International Rotavirus Symposia - A 30 year history


5. 1995 Atlanta, Ga
6. 2003 Mexico
7. 2005 Lisbon
8. 2008 Istambul
9. 2010 Johannesburg
10. 2012 Bangkok

11. 2014 New Delhi
We have a lot to Celebrate!

- Global recognition of RV + Surveillance in ~60 countries
- 2 globally licensed vaccines (GSK, Merck)
- 3 nationally licensed vaccines (China, Vietnam, India)
- New candidate vaccines in the pipeline
- Demonstration that vaccine can decrease RV deaths, illness, hospitalizations
- WHO recommendation for global use
- Vaccines in 69 countries +
- GAVI rollout in >12 Low Income Countries
- Priority for WHO, GAVI, many countries, BMGF, ………the World!
India is taking the lead for RV vaccines in Asia

- Both Multi-national vaccines licensed in India
- New Vaccines from India
  - Rotavac licensed 2014
    - Bharat Biotech
  - UK reassortant enters efficacy trial - Serum Institute
  - Research on new vaccines
- Prime Minister Narendra Modi
  "Government of India will provide a rotavirus vaccine to all Indian children"
India is taking the lead for RV vaccines in Asia

- **Dept of Biotechnology**– supporting research on RV for 29 years- Vaccine Action Program (VAP)
- **ICMR** - established RV surveillance for India
- **Indian Industry** -- making safe, effective, low cost RV vaccines
  - *Bharat Biotech*
  - *Serum Institute of India*
  - *Shanta*
  - *Biological E*
- **Ministry of Health** - Planning vaccine rollout!
Estimated Burden of Rotavirus in India

Risk
1 : 345
1 : 31
1 : 8
1 : 2

Events
~78,000 Deaths
~872,000 Hospitalizations
~3.3 million Outpatient visits
~11 Million episodes

In birth cohort of 27 million

J. John, Vaccine, 2014
Charge to the Meeting

• What has been the impact of RV vaccines in other parts of the world?
• What are the remaining research questions that will allow for the control of RV disease and death through the use of vaccines? (Herd protection, lower efficacy in LMICs, effect of vaccine on strain diversity, issues of safety)
• What could be done to improve current vaccines?
• What new vaccines are in the pipeline?
International Rotavirus Symposia - Legacy & Loss

NIH Bethesda, MD USA

5. 1995 Atlanta, Ga

6. 2003 Mexico
7. 2005 Lisbon
8. 2008 Istanbul
9. 2010 Johannesburg
10. 2012 Bangkok
11. 2014 New Delhi

Albert Z. Kapikian

Ciro de Quadros
1973 – Discovery of Norwalk virus & Hepatitis A (S. Finestone)

1970s-2014

First ELISA for rotavirus – R. Yolken
First growth of human RV – R. Wyatt
Determination of serotypes – T. Hoshino
Epi studies of importance - Wash, DC/ Bangladesh
Reassortment of RV genes – H. Greenberg & K Midthun
Genetic uniqueness of neonatal strains - J. Flores, M. Gorziglia
First trial of Rhesus rotavirus abroad – Leif Gothefors
Studies of gene function - J Patton
Global Burden of Disease - D. Steele, R. Glass
Dr. Albert Z. Kapikian
A Scientific Tribute to the Laborary of Infectious Diseases, NIH

1998 - First licensed RV vaccine for humans
   Rotashield

1990-present
Development of UK reassortant vaccine
   Serum Institute of India, Shanta, + others
Further developments with Rotashield
Non-replicating RV vaccine – Taka Hoshino + PATH

“Every major Rotavirus vaccine in development today has benefitted from research done at NIH by Dr. Kapikian & his trainees ”
With Albert Sabin, originator of the concept of live oral vaccines
The Pioneers- WHO Steering Committee on Diarrheal Diseases -1979

Ruth Bishop  Tom Flewett  Albert Kapikian
Al with sons Greg, Tommy and Albert
Cathy and grandson ___
August 28, 2014
Society for Advanced Studies (SAS) begins Phase 3 Trial of Serum Institute of India’s UK-Reassortant vaccine
New Delhi

Nita Bhandari & Naro Rongsen-Chandola

The SAS Team

First Vaccinee
Building a Rainbow
Organizing committee
Mathu Santosham
Gagandeep Kang
Kathy Neuzil
Umesh Parashar
Duncan Steele
Carsten Mantel
Roger Glass

Sabin Institute
Ciro de Quadros
Brian Shaw
Ana Carvalho

Supporters
ICMR, DBT, CMC Vellore
Serum Institute of India
Bharat, Merck, GSK
PATH, BMGF, CDC

The Rainbow Builders