



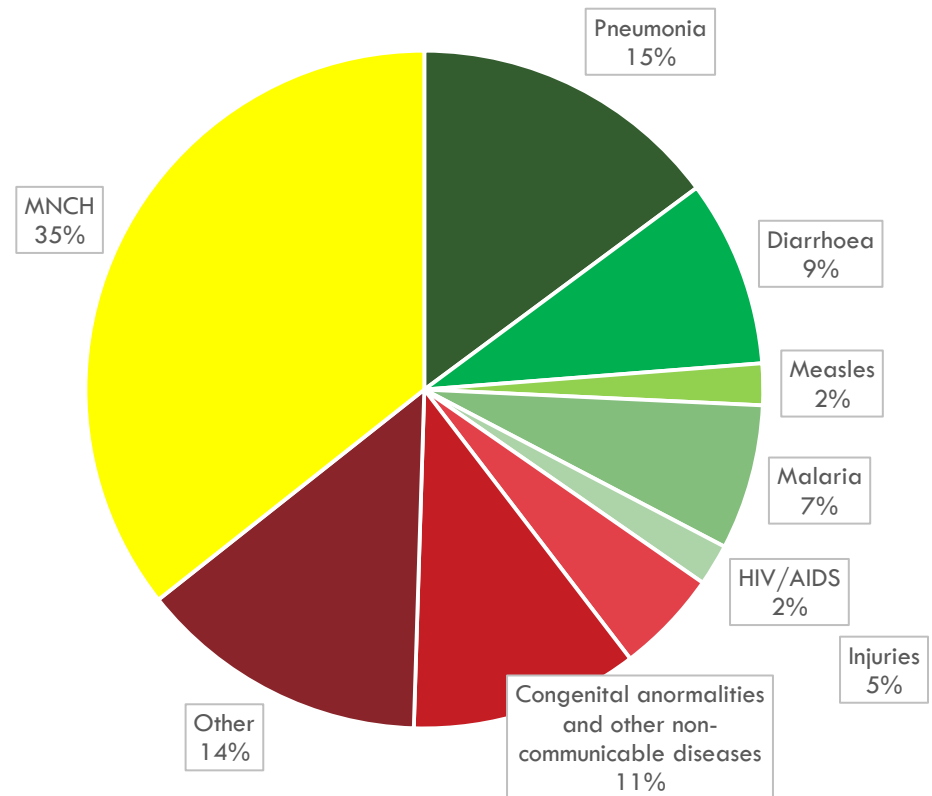
GLOBAL HEALTH INVESTMENT FUND INTRODUCTORY PRESENTATION

15th DCVM Conference,
Delhi October, 2014

GHIF: A NEW STREAM OF CAPITAL TO ACCELERATE THE DECLINE IN CHILD MORTALITY

- ❑ GHIF is a \$108mm investment Fund which held its final close in December 2013
- ❑ The objective of the Fund is to provide capital to late stage projects or company's developing late stage projects, to support final clinical trials and early stage commercialisation
- ❑ We target drugs, vaccines, diagnostics and devices in infectious global health diseases which disproportionately impact populations living in the poorest countries in the World
- ❑ Our investments primarily take the form of mezzanine finance, but can include preferred equity

