A FIGHTING CHANCE FOR EVERY BABY™

# European Prematurity Research Center
# Request for Proposals to Determine Causes of Preterm Birth

The March of Dimes currently has five transdisciplinary Prematurity Research Centers working to find causes of and treatments for preterm birth. Our unique approach of transdisciplinary research was developed in response to the multiple factors involved in triggering prematurity. The strength of this method lies in the diversity of its participating disciplines and reflects prematurity's many causes. In addition to physicians (e.g., obstetricians, pediatricians) and reproductive scientists (e.g., physiologists, cell biologists), who have long attempted to illuminate the underlying scientific basis of labor, we are bringing together scientists from divergent disciplines not traditionally engaged in prematurity research, such as genomics, bioinformatics and engineering.

The March of Dimes seeks an understanding of the biological basis of normal and premature parturition. We are committed to the discovery of knowledge that will mitigate the deleterious causes of preterm birth. We specifically target causes of preterm birth in otherwise seemingly normal pregnancies, rather than studying preterm birth arising secondary to complications involving mother or fetus. Discovery science is pivotal because known implementations will not be able to reduce preterm birth rate by more than 5% [1]. To make progress, investigators from different disciplines must integrate their research and share novel insights with one another.

The five U.S. Prematurity Research Centers pursue a matrix of discovery themes (three to five per center). We seek a sixth center based in Europe to be funded up to $1 million per year (including indirect costs). The funding commitment for a March of Dimes Prematurity Research Center is five years. Preliminary research directions for the European Prematurity Research Center include, but are not limited to, immunological mechanisms involved in pregnancy and labor and genetic pathways not previously explored.

Eligible centers in Europe should have the capacity for world-class research involving several different disciplines, as is the case in the five U.S. Prematurity Research Centers. Examples of themes currently being explored include identification of causative genes, mechanisms of gene regulation, including epigenetic control, role of vaginal microbiome, maternal-fetal signaling, roles played by different cell types in myometrium and cervix, uterine contractions and their 'pacemaker' control. Complementation with existing U.S.-based Prematurity Research Centers is desirable. It is expected that most investigators will be basic scientists, not necessarily heretofore pursuing research in etiology of preterm birth. Obstetricians are not obliged to serve as theme leaders or principal investigators, but March of Dimes Prematurity Research Centers are expected to have academic obstetrical faculty familiar with or currently conducting laboratory investigation.

Multiple entities can collaborate, but a single Letter of Intent is expected with a single principal investigator designated for the Prematurity Research Center. The Letter of Intent

should enumerate areas of inquiry in discovery science that are proposed. Of note, the March of Dimes considers other sources better suited to fund randomized clinical trials or implementation.

Interested parties should expect the following sequence:

1. A Letter of Intent up to five pages is due June 30, 2017. This should demonstrate academic robustness of obstetrics, neonatology and especially basic science components integral to the proposed aims of the Prematurity Research Center. The Letter of Intent should provide up to three research themes. In addition, please include biographical sketches of the principal investigator and key participants, up to four pages each. Budgets are not necessary at this stage. The Letter of Intent will undergo peer review. Send to ResearchGrants@marchofdimes.org with the subject line: European PRC.

2. Based on scientific merits and promise of the Letter of Intent, a limited few will be asked to prepare a full application. This will be expected to contain details on each of the proposed themes. The full application will again undergo peer review. The reviewers may recommend targeted discovery areas or expansion or restriction of any themes proposed.

3. If warranted, a site visit will be conducted. A final decision may not be possible on the basis of the final written application or a site visit. If needed, additional revisions or site visits could be required.

Funding is expected to begin December 2017. A face-to-face or telephone discussion can be arranged with Dr. Joe Leigh Simpson, Senior Vice President for Research and Global Programs or (jsimpson@marchofdimes.org) or Dr. Rebecca Liu, Director of Research Programs (rliu@marchofdimes.org).

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[1] Preventing preterm births: analysis of trends and potential reductions with interventions in 39 countries with very high human development index. Hannah H. Chang, Jim Larson, Hannah Blencowe, Catherine Y. Spong, Christopher P. Howson, Sarah Cairns-Smith, Eve M. Lackritz, Shoo K. Lee, Elizabeth Mason, Andrew C. Serazin, Salimah Walani, Joe Leigh Simpson, Joy E. Lawn. *The Lancet*. 381(9862):223-234, 2013.