

## ROUND TABLE 4 – SUMMARY

### DIAGNOSTIC PROCEDURES: NEW AND OLD

Chairman: *Pierre Ambroise-Thomas\**  
Co-Chairman: *Antônio Walter Ferreira\*\**

For a long time it seems that all had been discussed about malaria and babesiosis diagnosis. In reality, the traditional methods have numerous limits and extremely interesting perspectives are brought by the new methodologies. To emphasize this important subject a special section was dedicated to diagnostic methods, in the IV International Congress on Malaria and Babesiosis.

This section consists of a total of 13 important communications with 5 concerning malaria and 8 babesiosis.

In the domain of malaria, Spielman, from the Harvard School showed very detailed data about the possibilities offered by the Quantitative Buffy Coat test (QBC) that, in collaborative work with Nairobi Hospital, led to very encouraging results. This same technique was evoked by Ambroise Thomas in his general review. However, with a prudent point of view in relation to the application of the QBC test in third world countries, due to the costs of reagents and also the difficulties for identifying the plasmodial species. In spite of this limitation, the QBC test unquestionably constitutes a very important progress. At the end of the discussion, it seemed suitable that new comparative evaluations be made, specially concerning the speed of the QBC test in relation to the microscopic examination (thin and thick blood smears). A more severe evaluation of the results found positive by the QBC test and negative in routine microscopic methods should also be done. In fact, in the majority of the cases, the results reported do not indicate for how long the microscopic examination was carried out and on which morphological elements the positive diagnosis was established in the QBC test.

Otherwise, Ferreira-da-Cruz, collaborators, from the Oswaldo Cruz Foundation at Rio de Janeiro, presented a very interesting result obtained in a test for the detection of plasmodial antigens of 50-kDa by an immunocapture assay (ELISA). Walter-Ferreira from São Paulo University, showed the parameters utilized for serological detection of human *Plasmodium* infection, sero-epidemiological surveys and for detection of pos-transfusional malaria. Santanu Data from Bangalore presented the first results obtained in molecular biology with a biotinylized probe. This method brought encouraging results regarding the laboratory studies as well as certain epidemiological surveys in the field. Finally, Avila and cols., from the Tropical Medicine Institute of São Paulo, showed their results on selective identification of plasmodial material on anatomic-pathological sections obtained using indirect immunofluorescent technique and monoclonal antibodies.

The studies on babesiosis were more numerous and diversified since they concern several parasitic species.

For *Babesia bigemina*, Morzaria and cols., from the International Laboratory for Research on Animal Diseases of Nairobi, Kenya, showed comparative results of QBC technique and a direct ELISA test that utilized a monoclonal antibody and a molecular probe. For the same parasite Buening and cols., from Missouri University also utilized a molecular probe labeled with digoxigenine for the diagnosis of infected cattle as well as tick vectors. In a study also using molecular biology techniques but with an epidemiological approach Ramos and cols., from Colombia University and Medical and Veterinary Faculty of Yucatan in Mexico did a survey in the southeast of Mexico.

In relation to *Babesia bovis*, Barci and cols., from São Paulo and Blandino and cols., from

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Cuba presented serological results obtained by indirect immunofluorescent test, by immunoperoxidase or by ELISA using different antigens. The ELISA test was also employed by Bruning and cols., from the Imperial College of Sciences of London, for the *Babesia caballi*

and *Babesia equi* diagnosis. Wagner and cols., from the College of Veterinary Medicine of Texas presented a review on the nonimmunological methods applicable to babesiosis for the detection of parasitized cattle as well as for the identification of tick vectors.