DEPARTMENT OF HEALTH AND HUMAN SERVICES PUBLIC HEALTH SERVICE NATIONAL INSTITUTES OF HEALTH NATIONAL ADVISORY COUNCIL FOR BIOMEDICAL IMAGING AND BIOENGINEERING STRATEGIC PLAN DEVELOPMENT SUBCOMMITTEE

Summary of Meeting May 26, 2004

The fourth meeting of the Strategic Plan Development Subcommittee was convened at 3:45 p.m. on May 26, 2004, in the Natcher Conference Center, NIH Campus, Bethesda, Maryland. Dr. Frank Yin, Chairperson presided.

Subcommittee members present:

Dr. Carlo J. DeLuca Dr. Norbert J. Pelc Dr. Janie Fouke Dr. Frank C. Yin

Dr. Barbara McNeil

Other Council members present:

Dr. Robert I. Grossman
Dr. Linda Lucas
Dr. James Zagzebski

Dr. Rebecca Richards-Kortum

Ex officio members present:

Dr. James Smirniotopolous Dr. Andrew Watkins

NIBIB Staff present:

Ms. Lillian Ashlev Mr. Nicholas Mitrano Ms. Pamela Clatterbuck Dr. Peter Moy Ms. Bonnie Dunn Dr. Roderic Pettigrew Ms. Angela Eldridge Ms. Anna Retzke Ms. Cheryl Fee Dr. Belinda Seto Dr. David George Dr. Patricia Sokolove Ms. Colleen Guay-Broder Ms. Theresa Smith Dr. John Haller Dr. Richard Swaja Dr. Joan Harmon Ms. Sandra Talley

Dr. William Heetderks Dr. Meredith Temple-O'Connor

Dr. Christine Kelley Ms. Florence Turska
Ms. Mary Beth Kester Ms. Stacy Wallick
Dr. Henry Khachaturian Dr. Fei Wang
Dr. Alan McLaughlin Mr. Elijah Weisberg
Mr. Todd Merchak Dr. Yantian Zhang

Ms. Brenda Mitchell

Other attendees:

Ms. Alicia Doherty, MasiMax Resources, Inc.

Mr. Andrew Hawkins, The Blue Sheet

Ms. Marianne Marlowe, Capitol Consulting Corporation

Dr. Roderic Pettigrew welcomed the participants and thanked everyone for their willingness to support the National Institute of Biomedical Imaging and Bioengineering (NIBIB) in defining strategic directions.

Dr. Joan Harmon provided an overview of Federal regulations and policies governing the meeting. She noted that the meeting was organized under the authority of the Federal Advisory Committee Act and the Government in the Sunshine Act and reviewed conflict of interest procedures.

*Update on NIBIB Strategic Planning Process – Dr. William Heetderks*Since the January 14, 2004, meeting of this subcommittee, the Institute has launched a web site for public comment. In addition, the Institute's Strategic Planning Working Group has attended three multi-day retreats and a special session to further refine roles, responsibilities, authorities, and to improve communication strategies.

At the February retreat, the Strategic Plan Working Group discussed the mission, vision, and values of the Institute. The following statements were adopted:

Mission:

Improve human health by leading the development and accelerating the application of biomedical technologies. The Institute is committed to integrating the physical and engineering sciences with the life sciences to advance basic research and medical care.

Vision:

We will profoundly change health care. NIBIB will push the frontiers of technology to make the possible a reality.

Values:

To succeed in our mission, all of us in the NIBIB value the following:

- Excellence: a commitment to exceed the expectations of ourselves, our colleagues, and grantees.
- *Innovation:* be willing to take risks, embrace new approaches, and pursue ground-breaking ideas.
- *Integrity:* be responsible stewards of the public trust; act ethically, openly, and honestly.
- Partnership: synergize with collaborators to maximize benefits to human health.

At the March retreat, the Strategic Plan Working Group expanded the mission's scope to include seven research areas:

- Research into the development of new biomedical imaging and bioengineering techniques and devices;
- Advancement of existing imaging and bioengineering modalities;

- Related research in physics, engineering, mathematics, computer science, informatics, and other disciplines;
- Research in multi-disciplinary areas;
- Technology assessment and outcome studies of the effectiveness of biologics, materials, processes, devices, and procedures;
- Research in screening for diseases and disorders; and
- Development of advanced imaging and engineering techniques for research from the molecular and genetic to the whole body level.