Causes of Death in Children Under 5 Years, 2013

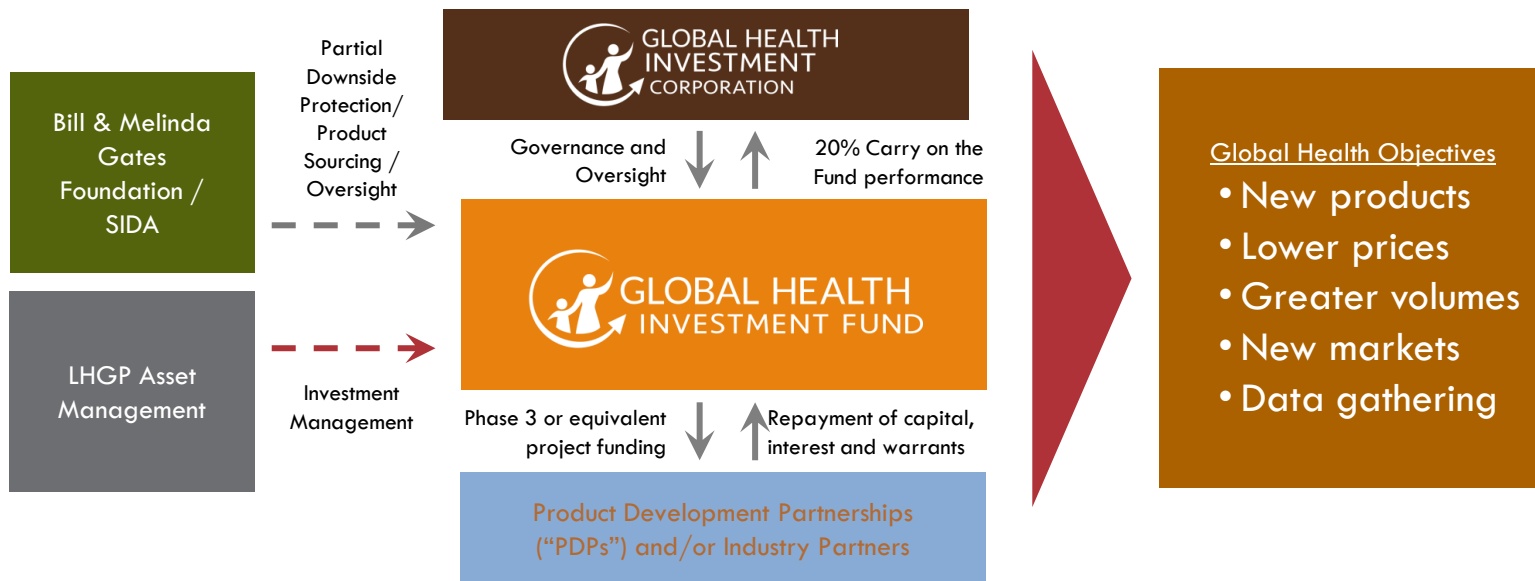


THE GLOBAL HEALTH INVESTMENT FUND STRUCTURAL OVERVIEW

The fund was sponsored by the **Bill & Melinda Gates Foundation**, uniquely endowed by **KfW** with a **cornerstone investment from IFC**

Government's of Sweden and Canada also partnered via **GCC and SIDA**

Key stakeholders have crowded in Industry and Private Investors in a unique partnership



1 The Fund is owned by a new 501(c)(4) charitable organization. – The Global Health Investment Corporation – The Managing Member of the Fund

GHIF HONORED AT 2014 FT/IFC TRANSFORMATIONAL BUSINESS AWARDS

We are delighted that the GHIF won the 2014 Achievement in Transformational Finance award from the IFC/Financial Times at the end of June. This is among the highest awards given to new development financing models.



