

**National Institute of Diabetes and Digestive and Kidney Diseases  
Network of Minority Research Investigators Workshop**

**Bethesda Marriott  
Bethesda, Maryland  
April 21-22, 2005**

**Workshop Summary**

**THURSDAY, APRIL 21, 2005**

**Welcoming Remarks—Dr. Allen Spiegel**

Dr. Spiegel recognized the accomplishments of the 2005 Network of Minority Research Investigators (NMRI) Workshop and credited them for the success of the program, which aids them in their careers as scientific investigators. He noted the vital scientific work they are undertaking, such as helping to solve various health problems and the issue of health disparities.

Dr. Spiegel stated that the NIH budget is currently increasing at a much lower rate (0.5 percent) after doubling from 1999 to 2003 but said that the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) is continuing its commitment to new investigator success despite the budget problems. Dr. Spiegel noted the new era of scientific investigation, such as fewer projects being run by single principal investigators (PIs), the influx of more Co-PIs, and interdisciplinary approaches to laboratory experiments.

Dr. Spiegel welcomed the keynote speaker, Representative Xavier Becerra.

**Keynote Address—Representative Xavier Becerra (D-CA)**

Dr. Ricardo Azziz introduced Representative Xavier Becerra, who thanked Dr. Azziz, Dr. Lawrence Agodoa, Dr. Spiegel, and the minority investigators for their efforts at solving the country's health problems, especially those of minorities.

Rep. Becerra stated that "band-aid" efforts are not solving the health care problems in the United States and that a new approach was needed. Scientific investigators will play an important role in a better health care system in the future. He praised the quality and work ethic of the medical and scientific research community while noting the many health care issues facing the United States.

In addition to their efforts in discovering new scientific and medical breakthroughs, minority investigators help improve health care among minorities by becoming involved in their communities and by encouraging people within those communities to take better care of themselves. Minority investigators can also play a role by working with Federal and State legislators, educating them on the importance of an expanding pool of scientific and medical research money to the Nation's health care and to the new investigator "pipeline."

Rep. Becerra said that too much of the U.S. health care budget is spent on the last 6 months of people's lives and not enough was spent to solve the health care disparities afflicting minority populations.

## **Introduction and Overview—Dr. Lawrence Agodoa**

Dr. Agodoa introduced the Planning Committee members, who coordinated the set up of the 2005 NMRI Workshop and thanked them for their efforts and also thanked Winnie Martinez and MasiMax Resources, Inc., employees for their efforts. He then asked the NMRI members to stand up and introduce themselves.

## **Submission and Assignment of Grant Applications—Dr. Suzanne Fisher**

Dr. Suzanne Fisher stated that the Center for Scientific Review (CSR) does not disseminate research funds. The Agency receives, processes, and assigns all National Institutes of Health (NIH) grant applications, which numbered 80,000 in fiscal year 2004-2005 and have increased markedly since 1998. The number of electronic applications should increase in the near future, which may help applicants avoid some of the common submission errors, such as forgetting to include necessary related material. Also, images sent electronically will help avoid another common problem, bad copies or faxes of documents.

Dr. Fisher discussed different submission details, such as the following:

- Multiple application dates per cycle and the fact that different types of grants have different due dates
- Standing vs. special receipt dates
- Applications no longer being able to be delivered personally
- Late applications, corrections, and missing material
- The ability to call CSR if an applicant is not sent an application assignment notice within 4 weeks
- Help from the CSR Web site
- The fact that CSR is available by phone to answer questions and engages in less e-mail correspondence than other NIH Institutes and Centers (ICs)
- Application preparation policies, such as the IC approval needed for grants of more than \$500,000; the modular budgeting of most R01, R03, R15, and R21 grants; revised application procedures; and the importance of paying attention to the details of the grant application, including format, font, readability, grammar, and layout issues.

She also talked about the following aspects of the process for assigning grant applications:

- The type of mechanism
- Suggestions from the applicant for a potential IC based on scientific study and funding issues, study section, a certain expertise that the reviewers should have, and potential conflicts of interest with assigned reviewers
- IC assignments, which are based on IC shared interests, investigator and/or IC requests, program announcements, and assignment history
- CSR to choose the study section based on the information above and a review of the application.

## **NIH Funding Mechanisms—Dr. Judith Podskalny**

Dr. Judy Podskalny reviewed the details of the many mechanisms of NIH support available to the investigators to fund their areas of medical and scientific study, 90 percent of which are given as grants.

