

National Caucus of Basic Biomedical Science Chairs

Meeting in Washington, D.C., June 18 – 20, 2008

Executive Summary

The overall purpose of the Caucus is to provide our participants information on the status of major issues relating to teaching and research in all basic science disciplines of academic medical centers. These issues include contemplated changes in the National Board examination procedures, adjustments in the operation of grant application reviews by study sections, and discussion of plans in the enhanced allocation of NIH funds for interdisciplinary and multi-institutional activities. An important and major Caucus activity involves discussing with our political representatives in the Senate and House of Representatives the shrinking NIH budget which prevents taking full advantage of medical science break-throughs which could improve the health of our nation.

We were briefed by colleagues from FASEB (Dr. Howard Garrison) and the Coalition for the Life Sciences (Lynn Marquis), Research!America (The Hon. John Porter and Mary Woolley) and the AAMC (Elisa Siegel) in order to present a united front, with non-conflicting requests, when we visit with members of Congress. Major points of advice:

1. To let our representatives in Congress understand that, in spite of the tight Federal budget, the NIH needs to sustain the momentum of new discoveries in health research. This requires increases in the appropriation for the NIH, to overcome the declining purchasing power over the past few years because of inflation, which has negated previous generous increases for the NIH.
2. To demonstrate to our young people that there is a national commitment to improve health through research, and to encourage the best and brightest to enter careers in fighting and preventing disease.
3. To inform our political leaders about significant recent scientific accomplishments in the fight against disease, many of which resulted from the recent doubling of the NIH budget.
4. To stress the dependence on innovation in science and technology in the future of the country's economy and prosperity, including benefits in their own local districts, and to explain that the cost of health research is amply repaid by improved health.
5. To encourage scientists to continue communications with their political leaders, but especially to make them aware of accomplishments in their own districts, leading to local economic benefits.
5. and last but certainly not least, to thank our political leaders for their previous NIH support.

We discussed these goals with the staffs of members of the House and Senate including many of their leaders from both political parties, including some members on NIH appropriations committees and others with special interest in the NIH. We reiterated the need for the Congress to provide adequate budget increases for the NIH, in spite of present federal financial pressures, and thereby maintain our momentum of scientific discovery.

Our invited guests included presentations from Dr. Peter **Scoles**, of the National Board of Medical Examiners, who discussed the contemplated modernization and improvement of the Board examinations. He indicated that proposed modifications would not be adopted imminently but would take several years, and would not curtail basic science testing. Dr. Bruce **Alberts**, former President of the National Academy of Sciences and now Editor of *Science*, provided his views on the necessary cross-fertilization of ideas from different laboratories, encouraging the role of innovations from individuals rather than mega-scientific groups, and the need for focusing on doing research rather than writing (and rewriting) grant applications. Dr. Lawrence **Tabak** reviewed the various modifications proposed to improve the functions of study sections laboring under the insufficient NIH budget allocations. Suggestions include promoting applications from new (i.e., previously unfunded) scientists, rewarding outstanding senior reviewers for their intense efforts, shortening the size of applications, reducing the requirement for amended reapplications, and encouraging the submission of applications for truly transformative research. Dr. Al **Teich** (AAAS) explained the federal research budget process and the relatively limited funding available for discretionary federal expenditures which limits NIH funding. Nevertheless, the U.S. supports health research more generously than most other countries. He also emphasized the need to permit more generous allocations for non-biomedical basic sciences which are required for biomedical progress. Peter **Farnham**, ASBMB, presented data on the shrinking role of truly unsolicited NIH R01 proposals in contrast to NIH-solicited projects. Dr. Alan **Krensky**, the Director of OPASI, described efforts to broaden the NIH portfolio by including special innovative grants, pioneer awards for transforming new research ideas, multi-institutional CTSA awards and other Road-map approaches. There was concern that with the constraints in the NIH budget a redistribution of dollars has deemphasized more traditional research investigator- initiated programs. David **Moore** (AAMC) mentioned that for FY2008 there may be a small additional allocation for the NIH, but there was also a chance that a Continuing Resolution would delay any consideration of budgets for the immediate future. For FY2009, once our political direction has been clarified, annual 6.5% increases in the NIH allocation would help restore the NIH purchasing power. Dr. Robin **Robinson**, Director of the newly formed BARDA designed to anticipate public health catastrophes, is organizing for U.S. preparedness by optimizing the availability of vaccines, drugs, diagnostics and special equipment to minimize emergency problems. We also had the pleasure of hearing Dr. Dora **Hughes**, of the Obama campaign, describe the Senator's strong interest in and understanding of health research which we thought was most impressive. Senator McCain did not provide a spokesperson although requested to do so.

