

National Cancer Advisory Board (NCAB)
Ad Hoc Subcommittee on Global Cancer Research

Gaithersburg Marriott Washingtonian Center
Gaithersburg, MD
December 3, 2018
5:30 – 7:00 p.m. EST

SUMMARY

Subcommittee Members:

Dr. Francis Ali-Osman (Chair)
Dr. Deborah Bruner
Dr. Yuan Chang
Dr. David Christiani
Dr. Beth Karlan
Dr. Electra Paskett
Dr. Nancy Raab-Traub
Dr. Mack Roach
Dr. Margaret Spitz
Dr. Robert Croyle (Executive Secretary)

Other Participants:

Dr. Otis Brawley (Emory University, Board of Scientific Advisors [BSA])
Dr. Melissa Bondy (Baylor College of Medicine, BSA)
Ms. Nelvis Castro (National Cancer Institute [NCI])
Dr. Ann Chao (NCI)
Dr. Henry Ciolino (NCI)
Dr. Susan Perkins Ciolino (NCI)
Ms. Mishka Cira (NCI)
Ms. Kalina Duncan, (NCI)
Dr. Carol Ferrans (University of Illinois, Chicago, BSA)
Dr. Keith Flaherty (Massachusetts General Hospital Cancer Center, BSA)
Dr. Thomas Gross (NCI)
Ms. Susan Giuliani (NCI)
Ms. Marianne Henderson (NCI)
Ms. Catherine Hidalgo (NCI)

Ms. Cynthia Kleeberger, Social and Scientific Solutions
Dr. Karen Knudsen (Thomas Jefferson University, BSA)
Dr. Barry Kramer (NCI)
Dr. Douglas Lowy (NCI)
Dr. Deborah Mayer (University of North Carolina at Chapel Hill, NCI)
Ms. Cathy Muha (NCI)
Mr. Kenneth Nock (NCI)
Ms. Elizabeth Orlan (NCI)
Dr. Mark Parascandola (NCI)
Dr. Paul Pearlman (NCI)
Dr. W. Kimryn Rathmell (Vanderbilt University Medical Center, BSA)
Dr. Vikrant Sahasrabudde (NCI)
Dr. Norman Sharpless (NCI)
Dr. Sudha Sivaram (NCI)
Dr. Sudhir Srivastava (NCI)
Dr. Lisa Stevens (NCI)
Ms. Martina Taylor (NCI)
Ms. Stacey Vandor (NCI)
Dr. Vidya Vedham (NCI)
Dr. Bhadrasain Vikram (NCI)
Dr. Amanda Vogel (NCI)
Mr. Adam Gattuso, The Scientific Consulting Group, Inc., Rapporteur
Dr. Carolyn Fisher, The Scientific Consulting Group, Inc.
Ms. Susie Warner, The Scientific Consulting Group, Inc.

Welcome and Introductions

Francis Ali-Osman, D.Sc., Margaret Harris and David Silverman Professor of Neuro-Oncology Research, Professor of Surgery, Professor of Pathology at Duke University School of Medicine
Robert Croyle, Ph.D., Interim Director, CGH, NCI

Dr. Robert Croyle convened the meeting at 5:33 p.m. Dr. Francis Ali-Osman welcomed attendees to the meeting, and the attendees introduced themselves. Dr. Croyle noted that changes have taken place recently at the NCI's Center for Global Health (CGH), and that this meeting will refer to action items from the July 26, 2018 Report of the NCAB *Ad Hoc* Working Group on Global Cancer ("WG Report"). The meeting includes a presentation on activities at Cancer Centers, a discussion about training mechanisms, and a presentation on low-cost technology initiatives.

Comments from NCI Leadership

Norman E. Sharpless, M.D., Director, NCI

Dr. Norman E. Sharpless thanked the attendees for coming to the meeting. He noted that because of the change in schedule for the upcoming Wednesday, there will be no orientation for new members. Dr. Sharpless thanked those who had helped develop the Working Group recommendations, which have been formally accepted by the NCAB. He noted that the search for a new CGH director is ongoing through the federal process. Dr. Sharpless emphasized that he personally cares about global oncology research, which is an important program for the NCI. He noted that people frequently inquire about this topic on his travels. The academic community wants to do more in this area, and encourages the NCI to perform additional organization and leadership to the extent possible.

Update from the Executive Secretary

Robert Croyle, Ph.D., Interim Director, CGH, NCI

Dr. Croyle encouraged and welcomed all forms of communication to provide ongoing input, leveraging the expertise of the global cancer research community. Dr. Croyle explained that the CGH has focused on internal issues over the past few months, including operations, planning, staffing, ongoing activities, and reviewing programs.

