respectively. A series of cysteine residues and potential glycosylation sites were identified. The enzymatic domains (serine-protease, helicase/NTPase, methyltransferase and RNA-dependent RNA polymerase) of Paraiso Escondido virus were found to be highly conserved in comparison with other flaviviruses. The putative cleavage sites of the polyprotein were identified and found substantially different from those of other flaviviruses. The AA distances observed ranged 53-85%, 40-72%, 35-56% with envelope, NS3 and NS5 proteins. Phylogenetic analyses based on amino acid alignments showed that Paraiso Escondido virus clusterized together with Aedes-borne flaviviruses although it is clearly distinct from other known flaviviruses. In the New world, Lutzomyia sandflies are the vectors of viruses (vesicular stomatitis virus, Orbivirus, Punta Toro virus), parasites (leishmaniasis) and bacteria (bartonellosis). Therefore they should be considered as possible vectors of viruses of potential medical and veterinary importance. Further investigations are on-going to determine whether Paraiso Escondiso virus is capable to infect vertebrates and humans.

## 1472

### INTEGRATED, COMMUNITY-BASED SURVEYS OF INTESTINAL PARASITIC INFECTIONS WITH TRACHOMA IMPACT ASSESSMENTS IN AMHARA NATIONAL REGIONAL STATE, ETHIOPIA

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In the Amhara National Regional state of Ethiopia we integrated assessment of intestinal parasitic infections into large-scale trachoma impact surveys to establish baseline prevalence upon which to monitor the impact of integrated control measures of improved hygiene, water, sanitation, and preventive chemotherapy. Both trachoma and intestinal parasites (Schistosoma mansoni, soil-transmitted helminths, and intestinal protozoa) were assessed in systematically selected clusters from a geographic listing of communities by district. One child aged 6-15 years per household in selected clusters was randomly selected to provide a stool sample of which about 1 g was preserved in sodium acetate-acetic acid-formalin, processed using formol-ether concentration and examined under a microscope by experienced laboratory technicians. A total of 6,732 stool specimens were collected from 368 communities. The prevalence of S. mansoni was 6.6% (range by district 0-40.9%), but prevalence in 55 communities was ≥10%. The overall prevalence of any soil-transmitted helminth infection was 22.5% (range by district 3.0-77.7%). Approximately 3 in 4 children were infected with at least one intestinal protozoa. The prevalence of Giardia intestinalis was 18.9% (range by district 5.4-41.0%) and Entamoeba histolytica/E. dispar was 12.5% (range by district 2.9-22.5%). Associations between soil-transmitted helminth infections and community-level indicators of hygiene, water, and sanitation were explored. According to World Health Organization guidelines, preventive chemotherapy targeted to school-aged children is warranted for the control of schistosomiasis in 10 and for the control of soil-transmitted helminths in 39 out of 59 districts. Integration of deworming with mass distribution of antibiotics for trachoma might further expand health benefits to co-endemic communities. Integrating assessment of intestinal parasitic infections with community-based trachoma prevalence surveys may be a feasible method for evaluating impact of neglected tropical disease control programs.

## 1473

### INTEGRATED SCHOOL-BASED SURVEILLANCE FOR SOIL-TRANSMITTED HELMINTH INFECTIONS AND FOR LYMPHATIC FILARIASIS IN GAMPAHA DISTRICT, SRI LANKA

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The Sri Lankan Anti-Filariasis Campaign (AFC) conducted 5 rounds of annual mass drug administration (MDA) with albendazole and DEC in 2002-2006 in 8 districts that were endemic for lymphatic filariasis (LF) (target population approximately 10 million). AFC conducted transmission assessment surveys (TAS) in 2012, about 6 years after the last round of MDA. This study explored the practicality of integrating surveillance for soil transmitted helminth (STH) infections with TAS for LF in Gampaha district (population 2.3 million). The district was divided into two Evaluation Units (EUs), coastal and inland. Each TAS tested 1st and 2nd grade school children drawn from 30 randomly selected schools (N  1,462 inland, 1,642 coastal). Tests included the ICT card test for filarial antigenemia (performed by AFC personnel) and the Kato-Katz test for detection of STH ova (performed by university personnel). ICT rates were 0% and 0.1% (0.01-0.3% CI) in the inland and coastal EUs, respectively. These results suggest that LF transmission rates are very low in Gampaha District. The STH survey was conducted at the same time as the TAS in the inland EU (955 stools from 1,211 children) and several weeks after the TAS in the coastal EU (927 stools from 1,586 children). STH infection rates and stool sample participation rates were 0.8% and 79% in the inland EU and 2.8% and 58% in the coastal EU. Most of the STH infections detected were low-intensityTrichuris (present in 73% of positive stools). The low STH rates are probably due to the country's national school deworming program (mebendazole in grades 1, 4, and 7) and relatively good sanitation in Gampaha district. The cost for STH testing was approximately   5,000 per EU. These results suggest that it is feasible for national NTD programs to integrate school based surveillance for STH and LF. Further work is needed to streamline procedures and to determine optimal sampling strategies for STH surveys, because these may not require as many samples or sampling sites as TAS.

## 1474

### QUANTIFYING THE QUALITY OF SURVEY DATA FOR THEIR USE IN THE DESIGN OF SOIL TRANSMITTED HELMINTH AND SCHISTOSOMIASIS CONTROL PROGRAMS

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Generous medication donations and increasing political commitment has led to the launch of numerous national neglected tropical diseases (NTD) control programmes. The first step in developing these programmes is often country-wide mapping of disease, which might be unnecessary if data from previously conducted studies exist. Thus, large scale surveys would waste resources and cause unnecessary delays for medication distribution. As the quality of previously collected data can vary in terms of study design and data collection, we developed guidelines for the use of available soil transmitted helminth (STH) and schistosomiasis survey results to support programme implementers during the process of programme design. These guidelines allow identifying areas where sufficient information already exists and others that should be prioritised for surveys. The approach is based on three steps: i) the identification of ecological