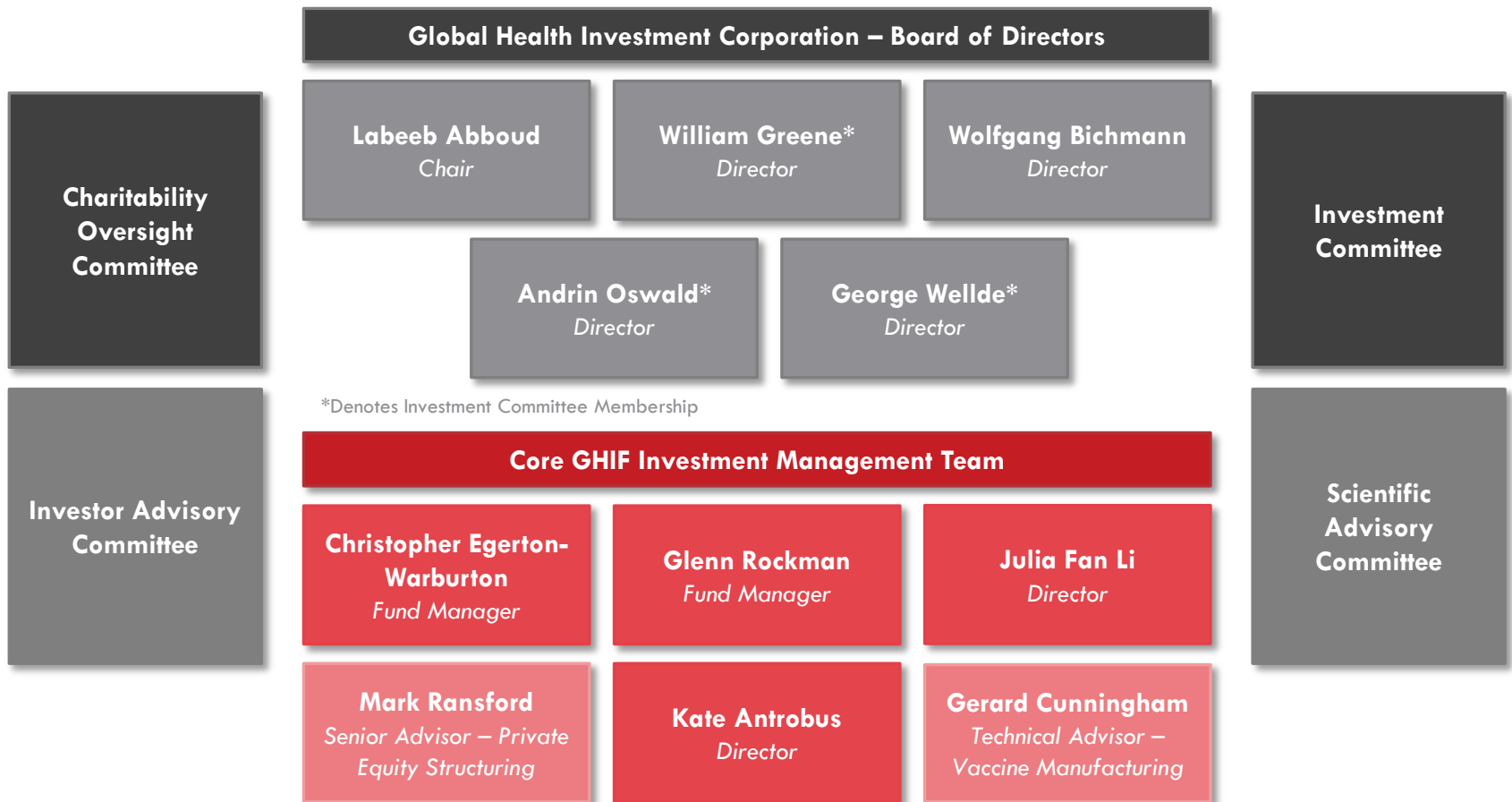
In announcing the award, the judges remarked:
“It would be criminal not to give this award to this pioneering project.”



