Infectious Disease Modeling to Inform Public Health Policy
(Post-doctoral fellowship, Johns Hopkins School of Medicine)

DESCRIPTION:
We are looking for one or more post-doctoral fellows to join our team of infectious disease modelers working at the intersection of disease dynamics, empiric epidemiological/clinical data, and public health policy both in the US and globally. Our work spans a number of diseases, with a focus on providing strategic guidance for the control and elimination HIV and tuberculosis (TB). The focus of the fellowship is on applying rigorous mathematical models to inform public health decision-making.

Our team is a vibrant, cohesive, yet flexible group that spans the School of Medicine and the Bloomberg School of Public Health at Johns Hopkins University. Individual faculty members include: Dr. Anthony Fojo, Dr. Emily Kendall, Dr. Sourya Shrestha, and Dr. David Dowdy.

The choice of projects can be tailored to fellows' interests and expertise. Potential projects include:
1. Expand and apply the Johns Hopkins Epidemiologic and Economic Model (JHEEM – www.jheem.org) of HIV transmission in the US to forecast the potential impacts of HIV interventions in US cities.
2. Develop predictive models and optimize treatment decision algorithms for patients with a borderline TB diagnostic test result (trace Xpert Ultra) in global high-TB-burden settings
3. Adapt models of tuberculosis disease dynamics to guide interventions related to early TB disease detection, transmission interruption, or drug-resistance containment
4. Model interventions focused on reducing transmission *of M. tuberculosis* and disparities in TB in the United States, in collaboration with the U.S. CDC.
5. Model the impact and cost-effectiveness of optimized screening for multiple infections (TB, HIV, STIs, viral hepatitis), also in collaboration with the CDC.

QUALIFICATIONS:
1. A recent PhD (or MD) degree in a relevant discipline (expected graduation by May 2023 is acceptable)
2. Strong quantitative and analytical skills, ideally including experience in data analysis
3. Experience in at least one of the following areas: (i) epidemiology; (ii) clinical research; (iii) health economics
4. Proficiency in one more programming language (e.g., R, C++, or other scientific language)
5. Experience in data analysis and visualization, development and simulation of mechanistic models, cost-effectiveness analysis, and/or Bayesian statistical inference

TO APPLY:
Submit the following to Dr. Anthony Fojo at anthony.fojo@jhmi.edu
1. Cover letter describing research interests, career goals, prior experience, and anticipated timeline to start the fellowship
2. Curriculum Vitae

Applications will be considered on a rolling basis until all available positions are filled, but preference will be given to applications received by Dec 31, 2022. The preferred start date is between April 1 and August 1, 2023.