## Disclaimer:

The views expressed are those of the presenter and do not reflect the official policy or position of the Defense Advanced Research Projects Agency (DARPA); the Office of the Assistant Secretary for Public Health Preparedness (ASPR) or United Therapeutics Corporation

Reference to any off-label use and reference to foreign-approved therapies will be identified.

Financial Conflict: United Therapeutics Corporation

## Why isn't TB included in Global Health Security Agenda

| Metric         | ТВ                  | COVID-19                  | Comment  |
|----------------|---------------------|---------------------------|--|
| BOD deaths/yr  | 1 Μ ( σ )           | 4.7M (19 mo) <sup>1</sup> | endemicity threshold<br>impossible to model for C19      |
| CFR 11         | 50% at 60 mo        | .8 – 7 % <sup>2</sup>     | Untreated <u>and</u> treated TB<br>CFR far exceeds COVID |
| Cost (\$1000s) | 19/ <b>152</b> /512 | 51-78 <sup>3</sup>        | MDR TB cases 2X cost of high acuity COVID                |

<sup>&</sup>lt;sup>1</sup> CFR https://coronavirus.jhu.edu/data/mortality

<sup>&</sup>lt;sup>2</sup> Cost: (https://wwwnc.cdc.gov/eid/article/20/5/13-1037\_article)

<sup>&</sup>lt;sup>3</sup> COVID https://www.healthcarefinancenews.com/news/average-cost-hospital-care-covid-19-ranges-51000-78000-based-age

## What New Innovation Can We Leverage for TB?

|             | Model   | Example  |
|-------------|---|--|
| MCM class   | <ul><li>Gene encoded therapies</li><li>PL -avid therapies</li><li>Host modulating therapies</li></ul> | 19 clinical; 2 market phase<br>9 clinical; 1 market phase<br>multiple clinical; 2 market |
| Financial   | <ul> <li>Twinning (DARPA)</li> <li>NMI (HIV)</li> <li>TPPs for LMICs (HIV)</li> </ul>                 | Dengue HCV Metrics = productivity; self pay LMIC drugs adopted by rich countries         |
| Cooperative | <ul><li>RUA v. AMR</li><li>Infrastructure</li></ul>   | Rif and EPT (SS Africa)  |