Minutes

The National Caucus of Basic Biomedical Science Chairs, comprised of presidents and other officers of associations of chairs of the basic science departments of U.S. Medical Schools, now completing its 17th year, held its annual meeting in the Department of Pharmacology & Physiology, The George Washington University School of Medicine and Health Sciences, Washington, D.C. Nineteen representatives attended, and there were three invited participants.. Dr. **Anne Hirshfield**, Associate Vice President for Health Affairs, GWU SMHS welcomed our guests on behalf of our Medical Center, and explained her pleasure that leadership in efforts supporting biomedical research could be provided by our Medical Center.

Before meeting with our political leaders, the Caucus was briefed by experts on the political process regarding health research issues, the present status of funding for the NIH, and the apparently dim prospects for significant increases in funding even this late for FY2008. There is still great uncertainty about the political future in this election year, but it was proposed that for FY2009 a 6.5% increase in the NIH budget be requested. This briefing was especially important because a third of our members at this meeting were new to the Caucus, due to annual turnovers of constituent association officers. We were fortunate that five of the 8 constituent associations were represented by their presidents. The Caucus efforts were coordinated with those of other Washington experts speaking up for the scientific community, to consider our major aims, and to maximize our effectiveness. Briefing us were Dr. **Howard Garrison** Director of Public Affairs, Federation of American Societies for Experimental Biology (FASEB);, **Lynn Marquis**; Director, Coalition for the Life Sciences; and **Elisa Siegel**, Chief Communications Officer of the Association of American Medical Colleges (AAMC). We should aim for funding for all biomedical sciences, rather than focusing on specific diseases. Excellent advice was offered on successful approaches to staff members, many of whom are young, not familiar with how the NIH spends its funds but enthusiastic about curtailing disease and reduce suffering. Contacts with our political leadership are very important, and should be followed by local appointments in the district of each political leader. They should be invited to our medical schools to see the scientific advances provided by their constituents, as well as the increased economic benefits (jobs) being provided by the NIH programs. Again, it was stressed to thank them for their past interest and support of biomedical science

Mary Woolley, President and CEO of Research!America, described survey data on the strong desire of our citizens for increases in health research, associated with a willingness to pay for such efforts. Economic growth depends on interactions of all disciplines of science and technology, an investment we need to make and sustain, since it represents creation of new jobs, and actually leads to cost savings when considering the huge expenditures caused by disease. Science can actually solve problems otherwise impossible to understand. Because the country is largely unaware of where scientific research is conducted, and who is doing it, scientists should speak up in their home districts on the contributions provided by their own local institutions, should challenge candidates running for political office on their stand on biomedical research, and should offer editorials to local newspapers to explain the need for furthering health research. Research!America has initiated a project, to identify positions of their political representatives regarding health research. All citizens, including research scientists, are encouraged to question their political leaders, including Presidential candidates, (www.yourcongressyourhealth.org) on their beliefs about the country's policy to improve health and fight disease. This is especially pertinent because this is an election year.

The Honorable John Porter, Chair of Research!America, who previously had chaired the House Subcommittee on Labor, Health and Human Services and Education, (responsible for formulating the NIH budget), was one of the major instigators of the doubling of the NIH budget. He was extremely supportive of our efforts on the Hill, and proposed that scientists become more active in contacting their representatives for supporting scientific research. He expressed concern that the U.S. was losing its international scientific leadership because of lack of adequate financial support for the NIH. He provided 5 principles to consider for our visits:

1. Congressional staff is just as important as the Congressional Member, since it is rare to see the latter;
2. Thank the staff and their political Member for their efforts on behalf of their efforts for the NIH
3. Be brief, but speak with passion about your personal feelings about the role of research and the need for appropriate funding
4. Make sure they know exactly what you are requesting from the Member
5. Volunteer to become a scientific adviser for the political leader.