OVERVIEW OF GHIF INVESTMENT MANAGEMENT TEAM

London & New York

ORGANIZATIONAL CHART





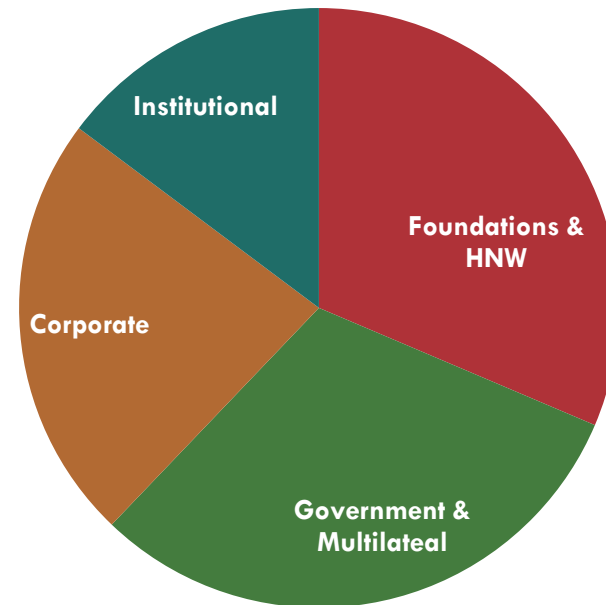
GHIF INVESTORS

Active, engaged and
passionate

GHIF INVESTORS

- ❑ GHIF benefits from a diverse investor base brought together in a single fund for the first time
- ❑ Investors were attracted by the Fund mission, commitment to generating a financial return and the partial capital guarantee
- ❑ The largest investors are all represented in the Investor Advisory Committee
- ❑ The Heads of Research & Development from BMGF, GSK, Merck and Pfizer, and an independent member from Imperial College London are represented on the Scientific Advisory Committee
- ❑ The Charitability Oversight Committee is made up of representatives from BMGF, Grand Challenges Canada, KfW, and SIDA

GHIF Investor Distribution

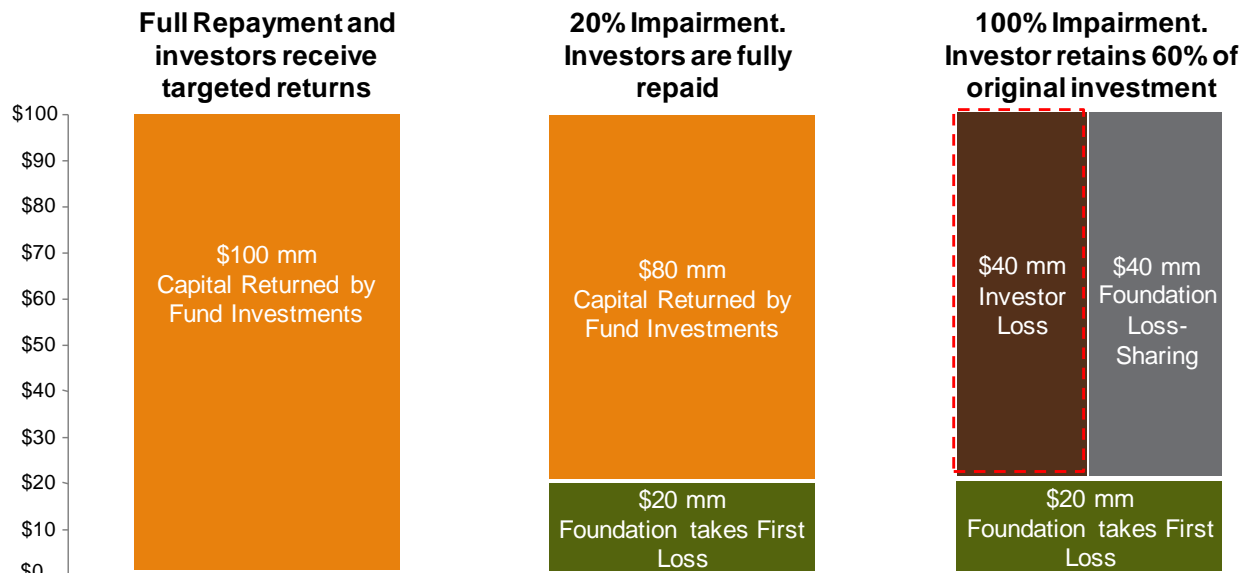


GHIF PARTIAL GUARANTEE

- GHIF benefits from a partial guarantee from the Bill & Melinda Gates Foundation and SIDA
- This enables us to target transactions with a lower risk adjusted IRR than you would traditionally find from a traditional private equity fund

