

First regional Asia-Pacific training course on leptospires and leptospirosis

The prognosis for leptospirosis can sometimes be severe, with major associated mortality. The clinical diagnosis for this spirochetosis is difficult, because the symptoms are not very specific, ranging from the basic influenza form (fever, headaches, myalgia) to Weil's disease, which includes liver and kidney damage. Specific biological diagnosis comprising the isolation of the pathogen, serology (MAT, ELISA) and molecular biology techniques from PCR remain the preserve of specialist agencies such as IPNC, whose laboratory is associated with the French National Leptospire Reference Centre. Present in a number of PICTs (see other articles in this issue) and in Asia, leptospirosis is a priority disease for PPHSN.

In view of this situation, in partnership with the SPC and with financial support from the Techmed company, IPNC organised the first regional training course on leptospires and leptospirosis for participants from the Asia-Pacific region from 10 to 16 April 2006. After consideration of the applicants' particulars (university training, professional background), 14 participants from a range of countries were selected (Fiji, Guam, Hawaii, Samoa, Cook Islands, French Polynesia, New Caledonia, Wallis and Futuna, Cambodia and Vietnam). Under the joint guidance of Fabrice Mérien (IPNC) and Tom Kiedrzyński (SPC), the participants of this first session enjoyed the benefits of theoretical and practical sessions led by French-speaking experts (including Guy Baranton) and English-speaking experts (including Rod J. Chappel of the National Serology Reference Laboratory, Melbourne, and John F. Mackay of Roche New Zealand). During the two days of practical work, the participants were able to become familiar with serological diagnostic techniques (microagglutination test, ELISA IgM, dipstick assay) and molecular techniques (real-time gene amplification on LightCycler).

The course allowed the participants to have access to complete and up-to-date background information on leptospirosis in fields as varied as metabolism, taxonomy, genetics, epidemiology, the clinical view, treatment, vaccination and diagnostics, together with the most recent data from scientific research (molecular typing, physio-pathology, cellular immunity).

One of the goals of the course was to train participants to better understand the relationships between leptospires and their hosts and the environment. Stress was laid particularly on the various modes of transmission and the eco-epidemiological consequences of modifications to the environment due to human activities. Another aspect concerned the principles of leptospirosis surveillance and prevention.

The most recent progress in knowledge of leptospirosis and the current diagnostic techniques for this zoonosis, such as the real-time PCR technique, were also presented to participants.

On returning to their respective countries, the participants will be able to assess the mode of propagation (endemic or epidemic) of human leptospirosis, assess the incidence of the zoonosis, identify the principal *Leptospira* serogroups in circulation in order to understand the most probable modes of human exposure, examine the various laboratory testing methods and recommend reliable and practical methods for use by laboratories at various levels, and make national and international decision-makers aware of the impact of leptospirosis on public health.

This first course was a genuine success and the organising team was very happy to see how highly motivated all the participants were. Further action is already being undertaken to

ensure that the course continues to be relevant in the participants' daily professional life.

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