

An analysis of public policy issues and how they affect MRS members and the materials community...

Building Bridges with NIH

On January 27, 2004, a group of officers from the Materials Research Society met with senior leaders in the National Institutes of Health to explore ways for the Society to better support NIH's mission. NIH, comprised of 27 separate Institutes and Centers, is the Federal focal point for medical research in the United States.

Traditionally, NIH has been a relatively minor supporter of MRS membership's research, though a recent Meeting symposium has received substantial funding from one of the divisions. Several key factors make it likely that this trend will only

increase. There is the obvious convergence between the physical and biological sciences that has attracted so much attention recently. There is the increase in emphasis on biomaterials, biomimetics, and biofunction within MRS meetings and publications. And there is the recent NIH Roadmap that has defined initiatives to allow NIH to better exploit the physical sciences. This Roadmap, which can be accessed at URL <http://nihroadmap.nih.gov/>, includes several topics of interest to the MRS membership, such as a strong interdisciplinary flavor, an empha-

sis on bioengineering, a push to work across Institute divides, and the emergence of nanomedicine. However, it remains a challenge for materials researchers to work within the Institutes. In light of this, MRS leaders arranged the meeting with NIH leaders in order to explore opportunities to incorporate materials research into the medical arena and to look for ways that MRS as a society can better communicate the needs of NIH to its membership and help its members support the Institutes' research mission.

MRS was represented by its 2003–2005 presidents (Merrilea J. Mayo, Howard E. Katz, and Dave J. Eaglesham) and Executive Director John B. Ballance. They met with Ruth Kirschstein (Deputy Director, NIH), Jeff Schloss (National Human Genome Research Institute and BECON), Eleni Kousvelari (NIDCR), Christine Kelley (NIBIB), and Molly Sourwine (NIBIB). The NIH leaders outlined the broad spectrum of ongoing materials research activities that they support, as well as several mechanisms for improved interactions. The NIDCR (National Institutes of Dental and Craniofacial Research) has traditionally supported a broad portfolio of materials research and has long been an active sponsor of MRS meetings. BECON (the Bioengineering Consortium) is a "glue/catalyst" activity that bridges multiple entities within NIH. NIBIB (the National Institute of Biomedical Imaging and Bioengineering) is the most recently established NIH institute, with a strong physical sciences emphasis. Kelley is head of the Division of Discovery Science and Technology within NIBIB. Both NIBIB and BECON are actively reaching out to the physical sciences communities through workshops, training schemes, roundtables, and conference presentations.

This meeting had several useful outcomes. First, MRS learned about the most common failure modes for materials science proposals at NIH: weak or naïve biology content and poor or inadequate clinical support. Second, the participants identified a set of potential solutions for MRS principal investigators. Ideally, the PIs will build their own bridges to their local clinicians. But it is also possible for PIs to seek the advice of the NIH program manager about bringing on board a collaborator from the relevant field. Additionally, researchers can exploit a series of training opportunities that NIH provides to allow people to obtain intramural or internship experience. Mechanisms are in place for sabbaticals and for work in clinical departments at the home institutions,

Materials-Related NIH Web Sites

(accessed March 2004)

Information

BECON, the Bioengineering Consortium

<http://www.becon.nih.gov>

A nexus of URL links providing an overview of some key funding opportunities. These include Nanoscience and Nanotechnology in Biology and Medicine; the Bioengineering Nanotechnology Initiative, inviting grant applications for Small Business Innovation Research projects (SBIR); Bioengineering Research Grants (BRG); and Bioengineering Research Partnerships.

National Institute of Biomedical Imaging and Bioengineering

<http://www.nibib.nih.gov>

Offers a listserv for communicating information related to biomedical imaging, bioengineering, and activities at the NIBIB. Members can join directly from the Web site. NIBIB recently held a joint NIBIB/DOE Workshop on Biomedical Imaging: Optical and X-Ray Technologies, <http://www.capconcorp.com/nibib/>.

Biomedical Engineering Materials and Applications

http://www7.nationalacademies.org/nmab/BEMA_Roundtable.html

Roundtable for information exchange, with open membership.

