Funding and Impact of Biomedical and Health Research

Laura Guay MD
Vice President for Research
Elizabeth Glaser Pediatric AIDS Foundation
Research Professor, George Washington University School of Public Health and Health Services
Outline

Overview of the Elizabeth Glaser Pediatric AIDS Foundation (EGPAF)

EGPAF Research Activities

Measuring impact of EGPAF research funding
The Elizabeth Glaser Pediatric AIDS Foundation Mission

The Elizabeth Glaser Pediatric AIDS Foundation seeks to prevent pediatric HIV infection and to eliminate pediatric AIDS through research, advocacy, and prevention and treatment programs.
International Programs

2000: 8 sites in 6 countries
2010: 5,400 sites in 17 countries

The Elizabeth Glaser Pediatric AIDS Foundation is a global leader in the effort to eliminate pediatric HIV and AIDS, working in 17 countries and at more than 5,400 sites around the world to prevent the transmission of HIV to children, and to help those already infected. The Foundation’s global mission is to implement prevention, care, and treatment; further advance innovative research; and to execute strategic and targeted global advocacy activities to bring dramatic change to the lives of millions of women, children, and families worldwide.

### Current Programs

| IN AFRICA          | Rwanda                | IN ASIA
|--------------------|-----------------------|--------
| Cameroon           | South Africa          | China  |
| Côte d’Ivoire      | Swaziland             | India  |
| D.R. Congo         | Tanzania              |
| Kenya              | Uganda                |
| Lesotho            | Zambia                |
| Malawi             | Zimbabwe              |
| Mozambique         |                       |        |

**Program initiated with EGPAAF support and transitioned to other implementers**

- Angola
- Dominican Republic
- Georgia
- Honduras
- Jamaica
- Russia
- Thailand
EGPAF HIV/AIDS Research History

• Basic and clinical research has been a cornerstone of the Foundation’s programs since 1988.

• Total research funding to date: >$73M

• Research grant/award categories:
  ▪ Basic Research grants – start 1989
  ▪ Scholar Awards – start 1989
  ▪ Elizabeth Glaser Scientist Awards – start 1996
  ▪ International Leadership Awards – start 2001
Types of Research EGPAF Supports

- Innovative basic science studies that are less likely to be funded through traditional NIH mechanisms
- Studies from young investigators who need support to establish their careers—to encourage the next generation of pediatric HIV researchers
- Support internationally-based physicians/scientists who have the training and potential to develop pediatric HIV prevention and/or treatment programs and research, but lack the resources to do so
- Operations research studies that will contribute to informing and improving program design and scale-up to assist in global efforts to eliminate pediatric HIV/AIDS
## Research Transitions: 1989 → 2009

<table>
<thead>
<tr>
<th></th>
<th>First decade</th>
<th>Second decade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major research gap</td>
<td>How to prevent/treat?</td>
<td>How to implement?</td>
</tr>
<tr>
<td>Foundation focus</td>
<td>Research/advocacy</td>
<td>Programs/research/advocacy</td>
</tr>
<tr>
<td>Research priorities</td>
<td>Primarily basic science</td>
<td>Operations/clinical research</td>
</tr>
<tr>
<td>Research funding focus</td>
<td>Individual investigators (EGSA, Scholars, ILA)</td>
<td>Program-related projects</td>
</tr>
<tr>
<td>Research location</td>
<td>Extramural</td>
<td>Intramural &amp; extramural</td>
</tr>
<tr>
<td>Research staff size</td>
<td>Very small</td>
<td>Growing</td>
</tr>
<tr>
<td>Funding sources</td>
<td>Primarily unrestricted</td>
<td>Decreasing unrestricted</td>
</tr>
</tbody>
</table>

---

www.pedaids.org
Evidence of Impact of Basic and Clinical Research

- Funded > 350 investigator-initiated projects, generating more than 1,000 original papers in peer-reviewed journals and $300 million in leverage funds.

- Established EGPAF as a leading supporter of pediatric AIDS research, providing credibility for attracting new funds.

- Helped to establish and nurture leading HIV scientists and facilitated significant advances in pediatric HIV/AIDS:
  - Identification of CCR5 as the second HIV receptor (R Koup ‘96)
  - Neonatal macaques model of HIV transmission (M Marthas ‘97)
  - Discovery of APOBEC3G and intrinsic immunity (M Malim ‘01)
Evidence of the Impact of EGPAF Operations Research

• Improved detection of incident HIV infection and uptake of PMTCT services in labor and delivery in a high HIV prevalence setting (Swaziland)
  – Demonstrated that a targeted one-day training intervention for maternity nurses had significant impact on the number of HIV-positive women who received ARV prophylaxis through improved PMTCT service delivery.
  – As result, Swaziland incorporated the training into national curriculum and routine HIV retesting into revised PMTCT guidelines.

• WHO-funded study evaluating the acceptability, feasibility, and cost effectiveness of rapid syphilis testing within PMTCT program: a field pilot
  – Conducted in Zambia and Uganda
  – Results lead to rapid change in each country’s policy on syphilis testing in antenatal care
Evidence of Impact of NIH-Funded Research

2009/2010 Revised WHO guidelines
Ultimate measure of successful federally funded research

Estimated Numbers of Perinatally Acquired AIDS Cases by Year of Diagnosis, 1985–2007—United States and Dependent Areas

Note: Data have been adjusted for reporting delays and missing risk factor information.