



**CURhE Meeting at Stanford University
March 7, 2016**

Background

A systems-approach to prevent Rh disease has been implemented in most developed countries; Rh disease of the newborn has virtually disappeared in those countries. However it is now evident that in middle and low income countries Rh disease is a serious problem because prevention is not given. We have recently carried out an annual burden of disease study which found that at least 24 million newborns for hemolytic diseases of the newborn. With existing practice patterns, nearly 600,000 newborns die or develop life-long irreversible brain damage (kernicterus). Of these, about 477,000 babies develop Rh disease. Among all livebirths, 0.36% of mortality and severe morbidity.

Our Goal

We have commenced to implement a program for the global prevention of Rh disease. We have established the Consortium for Universal Rh disease Elimination (CURhE). It includes Professor Emeritus Alvin E. Zipursky (Hospital for SickKids), Professor Vinod K. Bhutani (Stanford University) and Professor Giuseppe Buonocore (University of Siena, Italy). The group also includes several NGOs and representatives from industry: Kedrion Biopharma (producers of Rhogam, a Rh immunoglobulin for Rh Prophylaxis), Eldon Biologicals (producers of Eldon cards for rapid point-of-care Rh blood group determination) and Capnia, Inc, (developers of a non-

invasive tests for neonatal hemolysis. Model programs are already underway in Accra, Ghana and Chandigarh, India. CURhE is endorsed by the International Federation of Gynecology and Obstetrics as well as the International Pediatric Association. We have also received endorsement and support from colleagues at academic institutions around the world.

Our goal is simply the global eradication of Rh disease.

Key Discussion Items at the March 7 meeting

1. **ANTENATAL PREVENTION.** Recently a brief on antenatal prevention of Rh disease has been prepared at WHO. Antenatal prevention is an important consideration however the brief requires further work, evidence review, clinical impact and health equity.
2. **INNOVATIVE IMMUNOPRPHYLAXIS AGENTS.** A research protocol has been registered with WHO regarding the effectiveness of the monoclonal anti-Rh preparation Rhoclone (Bharat Serums, Inc). The details of this protocol requires a more extensive scrutiny to merit an impeccable study design. WHO and to the authors of the protocol would benefit from an independent scientific review. This is a serious issue because Rhoclone has been used in India for several years and now is being marketed outside India as well.
3. **DRUG DOSAGE AND TIMING:** CURhE will discuss standards for the use of Rh immunoglobulin [dosage timing etc.] which should be addressed for policies developed in collaboration with WHO.

A CALL TO ACTION: In collaboration with FIGO and IPA, CURhE will outline a global initiative strategy and the outlines for “Community Awareness” such that each woman knows her blood type, have unfettered access to safe, affordable and effective immunoprophylaxis and, when needed, early referral for prenatal interventions. A community-based embedded surveillance system for Rh disease prevention could serve as the icon for infrastructure integrity of all maternal-child health services.