- The main types of awards—T-, F-, K-, and R-series awards
- The nonrenewability of many of the grants, with some R-series grants being an exception
- The appropriateness of the grant to your interest, experience, and career level
- RFAs—available money being committed to a certain research area, as indicated on the application
- Program Announcements (PAs)—no funds for the research area but an Institute indicating a future interest in the area and considering funding the PA if presented with an intriguing study idea
- Career Development Awards—investigator to have protected time in the laboratory, attend seminars, and develop preliminary data

- F32s—a mentor, a research project, and an applicant’s training potential the key determining factors
- K-series awards—the qualifications of the candidate, the ability to work with a mentor, a research project with preliminary data and a working hypothesis, and a career development plan
- R34s—new grant available since 2003 and used in clinical trials planning
- R25s—nonrenewable educational project grants (\$100,000 per year) awarded to develop and implement a course or seminar to draw investigators to a certain field of study
- R21s—exploratory, IC-specific grants that are not renewable and are limited to \$275,000 over 2 years
- R03s—small, nonrenewable grants limited to \$50,000 over 2 years
- R01s—major NIH grant mechanism for scientific study—renewable and set up as a modular budget (<250,000) or detailed budget (>250,000).

Dr. Podskalny noted the intense competition among those sending in unsolicited R01s but stated that those applications can sometimes be tailored to meet Institute-specific research areas and/or those areas in which the Institute has expressed an interest in putting research money. She listed many NIH resources available for investigators to use, including the NIH Guide listserv, the CRISP database, the Institute Web page, and Grant.net and noted the value of talking to mentors and colleagues to gain information.

### **Foundation Funding Mechanisms**

Each foundation representative described various aspects of his or her organization’s funding, including the following:

- The available funding programs
- Some of the qualifications that the foundation would look for in an applicant
- Applications tips
- The value of contacting the grant people to ask questions and of being nice to those with whom you have contact
- Web sites as a source of useful application information
- The type of research funded by and the award aims of the particular foundation
- The amount and number of funded years per award
- The number and type of awards given per year
- The foundation mission behind the funding
- The percentage of applications received that warranted funding
- Research priorities, that is, clinical vs. basic science
- The need to create a sense of urgency about the science behind one’s application.

The purpose of the five Mock Study Session breakout groups was to demonstrate how the study sections work and to provide guidance to investigators as to what gets noticed and garners a low (good) score from the reviewers.

### **Mock Study Sessions**

#### ***Drs. Greg Florant, Mario Ascoli, and Michele Barnard***

Senior investigators and/or a mentor should review one’s grant before it is sent to CSR for assignment to a study section. Such critiques are invaluable to avoiding the common mistakes made by those applying for their first grant award as well as those who have applied before but have yet to be funded or have been funded only a few times.

The facilitators and attendees discussed the following study section issues:

- The study sections on the CSR Web site can be used to get information valuable in helping you decide which section you should suggest receive your grant application for review.
- You can suggest that a reviewer be excluded from reviewing your application.
- You can never suggest that a particular reviewer be on the study section reviewing your application.
- Each study section, which meets for about 1½ days at a time three times a year for 3 years, develops a “personality,” information that you can find out by talking to program personnel within that Institute. The reviewers tend to be scientifically conservative and to know each other.
- About half of each study section’s applications are “triaged”—not reviewed by the reviewers and not scored—and budgetary considerations can sometimes raise that rate.
- The reviewers should never be given an obvious reason not to fund your application (e.g., ethical issues, conflicts of interests with potential collaborators or other institutions).
- Study section reviewers will probably have indepth knowledge of some aspect of your grant application information and may well have heard of the research, attended a talk, and/or seen a poster but are unlikely to be fully conversant concerning every component of the grant. The best reviewers are those who know enough to appreciate your expertise but do not know enough to compete with it.
- Pilot data is important, but not all grants demand it.
- Initial reviewer scores can be changed after discussion with other reviewers at the study section, but reviewers do not see each other’s final scores until they are posted.
- Applicants should never directly respond to the grant application criticisms but should address them before resubmitting the grant. If a criticism is factually wrong, correct the criticism diplomatically.
- Study section scoring can sometimes vary over the course of time, for example, being tougher earlier in the session. Reviewers cannot change scores once they have been posted.
- Junior investigators must be more rigorous with both the science within and the presentation of their grant for it to receive a score that warrants funding consideration, whereas senior investigators, given their successful publication and grant history, may be allowed some intellectual fuzziness and minor presentation problems.
- Reviewers generally have been awarded grants and understand the application process.
- Amended grants are not always sent to the same study section; therefore, one’s resubmitted grant might be treated as a new grant, and the investigator should prepare the grant with that in mind.
- The Scientific Review Administrator (SRA) manages the discussion among the reviewers, tabulates the scores, and writes the summary statements.

***Drs. Renty Franklin, Carlos Isales, and Paul Rushing***

- Easy-to-read diagrams and pictures can help a reviewer summarize and understand the text.
- The science behind your grant application and your career development thus far are critically important to receiving funding for most grant awards.
- The first page of the application is important to spark interest among the reviewers for your research.
- Funding rates are higher for competitive renewals than for new research applications, and funding rates for first-time submitters are lower yet.
- Unscored grants get reviewed, and although not as detailed as the write-up for scored but rejected applications, the statement can be used to improve the application prior to resubmission.
- Each study section reviews between 40 and 100 grant applications per session. The SRA assigns applications based on expertise.
- A reviewer who is an expert in a field similar to the applicant can carry the section to its decision. Forceful personalities and group dynamics play a role in application assessments. Generally, a reviewer may champion one scored grant per session to get colleagues to improve their scores. Indeed, if one reviewer insists on discussing an application triaged by the others, it may get discussed.

