

Development of a rapid, user-friendly, diagnostic test for *Taenia solium* cysticercosis

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In this presentation we would like to introduce a novel diagnostic tool for *Taenia solium* cysticercosis in the porcine host. This tool is a rapid, user-friendly lateral flow format assay utilising the HP10 monoclonal antibody. We will describe the production of this assay, its performance as judged using a Bayesian no-gold-standard analysis and discuss the utility of such a test in the field. Neurocysticercosis, the development of the larval stage of this parasite within the central nervous system of man, is a leading cause of acquired epilepsy in the developing world. The parasite is sustained in a population by factors intrinsically linked with poverty: low-input free-range pig husbandry, poor latrine provision, lack of formal pig slaughter and meat inspection and low levels of education or awareness of hygienic meat preparation techniques. In order to assist the affected communities, who are by definition often those with scarce resources, it is imperative that cost-effective and easy-to-use diagnostic assays are made available. Although checking the tongue of a pig for cysts has been recommended as a low-cost screening method for *T. solium*, the sensitivity of this test is notoriously poor. Several antibody and antigen ELISA assays have been developed, but the time, equipment and skills required to perform them makes them unsuitable for many of the situations where diagnostics are required. To rectify this situation work has been ongoing to develop a rapid, user-friendly, antigen detection test for use in the field. We believe that such an assay has a real utility both as a tool for epidemiological studies and within intervention strategies as we work towards control of this important parasitic disease.