Novel diagnostic assay to monitor AIDS progression and enteropathy

**Background:**
Approximately 34 million individuals worldwide are currently living with HIV/AIDS and the estimated 2015 market size of HIV/AIDS diagnostic tests is $3.5 billion dollars. Enteropathy (i.e. diarrhea and intestinal distress) is a common symptom in HIV/AIDS-infected individuals that negatively impacts the patient’s quality of life. In addition, enteropathy is thought to contribute to the progression of AIDS. The diagnosis of AIDS enteropathy is made after excluding other potential pathogenic causes of diarrhea and performing invasive endoscopic biopsy procedures. Currently, there is no positive diagnostic test for AIDS enteropathy. Recent studies found that AIDS enteropathy in non-human primates was associated with an increase in previously unknown intestinal viruses. Assays to detect these viruses can be used to diagnose AIDS enteropathy or as a novel and cost-effective way to monitor AIDS progression.

**Technology Description:**
A next-generation-sequencing and associated bioinformatics-based test to detect AIDS enteropathy-associated viruses in stool, blood, or tissue samples.
- First-in-class diagnostic test for AIDS enteropathy
- May be used alone, or in conjunction with CD4+ cell counts or serum viral load testing as a diagnostic or prognostic indicator for AIDS patients or non-human primate research subjects
- Potential to develop serological assays that could be affordable, point-of-care diagnostic and prognostic AIDS tests for use in developing countries
- Therapeutic targeting of enteropathy-associated viruses could reduce a major contributor to AIDS morbidity and mortality

**Patent/Patent Application:** WO 2014/047261 A1

**Publication:** Pathogenic simian immunodeficiency virus infection is associated with expansion of the enteric virome. *Cell.* 2012

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**Application Space**
Diagnostics, Infectious Diseases, Gastroenterology

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