Illustrative loss protection scenarios

Assumes \$100 million in contributed capital to the Fund





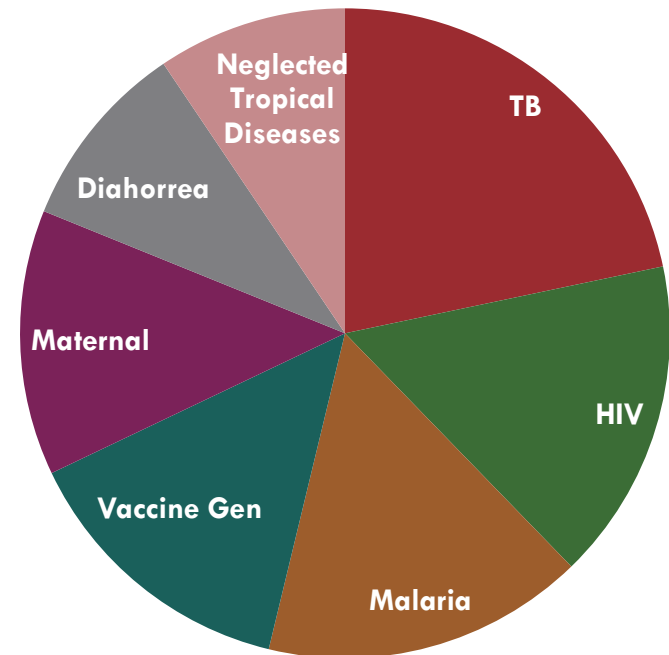
GHIF PIPELINE

Overview & Epistem
Holdings PLC

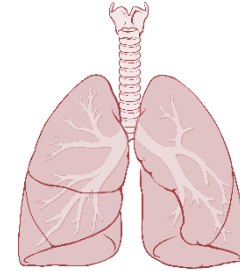
GHIF PIPELINE

- ❑ GHIF is actively seeking potential investment opportunities and will continue to do so over the next 2 years
- ❑ To-date GHIF has reviewed over 70 investment opportunities since its launch
- ❑ The Fund has an active investment pipeline of transactions totalling over \$160mm in demand demonstrating the potential of the Global Health sector as an investable asset class

GHIF Current Active Pipeline by Disease



EPISTEM HOLDINGS: \$8MM CONVERTIBLE BOND



- Tuberculosis (TB) is contagious and airborne; it ranks as the second leading cause of death from a single infectious agent, after the human immunodeficiency virus (HIV).
- The TB bacteria usually attack the lungs, but can attack any part of the body such as the kidney, spine, and brain
- 8.6 million people fell ill with TB in 2012, including 1.1 million cases among people living with HIV
- In 2012, 1.3 million people died from TB
- 410,000 women died from TB in 2012. TB is one of the top killers of women of reproductive age
- An estimated 530,000 children became ill with TB in 2012

CASE STUDY: CEPHEID'S GENEXPERT

Although not a perfect solution to the full range of TB diagnostic needs, Xpert MTB/RIF represents a meaningful advance over existing tests and has enjoyed rapid adoption in low- and middle-income countries with heavy TB burdens—thanks in part to active promotion and subsidization from the global health community

Xpert MTB/RIF: A major advancement in TB diagnostic capabilities...

- High accuracy (>90%)
- Fast result time (two hours)
- Ability to detect RIF-resistance
- Simple sample preparation and test operation

..but Xpert MTB/RIF still falls short of the solution needed by the global health community

- High cost of device and maintenance (\$24,300 for device with 5-year warranty/maintenance), with fully loaded installation and annual operation costs estimated to exceed \$100,000 even after subsidies
- High COGS (\$14) leading to an unsubsidized market price of \$16.68
- Requires a stable/uninterrupted power supply
- Requires a temperature-controlled environment