- A cover letter is important to one's grant application; it can be used to suggest a study section or Institute for the review. Talk to colleagues and mentor(s) about the different potential study sections. An applicant can also suggest a dual Institute assignment to CSR based on the science.
- The study section scores and comments on the application; the Institute decides whether to fund it.
- Foundation funding can provide an important bridge to those whose nonrenewable NIH grants have run out and who have yet to receive other funding, such as an R01.
- Your field of expertise should match the funding and research priorities of the Institute suggested in the cover letter.
- Different NIH awards (e.g., K- and R-series awards) are scored differently.
- The triaging of one's grant application does not preclude future funding based on the same research. The applicant needs to discern and address the reasons for it being triaged.
- One's application needs to be succinct, clear, and concise as well as neither overambitious nor underambitious. If the science base is equal, an easy-to-read application is more likely to be funded.
- One hypothesis, which must be testable but need not be correct, per application is advisable. However, two to three aims are typical but not necessary. More than three aims tend to spark comments about the application being too ambitious. The aims should fit together, and the applicant should discuss any possible alternate outcomes or hypotheses.
- All the information received to review is kept confidential.
- Ethical issues are not discussed in the review but are brought to the primary reviewer's attention.
- Each application is discussed for an average of 15 to 20 minutes, although applications given initial reviewer scores that are close will probably not be reviewed at length.
- Some budget considerations, such as cutting some aspect of the study or dropping its length of time, can be discussed by the reviewers after the final scores are posted.
- The applicant needs to sell the significance of the science as well as the quality of the basic science.

***Drs. Lewis Roberts, Francisco Andrade, and Maria Davila-Bloom***

- Prior funding and data are important considerations in first-time R01 grant applications.
- If a reviewer votes outside the accepted score range, he or she must defend the score.
- If women, minorities, and/or children are not included, the applicant needs to note the reason(s).
- The application should always propose new avenues of research within one's field of study, because funding will not be awarded for those merely proposing to continue their current investigations.
- A grant awardee can diverge from some aspects of the original award but cannot change such things as the basic science of the study, animal models, percentages above or below accepted levels, or key personnel without notifying and receiving clearance from the Institute about the change. However, he or she may use some money to develop preliminary data in preparation for the next grant.
- Let the criticisms in a rejected applications sit out of sight for a while before studying and addressing them. One's initial response to the criticisms might not be the best way to address them.
- Program personnel can cut the time or the budget but cannot change the science behind a grant.
- If one's application is "not recommended for further consideration," then it will never be funded.
- A reviewer can put a positive spin on the negative aspects of an application that he or she likes to push for the highest possible scores from the other reviewers.
- A reviewer should never identify himself or herself to known applicants if he or she sees them at a meeting or a poster session.
- Even senior investigators have been known to get opinions from colleagues concerning the work they have done over the years of a particular grant in preparation for reapplying for their R01.

*Drs. Maria Castro, Odilia Bermudez, and Judith Podskalny*

- Instructors and Assistant Professors do not typically take part in study sections, although they may sit on RFA study sections. CSR has rules as to how many junior investigators may sit on study sections.
- The applicant should never put anything critical to assessing the research in the Appendix, because study section members are not required to assess that material when judging the application.
- Not all worthy grants get funded. Institutes have a certain pool of money that is divided among the numerous grants they will fund; an application's good score does not guarantee funding. Special emphasis awards come from a separate pool of funds.
- Modular budgeting has allowed reviewers to spend more time assessing the science of applications and less time on budgetary considerations.
- Studies taking place over 3 or 4 years instead of 5 years can sometimes receive higher scores.
- Data-sharing needs and procedures among colleagues and institutions must be addressed in many applications.
- A position as a Co-PI is a good way to begin an independent research career.
- One's basic science has to be viable, and the application of one's science to a particular disease and/or organ is important to gaining funding.
- Congress can institute certain parameters for NIH grants to follow, such as a recent rule that the average grant funded cannot exceed 4 years.
- The Institute's Advisory Council generally comprises senior people in the field, such as departmental chairpersons and deans, but may also include a few foundation people, lay advocates, or celebrities. The subcouncils meet to discuss application details and may adjust budgets or time as necessary.
- The grant money belongs to the institution, not the PI. If the PI leaves or dies, the institution may be able to replace him or her, with NIH approval, or NIH may take the unused study funds.
- Study sections are closed to observers except under extraordinary circumstances.
- Some well-done grants never receive funding because the subject matter is not cutting-edge science.

