Defeating Respiratory Disease in Children
The search for an affordable, multivalent and stable vaccine

The Crisis is Global
Worldwide, more than 5 million children under age 5 die each year of respiratory infections such as pneumonia and influenza. Vaccines for diseases in the developing world would seem to be the answer, but several factors have made successful immunization projects difficult, until now.

What Has Been Stopping Us?

• **Cost Factor**
  Many vaccines are too expensive.

• **Moving Target**
  Sometimes protection against most important viruses is elusive.

• **Instability Issue**
  Medications break down and are not portable enough to take where they are most needed.

• **Dosing Dilemma**
  One dose is often not enough to be effective in preventing disease in developing countries.

Real-World Solutions
This exciting new initiative envisions a time when low-cost vaccines designed for travel can be administered by local healthcare providers in remote villages on every continent. Addressing the obstacles that currently stand in the way might reverse the trend of child mortality worldwide.

Project Leadership

**Ralph Baric**, PhD, professor of epidemiology, UNC Gillings School of Global Public Health, aims to develop a single dose vaccine to be given through the nose. This revolutionary design is being developed through the use of synthetic genomics and a computer-based genome design.