The visit with Congress. Because this is an election year, and a new President will be inaugurated in January of 2009, together with elections of all seats in the House of Representatives and a third of the Senate, there presently is great political uncertainty. Nevertheless, we should not hesitate to express realistic recommendations. We should encourage enhanced funding for the NIH in FY2008, which is almost over. A sizeable increase in funding would encourage a presidential veto which probably cannot be over-ridden by the Legislators. Actually, during the afternoon we spent on the Hill, the House added \$ 150 million to the NIH appropriation (undoubtedly because of our excellent presentation), and at the time of this writing the proposal is still being developed. It is also quite likely that there will be a "Continuing Resolution" maintaining previous level of funding until spring of 2009. Regardless, we should now prepare our requests for FY 2009, (which starts October 1, 2008), and should document our requests based on previous scientific accomplishments promoting better health..

In our discussion prior to going to meet our Congressional representatives, it was emphasized that the concept of incremental % increases is not as meaningful to politicians as are the actual dollar increases, and these can become relatively large numbers in the Federal budget. The requested 6.5% increase in NIH funding for FY 2009 represents about \$ 2 Billion. We should focus on the immense importance of basic research in providing translational achievements in the treatment of disease, which is of

great interest for our legislators, since the H in the NIH represents health. We should encourage our representatives to work with us to realize those aims. Mentioning rejection of funding for 85% of newly proposed excellent and peer-reviewed suggestions for innovative research because of insufficient funding is a powerful argument. Focusing on national competitiveness is also appreciated, and the increased availability of jobs because of successful research grants in the politician's own districts could be a strong incentive for their support of health research. Science should be viewed as an investment in the nation's future. It is also extremely important to stress that decreasing funding for health research, and especially major annual fluctuations in that support, has detrimental consequences in the recruitment of new scientific recruits. Attracting excellent young people for careers in scientific discovery is essential since otherwise future scientific accomplishments will be limited. The Caucus left a brochure in the Congressional offices during our visit consisting of the attached Summary Statement, together with a listing of scientific accomplishments prepared by FASEB.

The Caucus split into small teams to meet with the staffs of many of the leaders of the Senate and House of Representatives. Included were aids to House Speaker **Nancy Pelosi**, Senate Majority Leader **Harry Reid**, House Minority Leader **John Boehner** (staff of Senate Minority Leader Mitch McConnell refused to meet with us); Senators **John McCain**, **Richard Durbin**, **Thad Cochran**, **Arlen Specter**, **John Cornyn** and **Jon Kyl**. We also visited with the staff of Congressmen **Bart Gordon**, **Timothy Bishop**, **Thaddeus McCotter**, **Vernon Ehlers**, **Joe Barton** and Congresswoman **Betty McCollum**.

We were well received by all of the staff members we had asked to meet. In general they understood the problem, created largely by the limited amount of discretionary dollars available for health research. There is enormous turn-over in staff personnel, so that some aides were more knowledgeable about the NIH funding problem than others, but all agreed to encourage their chiefs to do their best. Instantaneous success cannot be expected but if we and other groups don't continuously raise the issue and explain our concerns there would be less progress.

We heard from a series of visitors who had important functions regarding biomedical research and teaching. Dr. **Peter Scoles**, Senior Vice President for Assessment Programs, National Board of Medical Examiners, discussed the present status of contemplated changes in the National Board Examination process. Because the present system was established some 20 years ago, there have been many changes in medical practice, and the Board felt the examination system needs to be reviewed. There had been a concern expressed that the Part1 Basic Science examination would be merged with a later clinical examination, but apparently such a drastic change is no longer being considered. Instead, it is now likely that additional basic science material will be covered in subsequent examinations. The whole review process is still in process, and is expected to take 4 or more years before implementation of any changes. The entire examination process is being evaluated to focus on testing concepts rather than data. Changes are still being discussed with basic science and clinical faculty, deans and other educators. A publication as of June 10 can be found at www.usmle.org/General_Information/review.html.