*Drs. Ricardo Azziz, Mark Lawson, and James Hyde*

- Investigators should serve on a study section if asked; one can learn much more about the process than by participating in mock study sections and grant-writing seminars.
- The reviewer's role involves assessing potential conflicts of interest, scoring grants, and discussing opinions with colleagues.
- Reviewers have a duty to fund good science while also considering the investigator's experience relative to the proposed science.
- A 5.0 is the highest (worst) score achievable for a scored grant application.
- The more narrow the focus, the less chance there is for one's application to be criticized, because much reviewer criticism revolves around unfocused, overambitious aims, along with insufficient experience and preliminary data. Such criticism almost guarantees a triaged application.
- An applicant needs to develop a relationship with the study section SRA, who can provide information and guidance as to the appropriate study section to suggest to CSR.

## Managing Career Transitions

### *Transition From Student to Postdoctoral Researcher to First Faculty Appointment—Drs. Francisco Andrade and Ricardo Azziz*

- Postdoctoral positions should be chosen to fit one's current career path and temperament and to allow you time to conduct research and publish, find a good mentor, and take the lead on a small project or a small part of a larger project.
- A postdoctoral researcher (PR) who can bring funding and a continuing research portfolio from his or her former PI's or mentor's laboratory has an advantage over other potential PRs.
- The potential PI with whom the PR will work has more of an effect on one's career than the institution for which both of them work. Assess how successful the PI has been in training past PRs based on their career paths and contact them if possible.
- The size of the laboratory is a personal preference; much depends on the amount of one-on-one time with the PI and the laboratory funding streams.
- It is best if the applicant does his or her postdoctoral work in a laboratory different from that in which he or she worked to earn a Ph.D. Different laboratories provide varying perspectives, personalities, and systems, all of which helps train a junior investigator.
- PRs work for a PI but are generally freer than graduate students to find their niche research area within the purview of the laboratory.
- A private-sector PR job is an alternative, but many people find the transition from academia to the private sector and back difficult. Negotiations with the private-sector company are as important as, but may involve different issues than, those with an academic institution.
- One's decision to move for a PR position should be based primarily on the best career move with, at all possible, other factors as secondary considerations.
- PRs should present their work often at poster sessions, which allow for more one-on-one time with attendees.
- A PR should begin looking for that first faculty position 6 to 8 months ahead of time. Discussions with fellow meeting and poster session attendees about who is recruiting are among the best ways to find out about possible positions outside one's current facility.
- Applicants need to develop a 45- to 60-second verbal biosketch to be ready at any moment, such as running into a senior investigator acquaintance at a hiring institution.
- A first-faculty position should allow the junior investigator time to work in the laboratory and should provide the necessary resources, collaborators willing and able to work with you, the short-term stability of the same chairperson who hired you expecting to be there for about 3 years, and a department with a record of solid fiscal stability.
- Departmental growth is good; instability is bad.
- The applicant should study the interviewees and their research, be pleasant with the scheduling staff members, and may suggest interviewers based on their research portfolios.
- Questions about the institution should be prepared ahead of time and asked at the end of the interview process.
- A second interview is usually the deal closer, involving a higher level of interviewer, a discussion of salary and benefits, and an in-depth discussion of the interviewee's research.
- Interviewers appreciate a thank-you note more than a thank-you e-mail.
- Before starting, the PR should know what is expected of him or her—getting a position is easier than keeping it.

***Developing an Independent Research Program and Managing Funds and Resources—  
Dr. Mario Ascoli***

- One needs to track the grant budget at set times, for example, monthly.
- Each institution will have their rules for spending the grant money. The SRA can help the PI track costs; however, much of the administrative burden regarding grant money has shifted to the laboratory employees, and the PI is ultimately responsible for the budget.
- Some employee pay boundaries are set by institutions and are outside the purview of the PI.
- The PI (and Co-PIs) need to assess the specific aims of the study about 1 to 1½ years before the grant ends to assess whether the basic science and conclusions are on track. Such assessments would be less rigorous for noncompeting renewals.
- The conserving of money over the course of the grant is important to meeting unexpected expenses without unduly affecting the science.
- Most small equipment costs can be purchased as part of the supplies category of the grant award. However, if you must purchase or repair a large, expensive piece of equipment outside the purview of the budget, the university should reimburse the PI's budget for the overhead costs.