One issue that appeared in the WG Report is finding the right balance of funding mechanisms for global health activities. Early on, the CCH was in a growth mode, funding pilots for a variety of activities. Dr. Croyle emphasized that the CGH is trying to transition to developing sustainable ongoing programs. Traditional NIH funding mechanisms, such as 2-, 3-, and 5-year awards, enhance the accessibility, predictability, peer review, and continuity of programs, which benefit awardees as they develop their own programs. This especially applies to developing continuous, trusting relationships in low- and middle-income countries (LMICs).

Dr. Croyle noted that staffing changes at the CGH will become effective in January. One such change will be Dr. Mark Parascandola beginning a leadership role as an acting branch chief. Another official will take on a supportive role for the grants portfolio. The CGH also will strengthen its operational staff support.

Dr. Croyle commented that the CGH wants to position itself in the most ideal way functionally, organizationally, and in planning processes, budget processes, and setting priorities, so that these processes and structures will be in place when a new director comes on board.

Dr. Croyle noted that maintaining strong relationships with international organizations has been a hallmark of the CGH. These relationships have been expanded, and the CGH wants to sustain momentum in this area. The WG Report suggested working more closely with the Fogarty International Center (FIC).

The CGH and FIC will share a role in NIH's position with the Beijing Embassy, integrating activities between the NIH and China.

The WG Report also addressed the role of Cancer Centers in global health, which has changed radically in the last decade. Dr. Ali-Osman previously raised the question of what Cancer Centers are doing in terms of global cancer research that is not funded by the NIH, which will be discussed later in this meeting. The WG Report also suggested that the CGH should be more integrated with intramural science programs across the NCI. Hence, an internal Trans-NCI Governance Group will form. Dr. Douglas Lowy has agreed to chair this group, which will serve a coordinating function across the NCI.

Dr. Croyle encouraged applicants for the open position of Director for the CGH. He invited those interested to contact himself, Dr. Sharpless, or the chair of the search committee Dr. David Chambers.

Dr. Croyle noted that, in collaboration with the NIH and other agencies, the CGH represents the NCI in a variety of health diplomacy contexts, including the World Health Organization, the United Nations, and non-governmental organizations. The CGH is fully engaged in handling requests for collaboration and NCI representation among embassy staff and in other international contexts. The WG Report suggested that the CGH delineate its health diplomacy function and its research science function, so that health diplomacy does not hinder activities supporting science.

A current challenge for the CGH is science policy expertise for international collaboration. Most of these issues are handled at the NIH level through the FIC. However, there may be a need for the CGH and the NCI overall to strengthen their internal policy expertise. The European Union's new General Data Protection Regulation (GDPR), which governs privacy and data sharing, is quite complicated.

Dr. Sharpless noted that the GDPR is a sprawling set of rules with implications that remain unclear. The Cloud Act, a requirement that American databases be made available in certain ways, may not be compliant with the GDPR. How the GDPR affects current data-sharing agreements remains unclear. E.U. and U.K. personnel are in the process of developing a manual to interpret this new law to share with the research community.

Discussion

Dr. Mack Roach, University of California, San Francisco, noted that challenges already existed in collaborating between U.S. and European institutions prior to the GDPR.

Dr. Croyle noted that the CGH is looking to develop clarity within its two branches. One branch will look like a typical extramural grant-holding organization. The other branch is charged with a health policy and liaison function, which should be integrated with portfolio analysis and information dissemination. Internal and external clarity will better serve CGH's constituents. Dr. Croyle pointed out that the CGH is trying to make changes without committing to too much detail, so that the new director has flexibility in how to implement them.

Dr. Deborah Bruner, Winship Cancer Institute, Emory University, supported the need for legal counsel to help investigators develop and implement grants. She expressed concern that a funding opportunity announcement (FOA) might be advertised without a proof of principle that the legal issues could be worked out. Dr. Croyle agreed with the need for providing grant applicants more legal and science policy expertise early in the process.

NCI-Designated Cancer Center Global Health Activities Survey Results

Kalina Duncan, M.P.H., Lead Public Health Analyst, NCI

Dr. Croyle noted that this presentation is a first look at the ability of NCI-Designated Cancer Centers (NDCCs) to characterize their non NIH-funded global health programs and activities.

Ms. Kalina Duncan commented on the fact that NDCCs have many activities not funded by the NIH, which have not previously been catalogued. This NCI survey had three aims: (1) to describe the non-NIH funded global oncology activities in a new centralized resource, (2) to use this resource to inform program planning, identify collaboration opportunities, and decrease duplication, and (3) to potentially convene and coordinate NDCCs around global oncology opportunities and activities.

