



Consortium of Social Science Associations

## **NIGMS Council Meets; Discusses Rebalancing the Institute's Portfolio and Database Support and Management**

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The May 2014 meeting of the National Advisory General Medical Sciences Council (NAGMSC) included an update from the Institute's director John Lorsch, a presentation from the newly appointed National Institutes of Health (NIH) Chief Officer for Scientific Workforce Diversity Hannah A. Valentine (see [related story](#)), and a discussion of a concept clearance on data reproducibility training models.

Reporting on the National Institute of General Medical Sciences' (NIGMS) activities since the last NAGMSC meeting in January, Lorsch informed the Council that the Institute currently has two ongoing searches for NIGMS staff: the NIGMS deputy director and a director for the Training Workforce Development and Diversity (TWD). He expressed his appreciation for acting NIGMS deputy director Judith Greenberg and emphasized that the director for TWD will be critical in the institute's collaboration with Valentine's office.

### **Rebalancing NIGMS Research Portfolio**

Lorsch emphasized the need for a recalibration of the Institute's research portfolio. Discussing the Institute's budget, Lorsch described NIGMS' funding history for targeted research versus investigator-initiated research, the R01 grant. Prior to the doubling of the NIH's budget from 1998 -2003, the institute had a very small investment in targeted research. But with the doubling, funding dedicated to such research grew dramatically, for good reason, and continued to grow somewhat after that, said Lorsch.

In the early 1990s, 99 percent of NIGMS' portfolio was investigator-initiated, but during the doubling of the NIH's budget, the it fell to its current rate of 80 percent. Lorsch also noted that the success rate, the number of research project grants funded in a given year, at the end of the doubling was nearly 40 percent and has fallen dramatically to a rate that is currently slightly under 20 percent. It is in many ways "devastating for biomedical research," Lorsch lamented. He explained that the current situation is driven by budget pressures, along with other factors, and is something the Institute is "extremely concerned about. Stressing that investigator-initiated research is at the core of the Institute's mission, the Institute has begun the process of sun-setting some of its large initiatives that were started 16 years ago, almost all of which were initiated at the start of the doubling. This process will include transitioning such programs as the Institute's pharmacogenomics research network into an investigator-initiated model, where the field, which is now thriving, competes with all the other research proposed by investigators.

In the short term, the director noted, the Institute has made the decision to reduce funding for P41 and U53 center awards by ten percent, except for those affiliated with the IDeA (Institutional Development Award) and AIDS programs, which have separate budget allocations. Moving forward, he explained, this will represent a new baseline for these programs. The Institute has also decided to reduce by up to 50 percent the set-aside funds for several funding opportunity announcements previously announced. Lorsch lamented that given the “careful analysis of [NIGMS’] portfolio, what is happening to the success rate...there is really no alternative.” With the reductions, the Institute predicts a success rate around 22 percent, which represents 100 research project grants and/or 100 new investigators being funded relative to 2013.

## **Database Support and Management**

Lorsch also reported on NIGMS’ current collaboration with the National Human Genome Research Institute director Eric Green on several issues, including database support and management. The collaboration is in recognition of the increasing importance of databases in biomedical research. At the same time, as the amount of information grows, the complexity of the information grows, he noted, adding that along with the opportunities provided by the use of databases, there are accompanying challenges. As biomedical information becomes greater and more complex, the current growth is unsustainable, and the support of additional databases threatens to eat up the Institute’s budget. It is an area where the two institutes need to work together, as well as the entire NIH, he stated. Lorsch stressed that it was important that a government-wide solution is found because it is a problem that will not be solved by the NIH, nor the U.S. government. An international solution will be required because it is an international problem, he added.

Lorsch maintained that the issue of data reproducibility is not a single problem but two main problems that have been conflated in the popular press discussion of the issue. The first problem is the reproducibility of data. The second problem is “the strength of the conclusions” or generalizability. Both, Lorsch explained, are influenced by a number of issues. He cited three in particular: (1) Sociology of Science – what is the scientific reward system, how do we value science, how do we promote people in science? (2) Methodological issues – techniques used, the techniques themes, experimental design, how we draw conclusions from data and the methods; and (3) Training and Education – how to train scientists to be able to respond to these challenges and pressures.

Given the Institute’s historic mission of training the next generation of scientists, NIGMS felt that this is an area in which it could have a potentially important role to play in the process, Lorsch said. Accordingly, the Institute brought forth a concept clearance for exportable data reproducibility training modules to the NAGMSC for which it received approval. The Institute now intends to solicit research education project (R25) applications for a small grant program to develop the training modules. The modules will be incorporated into research training programs for junior faculty, postdoctoral fellows, and graduate students.

Lorsch concluded his report by emphasizing the “stark challenges” facing the Institute. Science, he stressed, has changed dramatically, and it is incumbent that the biomedical research communities respond in a way that recalibrates a system designed 20 years ago and “re-optimize it for the new reality.” He called on the Council, the research community, universities, and societies “to come together...to find optimal models.”