***Developing an Independent Research Program and Managing Funds and Resources—  
Drs. Greg Florant and Maria Castro***

- In a time of limited NIH budgets, there is some luck involved in getting one's grant funded; only about 9 percent of all grants submitted will receive funding this fiscal year. However, good ideas tend to transcend politics and bad funding cycles.
- Junior investigators need to submit many publications and consistently develop data, present posters, engage meeting attendees, and be persistent in following up with those who you meet and who have expressed an interest in your work.
- Investigators need to know that a grant is different from a paper—responding to reviewer criticisms does not guarantee funding upon resubmission, unlike a journal paper, which is much more likely to be published once the scientific and editorial corrections are complete.
- The investigator should send out as many grant applications to as many institutions as possible. Outside of large institutions like NIH, the National Science Foundation, and the American Diabetes Association, many foundations tend to be specific about the research they will fund, but if one's research fits their niche, the investigator has a much higher likelihood of funding.
- In addition to workshops such as this, junior investigators can learn to write grant applications from mentors and senior colleagues.
- Private-sector companies will sometimes accept offers from junior investigators for them to conduct a seminar for the company's research group as a way of trying to get research funding in the form of collaborations or direct research support.
- There are complaints heard from both senior and junior investigators that graduate students and technical personnel are not as dedicated to working on studies as past generations of employees have been. Investigators can call mentors or previous laboratory personnel to try to get opinions on possible hires.
- Experience needs to be considered when hiring laboratory personnel but do not overlook the inexperienced technician who shows a lot of enthusiasm and drive. On the other hand, a solid technician may leave after 1 or 2 years to pursue his or her own educational goals after gaining some laboratory experience. PIs must be creative in looking for and keeping employees, such as advertising for and hiring undergraduate students with science training at a base pay scale or as volunteers. The hiring process can be easier at prestigious institutions, which tend to draw people to work in their laboratories.



- Junior investigators who go from working in a laboratory to running one and managing funds, people, and equipment will make mistakes.
- PIs should be friendly and cordial with their laboratory employees but should avoid making friends with the employees.

## **Oversight Committee Meeting**

### ***Action Items***

- Carlos Isales will be the Chair of the Oversight Committee.
- Virginia Sarapura will be the Chair-elect of the Oversight Committee.
- Meeting attendees agreed that the Oversight Committee would continue with 10 members, 5 of whom would be replaced every year.
- The next Oversight Committee conference call will occur in June.
- Dr. Isales will e-mail NMRI members a list of short- and long-term things to do over the next year and will ask members for their suggestions of other possible tasks.
- The top priority of the Oversight Committee should be to increase the NMRI membership.
- Ask MasiMax to send a complete list of the current members to select NIDDK managers to allow for the members to be grouped into various research categories (e.g., diabetes endocrinology, gastrointestinal).
- Send an e-mail survey to NMRI members concerning their grant status.
- Ask the various societies, such as the Endocrine Society, to send NIDDK a list of their minority investigators, who could then be invited to join NMRI.
- Ask NMRI members who attend society meetings to obtain the names of minority investigators attending the same society meetings and provide the names to NIDDK.
- Ask NMRI members to provide NIDDK with a list of all the societies of which they are members.
- Continue to eliminate the names of members who do not participate on the committees or attend the annual workshop.
- Set up a database of NMRI member funding, both NIH funding and funding from outside sources, such as societies and foundations. Ask those members who do not work at NIH to provide their funding information.
- Assign certain tasks to Oversight Committee members between conference calls to spread the responsibilities.
- Ask NMRI members to suggest issues for the Oversight Committee conference calls.
- Ensure that senior investigators remain as active NMRI members.
- Invite Suzanne Fisher back to future NMRI Workshops.
- Increase the number of minority reviewers at the grant application study sections.

### ***Suggestions***

- Suggest to the Program Committee that there be changes to the agenda for the 2006 NMRI Workshop to ensure that annual attendees do not feel that they are attending the same workshop every year.
- Include a separate breakout session at future NMRI Workshops for postdoctoral researchers to provide them information on writing grants and finding mentors.
- Set up an ACCESS database that would include all the relevant information on NMRI members, for example, when the investigators began their careers, when they received their first grants, and the number and type of grants that they have had and currently have. Hire a graduate student with computer expertise to initially set up the database, develop a spreadsheet, and then keep the database current.

- Have the NMRI information sent out from NIDDK rather than MasiMax personnel so that the members know to contact NIDDK and keep them in the loop on all issues. Ensure that Dr. Isaacs and Dale Evans, Chair of the Program Committee, deal directly with Winnie Martinez from NIDDK.
- Contact those members who have left NMRI or who were dropped due to inactivity and ask them why they stopped participating or never participated even after initially joining. Would they like to rejoin?
- Provide a supplement to students to attend the NMRI Workshop.
- Set up a new NIH grant only for minority investigators.
- Invite other members of Congress to speak at future NMRI Workshops and have groups of NIH health and science investigators visit Capitol Hill to attend health care-related committee meetings and visit congressional offices.
- Invite a speaker to discuss the congressional budget process as it relates to health care-related issues.
- Invite representatives from other science grant-funding institutions, such as NSF, NAS, and AAAS, to speak at future NMRI Workshops.
- Change the hotel for next year's NMRI Workshop.

### **Dinner Meeting Address—Dr. Levi Watkins**

Dr. Levi Watkins urged the NMRI not to drop the word “minority.” He is very concerned about the deadly rate of health disparities among minority populations, with about 120,000 African-Americans and other minorities dying unnecessary deaths each year. Dr. Watkins noted that those deaths occurred despite their having access to the same health care as the rest of the Nation’s populace. The disparities begin at birth and continue throughout the lives of many minorities. For example, according to a recent article in the *New England Journal of Medicine*, minorities entering emergency rooms are less likely to be diagnosed with a host of potentially life-threatening diseases. He noted, though, that he has some hope that the issue can be resolved in the future by the increasing number of minority researchers, and he urged the audience of minority investigators to continue making a difference and to encourage others to do so.

