A SOCIOTECHNICAL SYSTEMS APPROACH TO IMPROVE TUBERCULOSIS (TB) DIAGNOSTICS IN PERU: Could a mHealth systems approach work?

**PROJECT SUMMARY (2016-2020):**
By integrating health systems engineering, machine learning, and mobile computing techniques, we aim to reduce patient wait times to be diagnosed with Tuberculosis (TB) in Lima, the capital of Peru.

**PROPOSED COMPUTATIONAL MODEL:**
1. Extraction of region proposals
2. Compute CNN features
3. Region classification
4. Tuberculosis manifestation recognition

**Deep Learning (CNN) Model Structure**

**TRAINING STRATEGY**
- Dataset
- Model architecture
- Model behavior
- Model behavior comparison
- Model evaluation

**PROJECT TIMELINE 2018-2019**

**ACKNOWLEDGEMENTS:** This study is funded by the National Institute of Health, R01AI018019.

The Institutional Review Board of the University of Massachusetts Lowell, Universidad Peruana Cayetano Heredia, and the Peruvian National Institute of Health approved the study protocols.