

**PT.046****ISOLATION AND DETECTION OF RABIES VIRUS IN THE FECAL CONTENTS OF NATURALLY INFECTED FRUIT BATS**

Scheffer KC<sup>1</sup>, Fahl WO<sup>1</sup>, Iamamoto K<sup>1</sup>, Rodrigues AC<sup>1</sup>, Carnieli Jr P<sup>1</sup>, Carrier ML<sup>1</sup>, Oliveira RN<sup>1</sup>, Ito FH<sup>2</sup> – <sup>1</sup>Instituto Pasteur de São Paulo, <sup>2</sup>Faculdade de Medicina Veterinária e Zootecnia da Universidade de São Paulo

The spread of the rabies virus into various tissues, organs and secretions in infected animals occurs with the progression of clinical disease. Fecal samples may have lower viral concentration and the objective of this study was to isolate and detect rabies virus in the fecal contents of fruit bats through virus isolation in cell culture technique and by RT-PCR, hemi-nested RT-PCR (hnRT-PCR) and Real Time RT-PCR. Thirty specimens of the genus *Artibeus* bats, previously identified as positive for rabies by FAT and inoculation of murine neuroblastoma cell line (N2A) were selected and the intestine was removed from every animal and was scraped off, in order to collect the fecal contents. The fecal contents were weighed, homogenized and diluted 1:10 (w/v) using a diluent, consisting of 0.85% saline solution, supplemented with 2% Bovine Fetal Serum free of rabies virus-specific antibodies and 0.1% of gentamicin sulfate. The suspensions were kept at 4°C for 30 minutes and centrifuged at 800xg for 30 minutes at 4°C, filtered with the aid of 5-ml and 33mm length syringe provided with filter Millex<sup>®</sup> with porosity of 0.45µm. The suspensions were inoculated into murine neuroblastoma cells (N2A) for viral isolation. For molecular techniques, extraction of total RNA and the reverse transcription were carried out, followed by PCR and hnRT-PCR targeting to gene N. The Real Time RT-PCR technique was performed on the product generated from the reverse transcription. Of the 30 suspensions inoculated, only one (3.33%) was positive for virus isolation. None of the samples was positive by RT-PCR, however, 13 samples (43.33%) were positive for rabies by hnRT-PCR and Real Time RT-PCR techniques. The fact that only one sample was positive by virus isolation can be explained by a variety of interferents found in this substrate, such as the presence of bacteria and also different degraded products of food that can cause inhibition of the reactions. It is also believed that these interferents may influence the results of the RT-PCR, hnRT-PCR and the Real Time RT-PCR techniques, demonstrating that the fecal contents are of the most complex biological samples for amplification techniques used as diagnostic methods. Nevertheless, this study demonstrated that both the hnRT-PCR and Real Time RT-PCR techniques were sensitive for the detection of rabies virus. Thus, we conclude that these techniques can be used as complementary tools in laboratory diagnosis and fecal samples may also be used for diagnosis of rabies.

**PT.047****A WORLDWIDE SURVEY OF THE REPORTING OF HUMAN RABIES**

Taylor LH<sup>1</sup>, PRP<sup>2</sup> – <sup>1</sup>Global Alliance for Rabies Control, <sup>2</sup>Partners for Rabies Prevention

Without accurate reporting of human rabies cases, it is impossible to assess the true burden of the disease on countries, to assess how much resources a government should allocate to rabies control, or to carry out cost-benefit analyses on rabies prevention efforts. The Global Alliance for Rabies Control (GARC) with the Partners for Rabies Prevention is conducting a global survey of human rabies reporting practices. We want to gain a global picture of where human rabies is a notifiable disease and to assess whether the systems in place for the reporting of cases are perceived to be adequate. Networks of rabies experts have been asked to complete a short survey which collected information

on whether human rabies was notifiable, which authorities were responsible for the collation and reporting of cases, whether the system was effective, and some details of what data is collected and how it is disseminated. The survey is available online in a user-friendly format in English, French or Spanish. Preliminary results from 104 respondents in 69 countries have been analyzed and show that human rabies is a notifiable disease in 61 (88%) of these countries. However, respondents indicated that the reporting system was ineffective for 23% of the countries where rabies was notifiable. A regional analysis suggests that the countries where rabies is not notifiable, or where the system is ineffective are almost all in Africa and Asia where the burden of human rabies is highest, and more investment in rabies control is badly needed.

**PT.048****INTRADERMAL-INTRAMUSCULAR SWITCH EFFICACY IN RABIES POST EXPOSURE PROPHYLAXIS.**

Poujol P<sup>1</sup>, Simons de Fanti A<sup>1</sup>, Goesch J<sup>1</sup>, Ribadeau Dumas F<sup>2</sup> – <sup>1</sup>Pasteur Institut – Rabies Center, <sup>2</sup>Pasteur Institut – Rabies Center/ National Reference Center for Rabies

**Introduction-objectives:** Because of the high costs of rabies intramuscular (IM) post exposure prophylaxis (PEP) protocols, cheaper intradermal (ID) protocols using reduced doses were developed in some countries and validated by WHO. Due to lack of data on the efficacy of a protocol using ID and IM route successively, WHO recommends using only one route of administration per protocol. In France and many other high resource countries, no packaging adapted to ID route is available and only IM regimens are authorized by the marketing authorization, leading doctors not to follow WHO recommendations for patients having started an ID protocol abroad. As there is no study available on ID-IM switch efficacy, we sought to evaluate it with two objectives: to describe serological efficacy of our daily practice and to assess if there is a need to alert our national health authorities about the need of authorizing the ID route. **Materials and methods:** In our rabies center, PEP initiated abroad with ID route are systematically switched to IM and one serology (ELISA) is prescribed 7 to 14 days after the end of this mixed protocol to control its efficacy. We realized a non interventional descriptive prospective study including all 15 patients of our center who began ID PEP abroad between 07/01/2010 and 08/31/2011. **Results:** The rabies serology, carried out in median 13 days after the end of the PEP, was available for 12 of the 15 patients who received an ID-IM protocol (3 others were lost to follow-up). Mean age of the patients was 38.8 years (6.5 to 61.5 years) and the country of exposure were Sri Lanka, Thailand, Madagascar and India. The antibody level was higher than the one recommended (0.5 EU/ml) in all cases. No patient disclaimed any side effect. **Conclusion:** This study is limited by a small number of patients but to our knowledge it is the only one available on this topic. We found no evidence of a lack of efficacy due to the ID to IM route switch during rabies PEP. Consequently this study does not provide any argument favoring an alert of the health authorities concerning this practice in countries where only the IM route is authorized. These results need to be controlled by larger studies. The authors disclose no conflicts of interest for this work.