



May 27, 2011

Alan E. Guttmacher, MD, Director  
*Eunice Kennedy Shriver* National Institute of Child Health and Human Development  
Bldg 31, Room 2A32, MSC 2425  
31 Center Drive  
Bethesda, MD 20892-2425

RE: NICHD Scientific Vision, Development

Dear Dr. Guttmacher:

The Endocrine Society appreciates the opportunity to provide feedback on the white papers developed from the Vision Workshops held by the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD). The Society lauds the transparent and reciprocal approach taken by NICHD in the generation of its scientific vision that will inform the Institute's direction for the next decade.

Founded in 1916, The Endocrine Society is the world's oldest, largest and most active organization devoted to research on hormones and the clinical practice of endocrinology. Today, The Endocrine Society's membership consists of more than 14,000 scientists, physicians, educators, nurses and students in more than 100 countries. Society members represent all basic, applied and clinical interests in endocrinology. A significant portion of the Society's basic researchers apply for funding through NICHD, and the NICHD Strategic Plan is of particular interest to our membership. Given the tremendous overlap between Society members' research interests and those of the NICHD, The Endocrine Society considers the Institute's scientific visioning process to be an important milestone for the continued advancement of endocrine science.

It is imperative that NICHD continue to fund investigator initiated, independent investigations into basic physiological processes regulating development. Continued support of basic research will provide the basis for advances in understanding these processes and applying this knowledge to human health.

The Society supports the mission presented in the Development white paper, but is concerned that the paper lacks clearly defined plans of action. The community resources section outlines needs for the next ten years and includes suggestions for actions such as the creation of banks of tissue and DNA from children with malformations. However, other sections do not make it clear how priorities will be established. The inclusion of more directed plans would be a welcome addition in outlining potential funding opportunities in the next ten years. Several examples of areas of opportunity that could be expanded are described below.

The authors state that “Research is needed in experimental and clinical situations to explore and comprehend the entire exposome (environmental exposures), including nutrition, during embryonic development.” This could be expanded to include objectives such as:

- Determine the environmental exposures that affect fetal development
- Utilize populations with isolated exposures to determine effects on development
- Determine the effect of excess carbohydrate and caloric intake on fetal development
- Catalog the effects of known environmental exposures on fetal development in model systems and humans

The white paper identifies the objective to “integrate information from diverse organisms, including humans, to enhance our knowledge of conserved aspects of basic developmental processes.” This could be further expanded to include an objective to create a cross-species database to compare genes, mutations, and pathways across development in mouse and human, and/or to develop cross-species, comparative, and comprehensive bioinformatics systems to examine developmental genetics, pathways, and environmental factors. This could include an objective for the development of a comprehensive platform to integrate basic developmental processes across species; including genetic and mutation information as well as knockout and knockdown models.

Again, the Society appreciates the opportunity to comment on the white papers made available by the NICHD and recognizes the efforts of the workshop participants in compiling the documents that will shape the future of the Institute. Endocrine research is a vital component of expanding our understanding of development, and Society members are enthusiastic about potential opportunities that may be presented by the Institute as a result of its rigorous planning. Inclusion of more actionable objectives would be a valuable addition to the Development white paper in driving the research focus of NICHD supported grants in the coming decade.

Sincerely,

Handwritten signature of Kelly E. Mayo, Ph.D. in black ink.

Kelly E. Mayo, Ph.D.  
President, The Endocrine Society