According to a recent Institute of Medicine (IOM) report, the reasons for the health disparities are complex, and they are deeply rooted in historical inequalities—stereotypes, biases, and racism all contribute to the unequal treatment. The report’s recommendations included increasing minority medical providers through affirmative action and other methods to draw minorities into careers as medical and scientific investigators, more patient information, more research, and more money. A report from the U.S. Department of Health and Human Services belittled the IOM report, calling the disparities minor.

Dr. Watkins noted that conservatives have vilified affirmative action programs across the country; such attacks caused a 30-percent drop in minority medical applications at the University of Michigan, and the number of new minority health care providers dropped about 40 percent over the past years. He noted that about 40 percent of all minority physicians had benefited from affirmative action policies. Dr. Watkins stated that other colleges and universities had responded to the challenge of encouraging more minorities to enter careers in medical and scientific research.

Dr. Watkins said that embryonic stem cells (ESCs) were a hope of the future to solving many of today’s health problems, such as Alzheimer’s disease, heart disease, and cystic fibrosis. Only 12 of the 78 ESC lines approved for use by the Bush Administration are ready for testing, none of which came from minorities.

Dr. Watkins ended his talk by stating that he remains defiant and optimistic.

**FRIDAY, APRIL 22, 2005**

**Introduction and Welcome—Dr. Lawrence Agodoa**

Dr. Agodoa said that members were responsible for deciding about the future of the NMRI, noting that NIDDK would help where possible. He talked about day 2 activities and asked Planning Committee members for their evaluation of the NMRI Workshop at the Lunch Meeting today.

**Promotion and Tenure Workshops**

***Dr. Judith Podskalny and Evangeline Motley***

The facilitators discussed the following key topics in gaining promotion and tenure:

- Publishing success, prestige of the journals, grant money, and one's contacts
- Tenure holds, especially if they last for a few years
- The "triple threat," that is, someone who has demonstrated research, clinical, and teaching abilities, on a curriculum vitae (CV)
- Current R01 funding; past awarding of an R01; number of graduate students and PRs who have served in one's laboratory; and past awards from NIH, foundations, and other organizations
- Publishing two to three papers per year as an assistant professor while training students in the lab
- Committee participation, as long as an investigator's other duties have not been affected, and service on department-wide committees by years 5 and 6 of one's tenure track
- Teaching load and faculty presentations to become known across a department and a consistent level of productivity regarding data development and publications
- Reviews of research chapters in books, abstract and poster presentations at meetings, an invitation to be a speaker at meeting, or special distinctions on one's work
- Attending international meetings and helping to host a conference at such a meeting when one is a senior assistant or associate professor
- Local media interviews and your role as the local go-to person for information and comments on a particular scientific or medical subject
- Visits to K-to-12 public and private schools to encourage careers in medical and scientific investigation and community service.

Other promotion and tenure issues include the following:

- Tenure can occur as an Associate Professor, although it is more likely to occur after being promoted to the role of professor. However, at some institutions, tenure is less of a job guarantee than in the past.
- Investigators on a tenure track have an advantage over those not on the tenure track, such as more notice needing to be given before letting an investigator go and department chairs being more willing to work with you to stay on the tenure track
- During the 7-year tenure track, years 3 and 6 involve a serious review of one's work progress, with smaller reviews occurring annually. At the year 6 review, the person is told whether they are likely to receive tenure. One could be put on an alternative clinical track if attending a medical school.
- One needs to love the work and not just work to get tenure.
- Everything is negotiable.

***Drs. Maria Castro and Sidney Golub***

The facilitators discussed the following key topics in gaining promotion and tenure:

- The characteristics of creativity, commitment, and collegiality
- The value of volunteering to serve on a committee that interests the investigator, is related to his or her work, and can help with one's career
- Reviews of journal articles and service on a journal editorial board, the more prestigious the better
- An up-to-date, extensive bibliography with articles in multiple journals, at least some of high prestige, with an investigator being the lead author on about half of the articles
- A high-impact article in a journal within one's discipline
- The best, most prestigious articles on one's mistake-free and well-written CV
- For researchers, the speed with which an investigator received his or her Ph.D. and postdoctoral award; for clinicians, the number of certifications and licenses and the hospitals at which they have worked
- The relationship with one's department chair and/or division chief and the extent he or she knows the investigator's abilities and research work
- The institution promotion and tenure packet—the five publications that most clearly identify one's work, teaching evaluations, university and professional service, abstracts of peer-reviewed grants, a research statement, and outside letters of evaluation.

***Drs. Ricardo Azziz and Virginia Sarapura***

The tape of this session was unintelligible.

