



# P R E E C L A M P S I A

*foundation*

October 9, 2009

Dr. Francis Collins, Director  
National Institutes of Health  
9000 Rockville Pike  
Bethesda, Maryland 20892

Re: AN OPEN LETTER TO DR. COLLINS

Dear Dr. Collins:

Per your recent request, here is a summary of the key issues important to the Preeclampsia Foundation, the only patient advocacy organization in North America that addresses this maternal-fetal health complication.

## **Historic Perspective**

The hypertensive disorders of pregnancy, especially preeclampsia, remain a leading cause of maternal and perinatal morbidity and death. Preeclampsia, the incidence of which has risen this decade, is also a leading cause of prematurity and an important risk factor for future cardiovascular and metabolic diseases for mother and baby. Still, this disorder remains near the bottom of research support, NIH included, in relation to Disability Adjusted Lost Years (DALYs). There are gaps in both physician and patient education about preeclampsia, as indicated by the Preeclampsia Foundation's experience derived from a survey questionnaire of 1,500 women with serious outcomes, many who assert they were never appropriately apprised of the disease's early warning signs and others whose disease seems to have been diagnosed at an advanced stage.

The Preeclampsia Foundation was founded in 2000 to rectify these deficiencies. One initial endeavor was a Gates Foundation supported, NIH personnel-attended, international meeting in 2003 that established goals and produced a report<sup>1</sup>. Our Foundation's Medical Advisory Board was instrumental in having Dr. Claude Lenfant convene a meeting of experts, with our inclusion as an observer, in 2001 to establish research needs in the field<sup>2</sup>. This was followed by NHLBI releasing funds specifically earmarked for preeclampsia research, and then about five years of promising growth in research findings explaining the pathophysiology of preeclampsia, making inroads into causality, and funding at least one major multicenter prevention study, that included important ancillary investigations into translational research.

During the last 5-6 years we have witnessed a reversion to some of the problems that predated the Preeclampsia Foundation and NHLBI reports. We have heard of NHLBI insinuating that it is NICHD that should support obvious cardiovascular-focused preeclampsia grants, and know of one instance where an NIH committee rejected our request to include preeclampsia in their plans regarding risk factors for cardiovascular disorders, this despite the fact that recurrent preeclampsia implies the same risk of later life

<sup>1</sup> Redman C, Garrett A, et al: [The Seattle Mandate](#): An International Call to Action for the Prevention and Treatment of Preeclampsia and Eclampsia. 2003.

<sup>2</sup> Roberts JM, Pearson G, Cutler J, Lindheimer MD: Summary of the NHLBI working group on research on hypertension during pregnancy. *Hypertension*, 41:437-45, 2003.

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cardiovascular disease as smoking. NICHD, on the other hand, has been supportive of certain areas of preeclampsia research, including a 2006 meeting to identify research gaps<sup>3</sup>, in which we also participated, but as it is more funds-limited than NHLBI, it has at times suggested that the latter Institute be more active in funding the pregnancy hypertensive disorders. Unfortunately, no focused funding followed NICHD's 2006 meeting. Finally, for 15 years now only one NIH funded Program Project/Center Grant focusing on preeclampsia alone exists. In a sense many of the achievements of the Working Group convened by Dr. Lenfant appear to have been reversed, and again preeclampsia – a disease that impacts up to one in 12 pregnancies – is still horribly underfunded; in the words of the World Health Organization, it is “an appalling example of neglect.”

## Research Needs

1. Though we have made progress on the cause of certain preeclampsia phenotypes, we still do not understand what initiates the disease nor completely understand its pathophysiology. Basic research that includes recently developed and pertinent animal models, placental preparations, primates and materials obtained from women with preeclampsia, as well as studies that address the holistic genesis of disease, including the impact of modifiable behaviors, should rate a high priority. Areas of follow-up interest include angiogenesis, immunology, and inflammation, obesity and molecular genetics. More interdisciplinary program project grants are a high priority.
2. Clinical trials and observational studies with ancillary studies stressing mechanism should focus on a growing reservoir of circulating protein markers and the long neglected area of antihypertensives in general. Clinical trial networks dedicated to preeclampsia are critically needed; the formation of collaborative data banks should be emphasized.
3. The last NIH sponsored working group on management of pregnancy hypertension was 10 years ago. Now, there is growing consensus that those recommendations require reexamination in light of newer research findings. There may be a need for changes in classification (e.g., subclassifications) and guidelines concerning antihypertensive therapy.
4. Preeclampsia has been identified as a risk marker for future cardiovascular and metabolic disease, and there is a need to determine if the disease has a role in causality, and if so, develop strategies where early intervention avoids or modifies these remote diseases. The popular women's heart disease public education campaigns (strongly supported by the NIH's “Heart Truth” campaign) has yet to include to a history of preeclampsia as a profound risk marker.
5. Mortality and morbidity related to preeclampsia is geometrically greater in developing nations. The NIH's growing commitment to the developing world should include preeclampsia interventions that can be implemented with existing resources.
6. In the meantime, attempts should be made to optimize diagnosis and therapy through health services, health literacy, and knowledge transfer research and strategies, as well as public education campaigns to improve how the care provider and patient can most effectively recognize and manage the disorder.

With great thanks for your commitment to science and to the needs of those whom it serves, the patients and their families.

Sincerely,



Eleni Z. Tsigas  
Executive Director

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<sup>3</sup> Ilekis J, Reddy U, Roberts JM: Review Article: Preeclampsia—A Pressing Problem: An Executive Summary... [Reproductive Sciences](#), Vol. 14, No. 6, 508-523, 2007.