Multi-Agency Tissue Engineering Science

<http://tissueengineering.gov/>

Offers a role in stimulating coordination and communication between the many agencies involved in this field.

Workshop on Medical Implant Information, Performance, and Policies

<http://www.nibib.nih.gov/events/BMIS/BMIS2002.htm>

Contains the final report of this workshop.

Training Opportunities

The following Web sites include opportunities for internships and sabbaticals, as well as more traditional training.

<http://www.training.nih.gov/careers/careercenter/fellow.html#nih>

Intramural fellowships, generally for graduate students and postdoctorates.

<http://www.nibib.nih.gov/training/training.htm>

NIBIB training activities and the combined NIH/National Science Foundation list of training opportunities.

<http://grants.nih.gov/grants/guide/pa-files/PA-02-127.html>

Opportunities in the Mentored Quantitative Research Career Development program (referred to as "K25"), which is designed to attract physical scientists from the postdoctoral level to the level of senior faculty.

as well as internships and scholarships within an intramural effort at NIH.

The meeting was an excellent opportunity for the MRS leadership to provide visibility for the Society to a key agency that drives an increasing fraction of the membership's research. MRS leaders expressed their strong endorsement of the new interdisciplinary flavor of NIH research, which is extremely exciting for the Society. The meeting also helped the MRS leadership get a better sense of the Institutes' strategic

needs. The participants agreed that this would be the first of several such exchanges and would form the basis of an ongoing set of interactions with the Society. For example, the NIH leadership will have an increased presence at MRS Meetings, beginning this month at the 2004 MRS Spring Meeting in San Francisco, where representatives will present a seminar on funding. The seminar will provide an overview of the Institutes' key opportunities and needs, and is intended to be the

first in a series of such overviews. In the long term, MRS hopes that better coordination with NIH will help the Society become an important component in the agency's overall mission.

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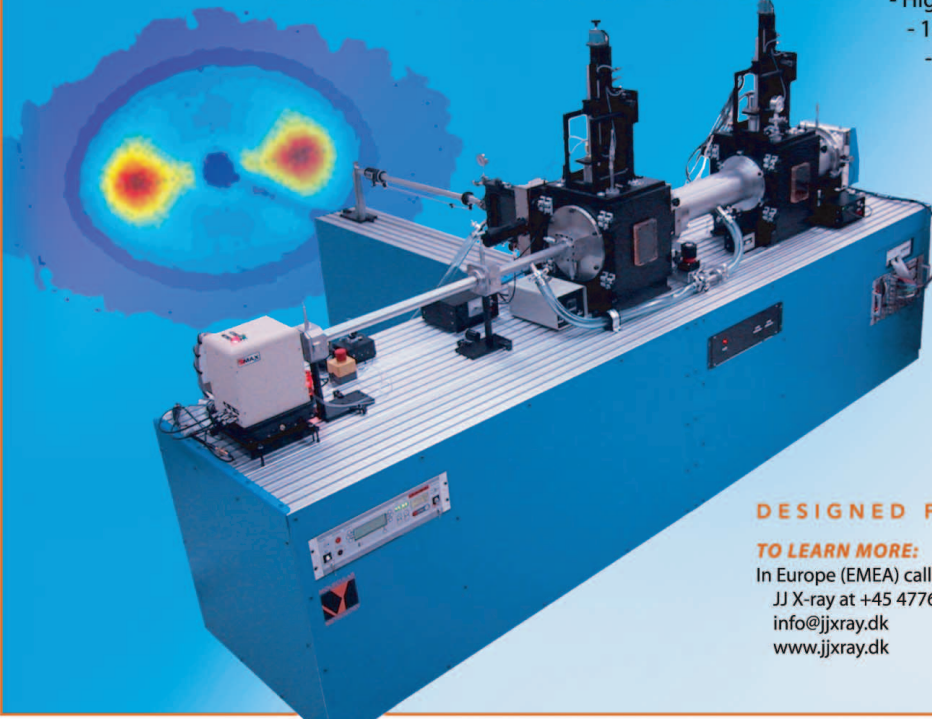
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