***Drs. Samuel Dagogo-Jack and Carlos Isaacs***

The facilitators discussed the following key topics in gaining promotion and tenure:

- Most schools have a tenure (Ph.D.) and a nontenure (M.D./Ph.D.) track, with different requirements for each track.
- The facilitators described promotion and tenure tracks for their schools.
- Grants and publications were most important early in a career, with no service or committee work being needed until the investigator was established as an assistant professor.
- The best way for an investigator to experience success is to get a mentor, but being a mentor can affect one's own research career. However, most institutions approve of the practice and consider it a bonus for a senior investigator to become a mentor.
- A lack of teaching is a noticeable drawback.
- An investigator needs to be his or her own advocate; he or she needs to know the requirements to be promoted or to receive tenure at a particular institution.
- The investigator should make a list at the beginning of each year of the articles he or she will publish in that year or other necessary items to do to successfully recompile a grant that ends in 1 or 2 years.

### **Academic Management Workshops**

***Laboratory Growth Management, Hiring Decisions, Human Resource-Related Issues, and Conflicts—  
Dr. Ricardo Azziz***

- Decide on a management style (e.g., hands-on or hands-off, detailed-oriented or big picture).
- Know the laboratory culture based on the people you have hired and your management style.
- Do both of the above items before you hire anyone.
- Develop a process for interviewing and know ahead of time most of the questions you will ask.

- Ask the same questions of all candidates for the purpose of consistency.
- Avoid personal questions.
- Have potential hires interview with many colleagues and get their feedback.
- Schedule the interviews throughout the day and have the candidates interview with people at all levels of the institution.
- Ask the candidate why he or she wants a job in this laboratory.
- Listen to your “gut” about whether the person fits well within the current laboratory culture.
- Look for “red flags” (e.g., too much job-switching, vocal complaints about past employers).
- Always speak with previous employers and work with your institution’s human resources department on this issue.
- Ask for a demonstration of the applicant’s research capabilities on site.
- Put your other work on hold for a few days and take the time to set up a thorough interview process.
- If at the end of the interview process you know that a person will not be hired, thank he or she for their time and note that it will not work out, providing no details.
- After you have moved from a fellow or PR to a laboratory manager with a R01, do not hire friends and do not get overly friendly with the people who work for you.
- Know that your personal science productivity will drop because of your new management responsibilities.
- Have weekly meetings at the laboratory.
- Set clear goals, provide constructive criticism, and hold an annual personal meeting with each employee.
- Realize that the best way to resolve conflict issues is to avoid them in the first place.

### ***Balancing of Research With the Rest of Your Life***

- A partner who works in academia can help with one’s life issues, but this situation involves its own consequences; for example, clinical researchers have more of a set schedule, where academicians have a more flexible schedule.
- Investigators need to develop arrangements that will work for them, such as early hours, late hours, a nanny, or a temporary respite from the tenure track. Unhappiness at work spreads to one’s home life.
- Certain family times or activities should be sacrosanct, with no work and no e-mails.
- A 3-month calendar, scheduling work and activities for the whole family, can help organize an investigator’s time and help with life choices.
- Children should visit you at work occasionally on their days off to see the importance of your work.
- Child care issues can be solved by networking within the local scientific community and within your neighborhood.

### ***Multiple Projects and Productivity Issues***

- Collaborative projects drain the time you need to work in your own laboratory.
- One’s responsibilities on a collaborative project should be received in writing, not accepted over casual conversation.
- Collaborations can be used to develop good science and to get published, but the marketing of other people’s products should not take up too much of your time.
- It is easier for a full professor to take on collaborative projects without hurting his or her individual career goals.
- Industry collaborations are an option, but there are issues of control of data and, depending on the results of the research, may or may not lead to a published journal article.

- A junior investigator should limit his or her involvement with collaborative projects until after being promoted to an associate professor, unless the project is directly related to your chosen career path.
- The undertaking of too many tasks at one time may limit the amount of work an investigator gets done efficiently and on time.
- More senior laboratory employees should be taught how to finalize certain types of projects so that the PI does not have to finalize every laboratory project.

### **Lunch Meetings**

Dr. Agodoa discussed the typical minority researcher career pathway—undergraduate student to graduate or medical student to PR to first faculty appointment to tenured faculty member. Various types of grants are available to the researcher at each stage of career development as well as programs for minority researchers. He also discussed various NIDDK strategies to reduce and eliminate health disparities, including the following:

- Research initiatives
- Infrastructure and capacity-building (e.g., NIH training opportunities, minority researcher pipeline, national professional meetings and workshops, annual NMRI Workshop)
- Outreach.

Dr. Agodoa asked attendees to fill out the workshop evaluation forms and to turn them in at the registration desk. Regarding the comment section, he asked attendees to include their new grant applications and new funding since becoming NMRI members. Dr. Agodoa stated that the 2006 NMRI Workshop will also take place in Bethesda on April 20 and 21. He said that keynote speakers would be invited for the opening session and dinner meeting and that he would like input as to the potential speakers from the Planning Committee members.

