We believe it makes sense to harmonize our activities to bring all the different programs together," says Behnke. Assimilation is not a challenge that ERA-Chemistry faces alone, but is intrinsic to the economic integration of the European Union.

The primary goal of ERA-Chemistry remains the implementation of a bottom-up approach to chemical research unencumbered by national and research subject boundaries. ERA-Chemistry has launched several programs to implement this goal, including transnational funding initiatives, workshops, conferences and a web site (<http://www.erachemistry.net/>), which offers a synthesis of funding-related information for chemists in Europe.

Program-defining workshops, sponsored in 2005 (Mainz, Germany) and 2006 (Madrid, Spain), provided a unique combination of scientific presentations and interactive exchanges between scientists and administrators. The pair of workshops held in 2005 provided separate forums for junior and senior chemists to interact with funding administrators. According to Behnke, the younger scientists participated more actively when separated, and "they came up with less conventional ideas."

The idea for a two-step application process, which is unique to ERA-Chemistry, came from this pair of workshops and involves the submission

of a very brief, peer-reviewed pre-proposal so that only the top tier of applicants submit a full proposal. The two-step process was more efficient for both the peer-review load and the input effort of scientists. According to one successful applicant, Dr. Peter Seeberger (ETH Zurich, Switzerland), the process was unusually rapid. "From beginning to end, it was less than six months."

In the first call for applications (2005), ERA-Chemistry restricted the applicant pool to target young scientists (within ten years of their PhD). "The idea was to establish new collaborations," said Behnke.

According to Seeberger, they were successful. Dr. Bianca Hermann (Walther-Meißner Institute, Germany) "contacted me and said she was interested in using carbohydrates on surfaces to study the interaction of those carbohydrates with other partners, such as proteins. The idea was based on the funding opportunity, which brought together three people [Seeberger, Hermann and Dr. Angel Rubio from the University of Pais Vasco, Spain] who would have never worked together otherwise."

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Leibniz Institute for Catalysis at the University of Rostock, Germany

Dr. Andreas Herrmann (University of Groningen, Netherlands), another successful applicant, agreed. "The program is really nice to establish scientific cooperation between young scientists who still have smaller groups." Ultimately, 22 grants representing nine collaborative groups were funded in the first initiative for a total of €3.2 million (~\$4.3 million).

The recently closed, third funding call had no thematic restriction—an unusual liberty in European funding—and represents the incorporation of yet another idea garnered from their workshops. "For basic research, freedom to choose the topic is important," says Behnke. Looking forward, Behnke anticipates that the network will support both types of schemes (strategically targeted initiatives and open initiatives) in parallel.

Although ERA-Chemistry is primarily geared towards chemists, they aim to lower barriers, not just between nations but also between scientific disciplines. "There should not be a line drawn between the different communities," Behnke says. Many disciplines overlap with chemistry. "As long as it's good research, there is no line to be drawn."

As the European Union expands and new funding agencies appear across the European landscape, ERA-Chemistry aims to rapidly integrate them into the network and encourages flexible funding strategies. ERA-Chemistry is jointly organizing a satellite event with CERC3 (Chairmen of the European Research Councils' Chemistry Committees) at the 2nd EuCheMS Chemistry Congress in Torino, Italy on September 16. According to Behnke, "Researchers are invited to discuss funding mechanisms. All of the key players in research funding in chemistry will be there. It is a good opportunity for researchers to bring in new ideas and influence the way research funding programs are generated."

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