Ms. Duncan noted that this type of survey has been conducted in years past, but was strengthened this year to ask about formally designated programs in addition to specific projects. The survey was sent to both the director and administrator of each Center. The NCI refined its method of engaging NDCCs to conduct the survey, increasing its response rate from 60 percent in the past to 93 percent for this survey. Out of the 65 NDCCs that responded, 30 have a formal global oncology program, and 57 have global oncology projects not funded by the NCI.

Dr. Roach expressed that it would be useful for NDCCs to have processes for tracking these activities, and suggested that future surveys ask whether these institutions have a tracking system in place.

Ms. Duncan highlighted that 16 NDCCs have at least 10 non-NIH funded projects, and noted that this is likely an underestimate. Dr. Karen Knudsen, Director, Thomas Jefferson Kimmel Cancer Center, agreed that the number of projects is underestimated.

Ms. Duncan shared a few preliminary highlights from the data. The more than 500 global oncology projects reported so far are primarily focused on research, capacity building, and training. Compared to the NCI-funded portfolio, these projects are more likely to focus on prevention; early detection or diagnosis; or cancer control, survivorship, and outcomes research. These findings could suggest that NDCCs are filling certain gaps in the funding portfolio. Finally, 14 percent of non-NIH funded projects focus on childhood cancers.

Ms. Duncan shared that the funding type for these projects was divided into five categories: industry, institutional, non-profit, other source, an unfunded collaboration, or not provided. The most common funding type was institutional. Dr. Keith Flaherty asked whether institutional funding accounts for philanthropic dollars, and Ms. Duncan replied that she would follow up on this question. Dr. Knudsen noted that when her Center filled out the survey, they included only those projects that were externally, peer-reviewed funded, and asserted that they would have reported more projects if they accounted for institutional funding. Ms. Duncan noted that non-NCI projects were more likely to be conducted in LMICs than in developed countries.

Ms. Duncan expected the completed report on this study to be available at the end of the first quarter of 2019. The completed report will be shared with this subcommittee and the NDCCs for their review.

Discussion

Dr. Roach noted that the NCI collaborates with other groups besides NDCCs, such as the International Atomic Energy Agency (IAEA). He remarked that it would be useful to understand how these collaborations can be optimized.

Dr. Croyle noted that this survey relies on self-reports, but these provide raw material from which the NCI can improve their methodology.

Dr. Keith Flaherty, Massachusetts General Hospital Center, asked whether the survey attempted to delineate between specific kinds of research or translational science. Ms. Duncan responded that the survey does include coding for clinical care for research, but the main focus of the survey is to establish a baseline.

Dr. Croyle noted that one thematic takeaway from this research is the focus on LMIC projects. The NCI international portfolio outside of the CGH is skewed toward developed countries. Dr. Croyle noted that prior discussions supported determining methods of integrating NIH funded programs with non-NIH funded programs.

Dr. Sharpless pointed out a practical reason to pursue these studies of funding portfolios: Many Cancer Centers have asked the NCI to give them credit for their activities. Dr. Henry Ciolino, Office of Cancer Centers, NCI, explained that the NCI is looking for ways in which Cancer Centers can include global health as part of their missions.

Dr. Croyle referred to the WG Report's discussion about LMICs, and the recommendation that different capacities and different needs in particular countries be addressed in their own context. It was agreed that LMICs should be a priority within the CGH.

Dr. Beth Karlan, David Geffen School of Medicine, University of California, Los Angeles, commented that if the CGH is to be a convener, these efforts should be catalogued in a central location to increase collaboration and decrease duplication.

Ms. Duncan explained that the NCI is a member of the International Cancer Research Partnership (ICRP), which maintains a large database of cancer research funders from around the world. ICRP (www.icrpartnership.org) works to enhance global collaboration and strategic coordination of research. Ms. Duncan noted that through this partnership, the NCI can view the past 10 years of cancer funding from more than 180 organizations. The data set is skewed toward high-income countries, but the NCI is aiming to add collaborator data to obtain the LMIC funding picture.

CGH-Supported Training Mechanisms

Robert Croyle, Ph.D., Interim Director, CGH, NCI

Dr. Croyle explained that an internal discussion has started at NCI to develop proposals to identify the appropriate standing training mechanisms in global health that the NCI should support. Dr. Croyle welcomed any feedback or ideas on this topic. Ms. Susan Perkins Ciolino, Center for Cancer Training, NCI, will work with Dr. Sudha Sivaram, CGH, NCI, to co-chair a review of available training mechanisms and will provide internal suggestions.

Technology Initiative

Paul Pearlman, Ph.D., Lead, Global Health Technology, CGH, NCI

Dr. Paul Pearlman discussed the Affordable Cancer Technologies Program (ACT), which is a currently operating initiative. This program's goal is to support translational research focused on adapting technologies to address cancer in LMICs. Dr. Pearlman explained that this program provides an opportunity to perform interesting work that does not fit anywhere else in the NCI portfolio.

