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Dr. William J. Martin II, M.D.  
Associate Director, NIEHS  
Director, Office of Translational Research  
National Institute for Environmental Health Sciences  
111 T.W. Alexander Drive  
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Dear Bill:

Thank you for the opportunity to review and comment upon the NIEHS Global Environmental Health Conference Report. I think this is an excellent summary and it reflects the intense work that was done by all three groups and the organizers in San Francisco. I wasn't sure that the life-course approach would work, and while there are clearly differences in structure and style across the groups, there is also remarkable consistency. I have just a couple of comments, neither of which will surprise you given my background and the role I played as one of the few social scientists at the conference.

In the *Environmental Components of Child Health* group, we developed an organizational structure for identifying and discussing priorities in two important ways. This includes Table 1, a matrix for summarizing a number of factors in columns, including global burden, potential for major impact within 10 years, whether there are measurable outcomes, degree of knowledge of the problem, regions most affected, and institutes/organizations that are relevant for resources. In the rows we listed those diseases and health problems for children that as a group we felt should be on the initial list for discussion, and these were categorized broadly into categories of disease, including infectious diseases, vector borne diseases, neuro-behavioral deficits, and so on. We also defined three types of research and for each disease or problem, indicated which of these were most relevant or of highest priority. These included:

**Type 1:** Translational research to test proven interventions for their effectiveness in the community setting

**Type 2**—Research to develop and test the efficacy of plausible interventions, including consideration of co-factors (where knowledge of underlying mechanisms is sufficient to develop intervention studies but where more studies are required to understand

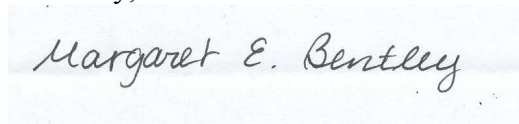
mechanisms, disease modifying co-factors, gene-environment interactions and epigenetic phenomena).

**Type 3**—Research to understand mechanisms and the biological basis of environmentally-related diseases, including epigenetics, especially where insufficient knowledge exists to plan large-scale intervention studies.

These underlying organizational structures of our framework provided a systematic way for our discussions and decisions for priorities; it also provides a transparency to those who are reviewing our recommendations and rationale. Our group felt strongly that we should include priorities for all three types of research -- downstream (more basic, eg Type 3) and upstream (translational, community, eg Type 1) research needs, and those that are intermediate (Type 2). We had clear consensus that NIEHS should consider research priorities that go well beyond biological, molecular, and mechanistic types of research to include social, behavioral, economic, and community-based research for specific diseases and environmental problems, as do most of the other NIH institutes. As important as understanding the impact of indoor or outdoor pollutant exposure on lung growth, there is a need for developing and evaluating programs that reduce exposure, including behavior change interventions. We felt strongly that should be part of a broad research agenda for NIEHS and it should not be assumed that other organizations will do the translational work, as was suggested in the conference.

Thanks very much for the opportunity to participate in the conference, and I look forward to working with you in the future.

Sincerely,

A handwritten signature in cursive script that reads "Margaret E. Bentley". The signature is written in black ink on a light blue rectangular background.

Margaret E. Bentley, Ph.D.  
Associate Dean for Global Health  
& Professor of Nutrition

Cc: Dr. Barbara Rimer, Dean, School of Public Health  
Dr. Mike Aitken, Chair, Department of Environmental Sciences and Engineering