Flowchart for ongoing feasibility study on the LDBIO device at the University of Chicago Medical Center. Data from this study may inform whether the LDBIO test—which already has the CE Mark for use in Europe—will receive 510(k) approval from the Food and Drug Administration in the U.S.

### Steps for Using LDBIO Device

(A,B) Clean fingertip; prick with lancet (if collecting whole blood only) (C,D) Collect 30 μl in capillary tube (WB only) (E,F) Apply serum or blood sample to well; add four drops buffer and wait about 20 minutes (G) How to interpret results: black line under “T” corresponds to IgG and/or IgM to T. gondii

**Results.** LDBIO had only one false negative for a total of 664 samples from three earlier U.S. studies and the UCMC feasibility study. Meanwhile, out of 69 total false positives from various non-reference laboratory comparator tests, such as the Bio-Rad Platelia and Siemens kits, the LDBIO generated zero false positives.

LDBIO’s Performance on U.S. Samples Since 2014

| Study                        | Comparator(s)          | Serum and/or Blood | Number of patients | LDBIO results (Sensitivity and Specificity) |
|------------------------------|------------------------|--------------------|--------------------|--------------------------------------------|
| Begeman et al. (2017)        | Sabino-Feldman IgG IgM| Both               | 180                | Sens: 100% Spec: 100%                      |
| Lykins et al. (2018)         | Abbott Architect IgG & IgM| Only               | 160                | Sens: 100% Spec: 100%                      |
| Gomez et al. (2018)          | Sabino-Feldman IgG IgM| Both               | 283                | Sens: 99.4% Spec: 100%                    |
| McLeod et al. (now)          | Bio-Rad Platelia IgG & IgM| Both               | 35                 | Sens: 100% Spec: 100%                      |

In all four U.S. studies (total 664 patients), the LDBIO device generated one false negative result and zero false positive results.

### Disclosures. All Authors: No reported disclosures

**725. Complete Blood Count Values Vary in Degree of Change with Day of Fever in Children with Dengue Fever**

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**Background.** Dengue fever (DF) is an acute viral disease which can lead to severe illness, including dengue hemorrhagic fever, marked by thrombocytopenia and hemolytic anemia, as well as end-organ damage. Despite the well-known presentation and prevalence, changes in hematologic markers across the DF course have not been well-described in children. We sought to investigate the association of clinical laboratory values over time with dengue disease progression and outcome in a pediatric population in the Dominican Republic.

**Methods.** Pediatric participants were enrolled at Hospital Infantil Dr. Robert Reid, Santo Domingo, Distrito Nacional, Dominican Republic, in a prospective, observational case-based study. Laboratory values, including complete blood count (CBC) indices and dengue titer results, were collected over the course of hospital stay. Using linear mixed models, we assessed whether 13 different CBC values and time trajectories differed by dengue status, including age and sex as covariates. To account for multiple testing, p ≤ 0.003 was considered significant.

**Results.** A total of 575 children ages 0 to 211 months met inclusion criteria; 51.8% (n=296) were male, and the median (IQR) age was 59 (14-93) months. Eighty-two percent (n=472) of participants had DF. CBC values across days 1 to 10 of fever in those with and without DF are depicted in Figure 1. Those with DF showed levels dropping more quickly across days of fever for hematocrit and hemoglobin (p ≤ 0.002), with a more rapid decline in those with severe DF (p < 0.0001). Those with DF had levels increasing more quickly for mean corpuscular hemoglobin concentration (MCHC), monocyte number, and white blood cell counts (p ≤ 0.0033), with those with severe DF having a more rapid increase (p < 0.001). The direction of the change across time differed by DF status for mean corpuscular volume and red blood cell distribution width (RDW) (p ≤ 0.0033), with those with severe DF showing an increase in RDW across day of fever (p ≤ 0.0004).

### Countries Working to Implement Regular Prenatal Screening for CT Prevention

The countries in green represent countries currently working with the University of Chicago to implement regular prenatal screening programs for Toxoplasma gondii: U.S., Panama, Colombia, Brazil, Morocco, and France. Screening programs in all six countries rely on low-cost, highly-accurate screening technology that meets the WHO’s ASSURED criteria. The LDBIO test—which is already in use in France—may become a usable resource in the other five countries if it gains FDA approval.

**Disclosures. All Authors: No reported disclosures**
The graph above depicts the following CBC values across day of fever in dengue (blue) and non-dengue (purple) patients: a) white blood cell (WBC) count, b) platelet count, c) monocyte number, d) hemoglobin, e) mean corpuscular hemoglobin concentration (MCHC), and f) mean corpuscular volume (MCV). Values with an asterisk (*) represent significant values (p < 0.0033).

Conclusion. The trajectory of CBC measures differs between those with and without DF, despite similar clinical presentations. These laboratory differences may facilitate a better understanding of the clinical course of DF and may aid in earlier identification of DF in resource-limited settings.

Disclosures. Elizabeth P. Schlaudecker, MD, MPH, Pfizer (Grant/Research Support) Sanofi Pasteur (Advisor or Review Panel member)

Table 1. Demographic and travel characteristics of AD personnel traveling outside the continental US.

| Age (years) | Median (IQR) | DEP (n=659) | EXR (n=659) | TDY (n=564) | p value*
|-------------|--------------|-------------|-------------|-------------|----------
| Overall     | 18 (16-20)   | 18 (16-20)  | 18 (16-20)  | 18 (16-20)  | 0.9936   |
| Gender      | Male         | 15 (14-17)  | 15 (14-17)  | 15 (14-17)  | 0.5660   |
| Race        | Black (Black) | 15 (14-17)  | 15 (14-17)  | 15 (14-17)  | 0.1600   |
| Trip duration (days) | Median (Range) | 7 (7-32) | 7 (7-32) | 7 (7-32) | 0.0500 |
| Region of travel | Indo-Pacific | 15 (14-17) | 15 (14-17) | 15 (14-17) | 0.8200 |
| Medicaid | Yes | 15 (14-17) | 15 (14-17) | 15 (14-17) | 0.7500 |
| Central Asia/Middle East | Yes | 15 (14-17) | 15 (14-17) | 15 (14-17) | 0.8200 |
| Central/South America | Yes | 15 (14-17) | 15 (14-17) | 15 (14-17) | 0.7500 |

Figure 2.

Proportion of AD servicemembers that experienced TD, ILI or undifferentiated febrile illness during DEP, EXR, TDY (p<0.05 for the comparison of each illness between DEP, EXR and TDY).

Proportion of AD personnel with partial or complete incapacitation due to TD, ILI or FI during DEP, EXR or TDY (p<0.05 for the comparison of each illness between DEP, EXR and TDY).

Conclusion. Infectious disease syndromes are common during overseas military travel. TD had the highest negative impact on military travel especially among DEP personnel. We identified several modifiable risk factors associated with incapacitating infections which can be used to inform preventive and treatment strategies.

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727. Predictors of Depressive Symptoms in Pregnant Partners in Serocordcordant Couples Living with HIV in Zambézia Province, Mozambique

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