At the upcoming retreat in June, the NIBIB Strategic Plan Working Group will identify goals, strategies, and objectives. A draft strategic plan will be available for Council review and discussion in September 2004.

Update from Chair of the Strategic Plan Development Subcommittee – Dr. Frank Yin The Subcommittee's charge has been to provide input, guidance and feedback to the NIBIB Strategic Planning Working Group as they develop this strategic plan. At the January 2004, meeting of this Subcommittee, members had an opportunity to provide input on their vision for the strategic directions of the Institute. Drs. Janie Fouke and Barbara McNeil could not attend so they were invited to provide input at this meeting.

Presentation by Dr. Janie Fouke

Dr. Fouke discussed several strategic issues that the Institute must consider. NIBIB has clearly filled a need in the scientific community as evidenced by the large numbers of grant applications in response to the recent initiatives. However, the success rate was lower than expected. A major contributing factor to the low success rate is that many of the applicants are new investigators that have not previously applied for NIH funding. The Institute should increase outreach efforts to these new, non-traditional investigators by conducting more grant writing workshops and providing additional opportunities for potential grantees to interact with the staff.

Dr. Fouke also mentioned that support of SBIR and STTR awards will continue to be a challenge for the Institute. Because of its' mission, the NIBIB receives more SBIR and STTR applications than other NIH Institutes and Centers. Although each Institute and Center is legislatively mandated to allocate 2.5 percent of their budget for SBIR and STTR applications, the NIBIB allocated approximately 3 percent in FY 2004. In spite of the increased allocation, the Institute still could not support many high quality applications.

Dr. Fouke continued by discussing the commitment of the NIBIB and the NIH to highrisk research. She suggested several ways in which this research could be supported within the NIBIB and as collaborative efforts across the NIH.

Because the NIBIB is appealing to many different communities, it is important for the Institute to encourage non-traditional collaborative efforts. For example, workshops that bring together clinicians and engineers to think about a specific problem could result in scientific collaborations leading to real innovations that could benefit healthcare.

The Institute should also carefully consider the balance between the research and training portfolio both in the types of funding mechanisms and the science supported. The Institute must strive to determine the right balance between investigator-initiated research and solicited projects. As the NIBIB matures, consideration should be given to support for multi-investigator, center-driven research. The Institute should continue its commitment to training, especially in underserved scientific areas and populations. The NIBIB must continue to actively participate in the NIH Roadmap initiatives and seek out opportunities for trans-Agency collaboration.

Presentation by Dr. Barbara McNeil

Dr. Barbara McNeil offered her thoughts on strategic directions for the NIBIB. In its first 2 years of existence, the Institute has made a strong start and is supporting exciting research. However, it is important as a new organization to have a sharply defined focus, especially in times of limited resources. The Institute should consider focusing on research areas not adequately addressed by other NIH Institutes and Centers and commit the majority of funds to these specific areas.

Discussion

The Subcommittee members and other attendees continued the discussion regarding the Institute's areas of research emphasis and how best to further define the Institute's focus. Dr. Frank Yin offered has perspective that the Institute had done a commendable job in focusing its areas of scientific emphasis despite serving a broad imaging and bioengineering community. Members observed that the first ten initiatives were targeted at research areas defined at the December 2002 NIBIB Workshop on Future Research Directions. Future initiatives will likely be program announcements based in large part on input from the scientific community that still are responsive to the mandated mission of the Institute. Council members, including Dr. Norbert Pelc, reiterated that it is impossible to predict what areas of technology development will have a major impact on human health and therefore the Institute should not limit research to a few specific areas. However, with limited resources, some prioritization of research areas must occur. Additionally, disease-specific, technology-driven research is ongoing at other Institutes and Centers.

The Subcommittee concluded the meeting by appointing Dr. Norbert Pelc to serve as Chair for the next year.

The meeting adjourned at approximately 5:15 p.m.

We certify that, to the best of our knowledge, the foregoing minutes and attachments are accurate and complete.

Joan T. Harmon, Ph.D. **Executive Secretary** National Advisory Council for Biomedical Imaging and Bioengineering Director Office of Extramural Policy National Institute of Biomedical Imaging and Bioengineering

/s/ Roderic I. Pettigrew, Ph.D., M.D. Chairperson National Advisory Council for Biomedical Imaging and Bioengineering Director National Institute of Biomedical Imaging and Bioengineering

The Council will consider these minutes at its next meeting. Corrections or notations will be incorporated in the minutes of that meeting.