# *SLO Public Health Laboratory Bulletin*

***July 2010***

**Resurgence of pertussis, California 2010**

The SLO Public Health Laboratory has now tested over 500 specimens with more than 100 positives (20% positivity rate) since the beginning of this most recent outbreak, and is continuing to run the Bordetella PCR test daily. County-wide over 250 cases have been reported based on laboratory tests of suspect cases, and clinical recognition of classic symptoms for individuals who have had contact with a confirmed case.

Statewide nearly 1500 cases have been reported, a five-fold increase over the number of cases reported last year for the same period. Another 700 cases are under investigation. Five deaths of Latino infants have also been reported, although cases under investigation may result in an increase in this tragic statistic.

Eight cases of ***B. parapertussis*** infection – NOT a reportable communicable disease—have also been detected with use of the PCR assay. The PCR assay is being adopted by a number of other public health laboratories to provide the most accurate means for laboratory diagnosis. Some laboratories still offer culture but health professionals are prudent to recognize the inferior sensitivity of culture even in the setting of optimal collection, transport and skilled laboratory staff. Direct fluorescent pertussis exams can be useful when disease transmission is high but is burdened by higher rates of false-positive results.

## Workshop FILLED:

**Identification of Medically Important Filamentous Fungi**
**September 8-9, 2010** - **San Luis Obispo, CA, Cal Poly**
*Sponsored by National Laboratory Training Network* & San Luis Obispo County Public Health Laboratory
Faculty: Jim Harris, Ph.D.

**What else does a public health laboratory do besides flu testing? Parasitologic exams**

Immigration—legal or illegal, international travel, consumption of unsafe foods, hygiene failures and other factors lead to parasitism, especially intestinal parasitism. The SLO Public Health Laboratory offers a number of assays to assist in the diagnosis of these infections. **Ova and Parasite (O &P) exam** is a tried and true method designed to concentrate whole parasites and their eggs as well as demonstrate amebic forms and their cysts. Preserved stool specimens—both formalin and polyvinyl alcohol (PVA) preparations are examined. The formalin prep is concentrated and examined microscopically for all adult worms and their eggs. The PVA prep is subjected to a Trichrome stain, an optimal method to allow the examination for amebic parasites and their cysts. **Cryptosporidium-Giardia Direct Fluorescent test** employs dual-labeled fluorescent dye-coupled antibody conjugate to provide enhanced sensitivity for the detection of both ***Giardia lamblia*** and ***Cryptosporidium parvum****.* Unprotected water supplies and water recreation area contamination have contributed to more frequent detection of these two parasites. The **Comprehensive Parasite Panel** includes the O&P and the Cryptosporidium-Giardia Direct Fluorescent test.

**Microsporidium, Isospora** and **Cyclospora** exams may be useful for focused studies of stool specimens for these particularly elusive organisms, each of which requires a special preparation and microscopic exam. **Blood Smears for parasites** employ thick and thin smears that are Giemsa-stained and examined for blood -borne parasites at various life-cycle stages. Positive findings are more common with the popularity of travel to malaria-endemic nations of the Caribbean basin, Asia and Africa. Our laboratory scientists observe ***Trichomonas spp*** by the **Vaginal Wet Prep** and ***Enterobius vermicularis*** by **Pinworm prep.** Staff is also skilled in the identification of worms recovered from stools as well as ticks and other insects. On request, ticks can be referred to a partner public health laboratory for PCR testing for the Lyme-disease agent ***Borellia burgdorferi.***