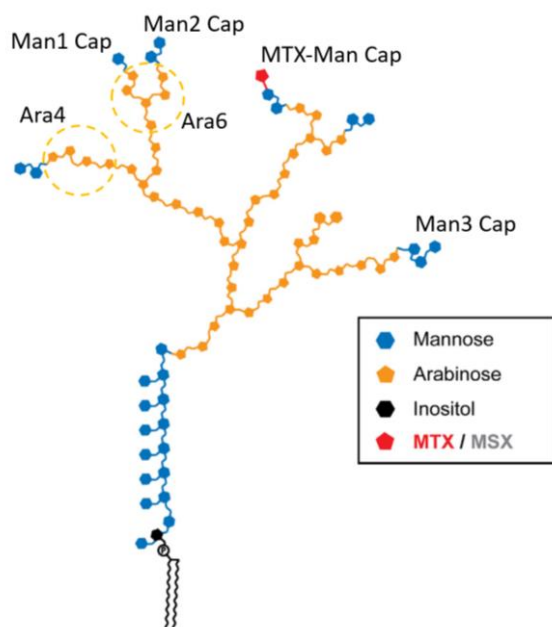


# A novel method for detecting Lipoarabinomannan in urine with the promise of meeting the WHO target product profile for the diagnosis of tuberculosis

Katharina Budde, Christoph Lange, Maja Reimann, Nika Zielinski, Lennard Meiwes, Niklas Köhler, DZIF TB cohort study group, and Patricia Sanchez Carballo



**Supplement Figure S1: Schematic depiction of LAM and its different epitopes.** MTX, 5-methylthio-xylofuranose; MSX, 5-methylsulfoxy-xylofuranose [1], [2].

**Supplement Table S2: Characteristics of used tests to measure LAM concentrations in urine** [3], [4], [5], [6], [7], [8].

|                          | WHO Target Product Profiles (TPPs) Minimal Criteria: “Biomarker Test” | AlereLAM          |   | FujiLAM           |   | EclLAM            |   |
|--------------------------|---|-------------------|---|-------------------|---|-------------------|---|
| Sample type              | Non-sputum samples, not/minimally invasive                            | Urine             | ✓ | Urine             | ✓ | Urine             | ✓ |
| Sensitivity              | > 65 %  | 10.8 %            | ✗ | 53.2 %            | ✗ | 66.7 %            | ✓ |
| Specificity              | > 98 %  | 92.3 %            | ✗ | 98.9 %            | ✓ | 98.1 %            | ✓ |
| Time to result           | < 1 hour  | 25 min            | ✓ | 50 – 60 min       | ✓ | 1 day (overnight) | ✗ |
| Price of individual test | < US\$ 6.00   | US\$ 3.00         | ✓ | US\$ 6.00         | ✓ | US\$ 5.00         | ✓ |
| Quantity                 |   | Semi-quantitative |   | Semi-quantitative |   | Quantitative      |   |

**Supplement Table S3: Inclusion and exclusion criteria for participants.**

|                           |   |
|---------------------------|---|
| <b>Inclusion Criteria</b> | <ol style="list-style-type: none"> <li>1. <math>\geq 18</math> years old</li> <li>2. Susceptible TB/MDR/XDR</li> <li>3. Beginning needs to be with T0 before therapy start</li> <li>4. Tuberculosis patients were identified by <ol style="list-style-type: none"> <li>a. Sputum smear microscopy</li> <li>b. <i>Mtb</i> specific nucleic acid amplification testing on sputum</li> </ol> </li> <li>5. Molecular identification of rifampicin drug resistance of <i>Mtb</i> in sputum</li> <li>6. Informed consent of study participation</li> </ol>  |
| <b>Exclusion Criteria</b> | <p><i>At baseline</i></p> <ol style="list-style-type: none"> <li>1. TB therapy within the last 6 months</li> <li>2. HIV infection</li> <li>3. Relevant immunosuppression at the physician's discretion</li> <li>4. Age <math>&lt; 18</math> years</li> <li>5. Anticipated inability to follow the study requirements</li> <li>6. Patient in custodianship or guardianship</li> <li>7. Anticipated inability to finish the study due to physical weakness</li> <li>8. Inability to finish the study due to anticipated migration</li> </ol> <p><i>After baseline</i></p> <ol style="list-style-type: none"> <li>1. Drug sensitivity testing unavailable</li> </ol> |

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