Mr. **Peter Farnham**, Director of Public Affairs, American Society of Biochemistry and Molecular Biology, presented data accumulated by Dr. Heidi Hamm, current President of ASBMB, on the decline of investigator-associated research at the NIH. R01 grants did not participate fully in the NIH doubling, and were reduced from about 80% of research project grants (RPG's) between 1996 and 1998, to about 60% in 2007. Within that group, unsolicited R01's were reduced from 65% between 1996 to 1998, to 50% in 2007. Further changes include Program Announcements (P.A.'s), formerly classified as solicited, now are termed unsolicited investigator initiated RPG's. P.A.'s and Requests for Applications (RFA's) until recently represented about 15% of total RPG's, now represent 40%. From 2003 to anticipated 2009, during which period there has been a 21% inflationary increase, RPG's increased 13% while research center funding rose 20%. These changes represent a diminishing role of unsolicited investigator-initiated funding.

Dr. **Bruce Alberts**, Editor of Science and past President of the National Academy of Sciences, provided critical thoughts on the current state of science. He expressed concerns about the difficulties of promoting cross-fertilization of ideas with colleagues, sometimes hindered by the designs of scientific laboratories where individuals work in "silos". He was concerned about the encouragement of large scientific groups which may limit creativity, rather than effective smaller groups of investigators making brilliant discoveries. An enormous share of funding now goes to already highly funded large laboratories. Too much time and effort is expended in designing and perfecting grant applications rather than doing research, and he discouraged the great emphasis on preliminary results at the expense of developing truly innovative ideas.

Dr. **Lawrence Tabak**, Director of the NIDCR and Co-chair of the Peer Review Working Group on NIH grant reviews, provided an update on the project to enhance NIH peer review. Dr. Tabak summarized the newly published Implementation Plan, which seeks to improve the study section experience and ensure that the best reviewers participate. Ideas include more flexible multi-year reviewer commitments and an expectation of study section service of all recipients of Merit/Javits/Pioneer awards and heavily funded PIs. One proposal is to allow a study section to re-calibrate their scores at the end of the meeting to avoid unintended "grade creep" during the meeting, although a concern was raised because not all members of the study section may be present at the end. Another proposal would eliminate the current scoring system and replace it with a 7 scale step system, with subscores provided in each of 5 specific review criteria by the assigned reviewers. Regarding the burden on reviewers and applicants, a proposal to reduce the number of "science" pages on R01 grants to 12 is being considered. This should help to focus reviewer discussions on the impact and originality of proposals, although a concern is whether this would actually increase the number of applications submitted. Dr. Tabak emphasized that the first rule in implementing any changes is "do no harm". A current summary can be found at <http://enhancing-peer-review.nih.gov>

Dr. **Albert Teich**, Director of Science & Policy Programs at AAAS, placed federal funding of biomedical research into the broader context of all federal science funding. Not surprisingly, the majority of federal funds (55%) are spent on defense-related research. What is interesting is that the US spends a much greater proportion of funds on health related research (25%) than do other major developed nations. The doubling of the NIH budget has markedly increased the percentage of non-defense funds devoted to health research, and this has remained relatively stable at about 50% of all non-defense research since 2003. Dr. Teich attributes this growth to the impact of health research, especially as it relates to new advances in treatment of diseases, and to successful advocacy by health supporters. Getting significantly more funds will require substantial growth in available discretionary funds, which has not happened. Dr. Teich encouraged us to advocate for increased funding for all of the sciences, since advances in other fields (e.g., imaging, computation) benefit health research.

