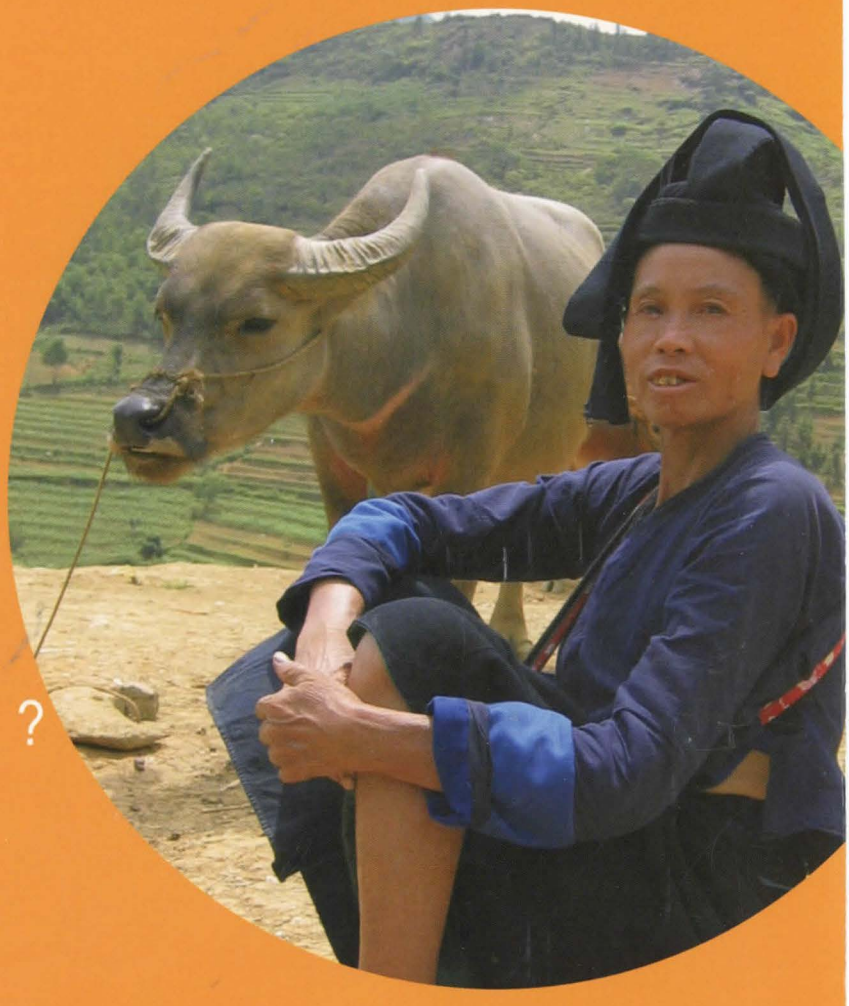
Proceedings

The 12th International Conference of THE ASSOCIATION OF INSTITUTIONS FOR TROPICAL VETERINARY MEDICINE



Does control of animal infectious risks offer a new international perspective ?

Montpellier, France
20-22 August 2007

AITVM

CIRAD

LONG-TERM STORAGE OF ANIMAL BLOOD ON FILTER PAPERS FOR DIRECT DETECTION AND GENOTYPING OF VIRUSES

MICHAUD V., GIL P., KWIATEK O., PROME S., DIXON L., ROMERO L., LE POTIER M.F., ARIA, M., COUACY-HYMANN E., ROGER F., LIBEAU G., ALBINA E.

Cirad, Control of Emerging and Exotic Animal Diseases Research Unit Campus international de Baillarguet, 34398 Montpellier Cedex 5, France

ABSTRACT

In tropical countries, the diagnosis of viral infections of humans or animals is often hampered by the necessity to maintain a cold chain for the sample preservation up to the laboratory. Here, we describe the use of filter papers for rapid sample collection, and the molecular detection and genotyping of viruses when stored over long periods at elevated temperatures. Infected blood was collected on filter papers, dried and stored at different temperatures (22, 32 and 37°C) for various period of time (up to 9 months). Two animal viruses, African swine fever, a large double-stranded DNA virus and Peste des Petits Ruminants, a negative single-stranded RNA virus were used to validate the method. Filter papers, with dried blood containing virus or control plasmid DNA, were cut in small 5 mm^2 pieces and added directly to the PCR tube for conventional PCR. Nucleic acid from both viruses could still be detected after 3 months at 32°C. Moreover, the DNA virus could be detected at least 9 months after conservation at 37°C. PCR products obtained from the filter papers were sequenced and phylogenetic analysis carried out. The results were consistent with published sequences, demonstrating that this method can be used for virus genotyping.

*Contact author:E-mail: vincent.michaud@cirad.fr