Dr. Agodoa then offered to write a letter for each NMRI attendee, with copies sent to their dean(s) or department chairperson(s), stating that they are part of this national minority effort and thanking them for their work. He then asked the attendees to tell Ms. Martinez the names of the dean(s) and chairperson(s) to whom they should be sent. Dr. Agodoa asked attendees to help recruit new NMRI members in areas related to NIDDK research. He also stated that the Oversight Committee members will serve 2-year terms, half of which will end every year. Committee goals include having NMRI members represent the Network at professional organizations and meetings, such as the Endocrine Society, SACNAS, and SNMA, and for them to recruit and spread the word about the NMRI.

### **Committee Reports**

- NMRI Workshop Issues
  - Provide a foundation annually to new members of the Network.
  - Realize that junior investigators will stop coming after 2 to 3 years or incorporate new workshop material to continually attract those who have attended previous workshops.
  - Hold parallel sessions for senior investigators when they are not facilitating workshops.
  - Send other workshop suggestions to Dr. Carlos Isales, who serves as the Chair of the Oversight Committee.
- NMRI future goals
  - Hold regional meetings in addition to the annual workshop.
  - Allow members to choose the topics and have NIDDK help support the meetings with staff members, logistics tasks, and funding.

—Invite undergraduate, graduate, and medical students to the regional meetings to provide them information on medical and scientific research careers and to recruit them into the NMRI.

- Planning Committee issues
  - Send the Planning Committee topic and networking suggestions for the 2006 workshop, such as grantsmanship, analyzing of CVs, the development of leadership and presentation skills, time management, the marketing of one's science (media skills), the making of an effective mentor, public policy (interacting with policymakers and legislative representatives), strategies for negotiating, and venture capitalist issues.

### **Feedback and Recommendations From NMRI Members**

- Keynote Address
  - Attendees liked the address. How about a scientist to give the address next year?
- Potential sessions
  - “Hot” topics, an IOM presentation, and a presentation from medical and scientific journal editors.
- Submission and Assignment of Grant Applications
  - A useful presentation.
- NIH Funding Mechanisms
  - A useful presentation.
- Foundation Funding Mechanisms
  - The topic was good, but the material was not specific enough. The presentation did not contain enough information about who and the type of research that the foundations fund.
  - Onsite Internet access would have helped and would have provided us more information about the foundation programs.
  - Each foundation representative could have used their Web site to demonstrate points of interest.
  - This session could be a workshop, with more information and contact and resource information on a resource table.
  - Foundation representatives could be part of the poster session.
- Lunch and Mentor Sessions
  - This session could explore the process of getting one's work published. Invite journal editors to present at this session.
- Mock Study Session
  - Most attendees provided positive feedback about this session.
  - They suggested allowing 2 or 3 weeks to read the grants, not just 1 week; the mailout of the grants must happen earlier. The e-mails to NMRI members were confusing; send the grants out over a short amount of time and include a mix of clinical and research grants, at least two of each.
  - The study sections should be organized by subject, such as diabetes, gastrointestinal, and kidney. Provide a better format for the study sections, such as not telling section attendees the scores ahead of time, allowing them to score the grants, telling them the facilitators' scores, and handing in summary statements at the end of the study section. The Mock Study Session should also be a major session next year.

- **Managing Career Transitions**  
—Most attendees thought all three sessions were valuable but suggested having two other topics—how to negotiate career promotions and how to give a good seminar, involve the audience, and present data. The workshops were a bit structured but were still interactive; the facilitators needed to make fewer points. The handouts were important.
- **Poster Session**  
—Most attendees liked the posters; such a session is a good way to quickly learn the type of research in which other researchers are engaged. However, not enough people showed up. NIDDK should organize a group presentation of each poster, with a certain amount of time for the group to spend at each poster. An-end-of-the-day poster session generally attracts fewer people; could it be built into the daily workshop activities, or could the session be held the night before the workshop begins? Dr. Agodoa noted that veteran poster presenters expect only three or four substantive comments.
- **Dinner Meeting**  
—All the attendees seemed to enjoy Dr. Watkins.
- **Promotions and Tenure—Workshop**  
—This workshop needed more structure and better organization. The session provided a good general sense of the tenure process at universities and noted the importance of securing recommendations from colleagues for your CV.
- **Academic Management Workshops**  
—All three workshops garnered mostly positive comments. Future sessions should address the difference between clinical and basic sciences. These workshop sessions gave more weight to basic science issues even though almost half the attendees were clinical scientists.
- **Planning Committee Members**  
—Invite more senior investigators to the NMRI Workshops and give them more tasks. Senior network members need not all be minorities. Some nonminority senior investigators have extensive experience and interest in issues central to the Network. New Planning Committee member suggestions should be sent to Ms. Martinez and Dr. Maria Castro.