PATH to TB INNOVATION

1882 - Robert Koch discovered TB using the microscope
1895 - Development of chest x-ray diagnostic
1907 - Tuberculin skin test developed
1921 - BCG vaccine introduced
1936 - Solid culture test used to identify TB
1943 - First anti-TB drug discovered: Streptomycin
1952 - First anti-TB regimen used: Streptomycin, PAS, Isoniazid
1963 - Rifampin and Capreomycin discovered
1974 - British Medical Research Council trials added Rifampin and Pyrazinamide
1980 - Liquid culture developed
1994 - Directly Observed Treatment, Short-course (DOTS)
1998 - Rifapentine approved
2009 - ILD microscope, line probe assay developed
2010 - GeneXpert MTB/RIF® rapid test for TB receives CE Marking
2011 - New drug development approach: CPTB (Critical path to TB (drug) regimens)

TB was first identified in 460 BCE by Hippocrates and initially named “phthisis,” which means “consumption” in Greek. Throughout history, TB has had many names, including “white plague.” However, since Dr. Koch’s discovery, “tuberculosis” became the more common medical term.

Monotherapy—(single-drug regimen)—resistant mutations began to appear within a few months of the introduction of the drug Streptomycin. It was soon demonstrated that this problem could be overcome by treating TB with a combination of two or three drugs.

Emergence of MDR-TB*
Emergence of XDR-TB*
GeneXpert MTB/RIF®* assay is a new molecular test that can detect TB and mutations associated with Rifampin resistance in fewer than 2 hours with far greater accuracy than smear microscopy.

One Day We Hope to Have...
- A tool that can diagnose TB and MDR-TB within 24 hours for children, adults, and HIV-infected individuals
- A shorter treatment regimen that can cure TB in 10 days or less that will also work with antiretroviral drugs
- A vaccine that can prevent new TB infections or recurrences of the disease

NOTES
MDR-TB: Multi-drug resistant tuberculosis, XDR-TB: Tuberculosis and HIV co-infection, EID-MDR: Extensively drug-resistant tuberculosis

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