UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH

Gillings Innovation Labs

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.

IMPACT! Global Health

This Innovation Lab is designed to reverse the devastating disease burden and deaths associated with respiratory virus infection in infants and young children. The program uses state-of-the-art techniques to allow local health care practitioners to participate in design, delivery and use in variant health care settings.

GOAL
To make vaccines more accessible for children and infants in developing countries.

PARTNERS
UNC School of Medicine, Carolina Vaccine Institute, Global Vaccines (a not-for-profit company in Research Triangle Park, North Carolina).