Dr. Pearlman noted that the first of three issuances of this program was awarded in 2014, and the ACT portfolio contains 20 active grants. These grants are managed by subject matter experts within NCI divisions. ACT performance sites are located throughout the world. The program is a mechanism with multiple principal investigators, and it seeks expertise in a plurality of areas, including oncology, engineering, business development, and global health. The program contains two phases, known as UH2 and UH3. UH2 is a 2-year adaptation of an engineering phase, followed by a 3-year phase, UH3, when initial clinical studies are performed.

Dr. Pearlman cited the example of the support this program provided to the Dr. Susan Love Research Foundation. Dr. Love and her collaborators developed analytical software to support handheld low-cost ultrasound for triage of palpable breast masses. This advancement enables a health worker, minimally trained by a 1- to 3-hour training program, to acquire a radiologist-caliber image. Results to date include 80 images analyzed from 148 enrolled patients. A sensitivity of 100 percent led to a 64 percent imputed benign biopsy reduction.

Dr. Pearlman referred to a second example featuring field testing in a mobile unit of a high-resolution micro-endoscope. This portable real-time imaging device can interrogate tissue at the cellular level and produce images similar to histology. To date, the researchers have successfully implemented the device in a mobile diagnostic setting. They aim to rapidly scale up to a population of 12,000 women to develop the diagnostic sensitivity and specificity.

Dr. Pearlman summarized the overall program achievements to date. Awardees from two Requests for Applications (RFAs) have transitioned to the second phase of the program, UH3. Twelve of the 14 awardees who transitioned to UH3 met and exceeded their milestones. The program has produced high-quality contributions to the literature, including publications in high-impact journals. Dr. Pearlman noted that these grants feature a combination of high-tech and low-tech science, including deep learning algorithms, advanced imaging, advanced microfluidics, and lens-free microscopy. Dr. Pearlman added that the in-country experiences and collaborations have been productive both for the LMIC investigators and for the engineers developing these devices.

Dr. Pearlman's assessment of the program continued by noting that the UH2/UH3 mechanism lacks flexibility, arbitrarily constraining grantees to award timing, which can create challenges. Awardees may structure their applications to meet the requirements or fail to make their milestones because of local constraints.

Dr. Pearlman recommended continuing to provide funding to support this research community, and to keep the scope high-level. He also recommended eliminating the phase transition, to be replaced with a standard R01 with an exploratory phase. Dr. Pearlman concluded by recommending that the program goals focus on clinical validation, and focus on other parallel programs for commercially driven research. The latter has begun by initiating a complementary small business innovation research (SBIR) program.

Discussion

Dr. Ali-Osman remarked that moving to an R01 mechanism will be challenging for this kind of non-hypothesis-driven work. Dr. Pearlman pointed out that an industry partner is expected for every project. Dr. Pearlman explained that he does not want to abandon holding a set-aside of funding dedicated to this program. He also expressed that special emphasis panels are essential for any global health project with this level of complexity. Unlinking the awards would remove the constraints on the phase transition. Because of the high variability in entry points for these technologies, Dr. Pearlman does not favor timing constraints.

New Business

Robert Croyle, Ph.D., Interim Director, CGH, NCI

Dr. Croyle opened this time for questions, suggestions for new business, or topics that attendees would like to discuss. Dr. Ali-Osman asked about the timeframe for hiring a new Director for the CGH. Dr. Croyle estimated that this process may be complete by mid-2019.

Dr. Bruner raised the issue of collaborating with researchers in China. Dr. Croyle responded that an entire subcommittee meeting could be devoted to this topic, as it contains complex issues. Dr. Sharpless agreed that this topic warrants a longer discussion at another time. He referred to a recent letter sent from the NIH to its awardees cautioning them about serious issues to watch for in the peer-review process. Dr. Sharpless, along with Dr. Francis Collins, Director, NIH, and other officials, had 3 minutes of open testimony about this issue to Congress this past August.

Dr. Sharpless emphasized that international collaboration is absolutely vital, including with Chinese trainees in American labs. Dr. Ali-Osman noted that because China remains officially designated as an LMIC despite its status as the world's second largest economy, that designation may have to be revisited. Dr. Sharpless pointed out that the NCI has a large portfolio of collaborations with China, which shares key research interests with the NCI.

Adjournment

Dr. Ali-Osman adjourned the Subcommittee meeting at 7:00 p.m. EST.

/s/ Francis Ali-Osman
Dr. Francis Ali-Osman
Chair

1/6/19
Date

/s/ Robert Croyle
Dr. Robert Croyle
Executive Secretary

12/7/18
Date