Date: April 3, 2017

To: Pamela Whitten
Senior Vice President for Academic Affairs and Provost

From: The Global Health Break-out Group: Chip Chambers, Martin Kagel, Steve Miller, Courtney Murdock, Luke Naeher, Svein Øie, Michael Terns, Bailey Palmer (Letter Lead Author), Mark Huber (Facilitator).

Re: Recommendations for Addressing the Grand Challenge of Global Health

Our team was tasked with brainstorming about ways to increase the University of Georgia's interdisciplinary response to the grand challenge of global health. Global health, as we define it, is a complex area of study, research and practice that focuses on improving health and quality of life for people world-wide. It is, by definition, broad and diverse. At UGA, there are numerous centers and stovepipes of expertise within global health, including the Center for Global Health, Center for Tropical Emerging and Global Diseases, among many others. What the University of Georgia currently lacks is an efficient way in which to identify where those areas of expertise exist and how these centers of expertise overlap and interact. To increase the interdisciplinary nature of global health research at UGA and fuel innovation, we recommend implementing a mechanism to reveal the linkages between key hubs of existing research and research interests. Expertise and innovative interests exist at UGA; we want to connect these in novel ways.

1. **Recommendation 1: Conduct an iterative series of network analyses of the university's faculty, staff, students and alumni, separated by expertise and interests.**
   <u>Mapping Expertise</u>
   a. **The first network analysis should focus on faculty expertise across the entire campus.** Using research keywords gathered from CVs, personal websites, and research publications, network analysis would establish how global health faculty are linked to one another, and how they are linked to faculty in other departments. These data could help administrators and departments discover where unexpected interdisciplinary research hubs are located, and where potential areas for growth lie. While global health is our focus, departments across campus would find this analysis useful. A network analysis also has the potential to be expanded to include information on research grants or other incentives to promote the usefulness of the analytical product.

      An initial pilot test of this analysis could be performed using existing UGA resources. However, a campus-wide analysis would likely require additional resources to support faculty, graduate students or external entities in conducting the network analysis. Other potential costs may include faculty time spent providing keywords or other information, or time spent communicating to faculty how best to utilize the data gained from the analysis.

b. **An additional iteration of network analysis should examine alumni expertise.** Using keywords from LinkedIn, CVs or survey data, this analysis would reveal how alumni expertise overlaps with faculty research, or indicate certain comparative advantages. This information could supplement research efforts by bringing in an industry perspective. In addition to drawing on the professional expertise of former UGA students, this would be an excellent method of engaging alumni, which in addition to potentially elevating the caliber and relevancy of future research, could draw in additional financial support from them.

Mapping Interests

c. **The second network analysis should map faculty, alumni and student interests.** These data, mined via survey responses or through existing databases, would provide information on where interests across campus and beyond intersect. This information could drive future collaboration between faculty, students and alumni. While mapping expertise is important, mapping interests is equally crucial in developing new research and finding creative ways of interdisciplinary collaboration.

   The student interest data would be more specific than broad major designations, and could indicate overlapping interests in unexpected fields. This information could prompt UGA to introduce interesting new interdisciplinary academic programs that differentiate the university from its peers.

   Mapping alumni's professional specialties and interests would also equip the university with more specific information on the types of skills and expertise that graduates use in the field of global health. This would allow advisors to provide students with data driven information on employer demand, the different pathways alumni have taken to a particular career, or unique combinations of majors and experiences that lead to novel ways of addressing global health.

2. **Recommendation 2: Create a searchable and browsing-enabled system using the network analysis data, allowing a user to interact with the network of interests and expertise.**
   This system would translate the network data into a visually appealing user interface which students, faculty, staff and alumni could access to find research opportunities in unexpected places. This system takes the idea behind FRED and creates a more user-friendly system that allows the user to visualize hubs of expertise and interests within the Global Health network without requiring precise search terms or keywords.

   Depending on the results of the analysis, the system could break down the field of public health into subsets such as human health and environmental health. "Human health" could include research regarding health disparities, biomedical science, public health infrastructure, etc. "Environmental health" might include topics such as the

effects of environmental degradation on human health, population concerns, food insecurity, etc. Within these areas, the analysis of interests or expertise could encompass the effects of social, cultural, political and economic dynamics on human health. The precise sub-regions would, in the end, be dependent on the output of the network analysis.

The amount of information made available could also be tailored to individual preferences. For example, faculty members could indicate whether or not they are looking to take on new projects, and this preference would be displayed via a green vs. gray node. Faculty could also list the classes they teach on their node, allowing students to learn more without inundating inboxes. Alumni could elect to post internship opportunities as well. Students would be represented in the network, enabling faculty and alumni to find relevant undergraduate or graduate skills more easily. This global network would also facilitate students' participation in experiential learning opportunities, such as research or faculty-led trips that more precisely address their interests. The system would also benefit the Office for Proposal Enhancement by expediting the process of finding collaborators.

In addition to the resources required to build out this system, UGA would also likely have to invest in training/informational resources to ensure that faculty, staff, students and alumni are able to make full use of the system's capabilities.

We hope these ideas will enhance UGA's leadership in the global effort to address current and future grand challenges.

Respectfully submitted by the Global Health Breakout Group.