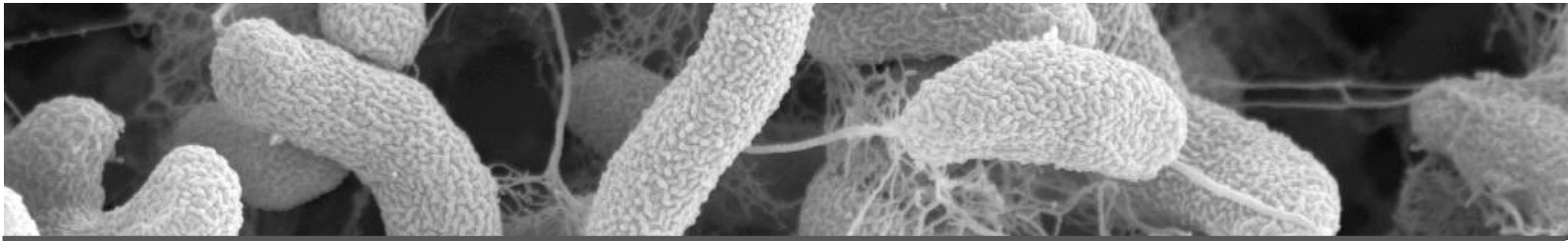
WHO Rapid Implementation of the Xpert MTB / RIF diagnostic test, 2011, page 25 (http://whqlibdoc.who.int/publications/2011/9789241501569_eng.pdf).

GENEDRIVE HIGHLIGHTS






- **Technology:** Polymerase chain reaction, for MTB and RIF resistance
- **Sample preparation:**
 - Sputum sample is applied to chemically-treated paper
 - Three discs of paper are punched into test cartridge after drying
- **Device cost:** ~US\$1,500
- **Cost per TB assay:** US\$8
- **Time to results:** ~1 hour
- **Power source:** 12v battery or other power source
- **Temperature requirements:** Operable above 30°C
- **Technical skills required:** Low-Medium (per UNITAID scale)

EUBIOLOGICS: \$5MM DEBT & EQUITY INVESTMENT



- Cholera is an acute, bacterial illness caused by infection of the intestine with *Vibrio cholera*
- Approximately one in 20 infected persons will have severe disease characterized by profuse watery diarrhea, vomiting, and leg cramps
 - Rapid loss of fluids can lead to dehydration and shock
 - Without treatment, death can occur within hours
- Globally, there are more than 100,000 cholera deaths each year

ORAL CHOLERA VACCINE LANDSCAPE

| Trade Name | Dukoral | Euvichol (target presentation) | Shanchol |
|-----------------------------|---|--|--|
| Appearance |  |  |  |
| Manufacturer | Crucell (Sweden, owned by Johnson & Johnson/Janssen) | EuBiologics (South Korea, privately held) | Shantha Biotechnics (India, subsidiary of Sanofi) |
| WHO PQ | Yes (2001) | Targeting 2016/2017 | Yes (2011) |
| Current Public Sector Price | \$5.00 / dose | ~\$1.70 / dose at launch; | \$1.85 / dose |
| Production Capacity | 4 million doses per year | 6 million doses per year; increasing to 25+ million doses per year | Estimated at 4 million doses per year |
| Summary Characteristics | <ul style="list-style-type: none"> Also confers short-term protection against ETEC Requires buffer solution (add'tl space for storage/transport) Time-consuming to administer Comparatively expensive | <ul style="list-style-type: none"> Easy to store, deliver and handle Easy to administer Less space needed for storage and cold chain transportation | <ul style="list-style-type: none"> Waste management for glass vials and caps More space required compared to plastic container for storage and cold chain transportation |

EUB GLOBAL HEALTH OBJECTIVE: AN IMPROVED PRODUCT WITH GREATER REACH

EuBiologics is working toward a plastic tube presentation of its OCV product, which has a number of advantages over the prevailing glass vial presentation:

- **Lower weight**
- **Smaller volume** (at least 33% less space occupied per dose than Shanchol, allowing for more doses to be delivered within the same volume-constrained cold chain)
- **Less waste** to dispose of