Dr. **Alan Krensky**, Director of the Office of Portfolio Analysis & Strategic Initiatives at NIH, discussed some of the newer initiatives at NIH, including the Road Map and Pioneer awards. The Road Map provides new opportunities for multidisciplinary research, and Dr. Krensky compared this activity with programs such as the BIO-X program at Stanford, which supports interactions of bioscientists with researchers in engineering, computer science and physics. Dr. Krensky pointed out that Congress is focused on disease-related research, and that the Clinical and Translational Science Awards (CTSA) awards will transform clinical research by replacing the General Clinical Research Centers (GCRCs). These awards require a substantial commitment from medical centers, and he indicated that medical centers, in addition to the NIH, should also be willing to support successful individual scientists. The latter have been the major contributors of innovative discoveries in the past. He also raised the issue of whether there should be a minimum effort (25%) on each NIH grant, and emphasized that when evaluating quality one should look not at total number of awards, but rather funding per person. With the very tight NIH budgets, there will continue to be "haves" and "have-nots".

We also met with Dr. **Robin Robinson**, the newly appointed Director of Biomedical Advance Research Development Authority (BARDOS), whose function is to achieve better preparedness to combat unanticipated disasters. This includes the capacity for improved preparation of vaccines, availability of appropriate drugs, protective equipment and diagnostics, and is located in downtown Washington. It is coordinated with various other agencies, is under the umbrella of the Department of HHS, but also is coordinated with Dept. Homeland Security, the Dept. of Defense, and various industrial concerns. Dr. Robinson encouraged participation of academia, and proposed that scientists should consider offering their services on a part-time or sabbatical basis.

Mr. **David Moore**, Associate Vice President AAMC, discussed the role of the AAMC in its support of the NIH in its entirety, without pinpointing specific programs. The *Ad Hoc* Group for Medical Research Funding has been one of the most effective supporter organizations of biomedical research, and also has been of immeasurable help in the functioning of the Caucus. He expressed concern about the increasing division between the "haves" and "have-nots" in biomedical organizations, but the role of the Congress is the management of the NIH and its funding. He noted the well-disciplined Republican congressional team, very concerned about deficit spending, in contrast to the Democrats who entertain more priorities. He was optimistic that the next Congress would be more helpful to the NIH.

Dr. **Dora Hughes** represented the Obama Campaign for President. The Senator is extremely interested in science, and wishes to increase, hopefully doubling, funding for all science. He wishes to bring foreign scientists to the US for training, and supports basic science and engineering, including climate research. He has formed committees to examine these areas, is also concerned about improving high school and college teaching in an effort to increase interest of young people in science. He feels American leadership and continuity of support for science is essential, while limiting regulatory activities and filling out forms instead of making discoveries.

Hopefully, our visits on the Hill and enthusiasm may have had some positive effect on future funding for biomedical research.

Respectfully Submitted

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NATIONAL CAUCUS OF BASIC BIOMEDICAL SCIENCE CHAIRS

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Cell Biology and Neurobiology
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Departments of Physiology

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A Message to our Political Leaders

Our Caucus, founded in 1991, is an organization of the presidents and other representatives of national associations of chairpersons of basic biomedical science departments in our nation's 129 medical schools. These departments, which represent virtually every state in the U.S., include some 100,000 faculty and other professional experts employed in biomedical research and education. We represent the chairs of Anatomy, Biochemistry, Genetics, Microbiology, Neurobiology, Pathology, Pharmacology and Physiology, or their equivalents, and therefore cover the preclinical disciplines of medical school teaching and research.

We urge you to sustain the exciting momentum in biomedical research, which will require a significant increase in annual funding for the NIH over that proposed by the Bush Administration, with the goal of a consistent, long-range realistic policy for those agencies involved in the fight against disease. Attainment of this goal will be a profound investment in improved health, quality of life, as well as economic competitiveness and benefits to our nation, and will maintain our pre-eminence in biotechnology.

Our views are based on the enormous achievements in health produced in large measure by previous support of the NIH. The encouragement of biomedical research, prompted by previous increased funding for the NIH, now has been negated by its stand-still budget of the past years. As evidence of important accomplishments and their translation to the bedside of our patients, we are attaching a partial summary of the human impact of our previous investment in medical research.

We thank you for your previous record of providing strong support for biomedical research, and hope you will understand our endeavors to realize the enormous new opportunities to improve health opened up by the wise investment of federal funds in the NIH and other health-research related organizations.

We thank you for listening to us.

H. George Mandel, Ph.D.
Chairman

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