# FEMS SYMPOSIUM

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# RECENT ADVANCES IN THE DIAGNOSIS OF SEXUALLY TRANSMITTED DISEASES (STDs)

## PROGRAM AND ABSTRACTS

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# Rapid diagnosis of *Chlamydia trachomatis* infections by enzyme linked fluorescent assay

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*Chlamydia trachomatis* is an important aethiological agent responsible for a significant portion of sexually transmitted diseases in men and women all over the world. Diagnosis of infection is based on symptomatic presentation or history of contact with an infected person.

Cell culture techniques, still considered as the " gold standard " by which all other methods are assessed. These techniques are costly and time consuming, require at least 48 hours to obtain the results and necessitate Giemsa, iodine or fluorescent antibody staining for confirmation.

Antigen detection techniques currently in use, as Direct immunofluorescence microscopy (DIF), Enzyme immunoassay (EIA) and Nucleic acid assays (PCR, LCR) are easier to perform and have the considerable advantage that viable organisms are not required on which cell culture techniques are dependent.

The VIDAS Chlamydia ( VCHL ) assay ( bioMe'rieux ), that we used in our study, is an automated enzyme-linked fluorescent immunoassay for qualitative detection of chlamydial antigens in endocervical, urethral or male urine specimens. The Test value (TV) thresholds and interpretation of results were according the manufacturer:

TV < 60 (-), TV ≥ 60 to 80 (+/-), TV ≥ 80 (+).

From a total of 307 specimens (table 1.), from symptomatic patients, 63 (20,5 %), 233 (75,9 %), and 11 (3,6 %) were (+), (-) and (+/-), respectively.

Table 1.

| VCHL | Urethral (U) | Endocervical (EC) | Conjuctival | TOTAL |
|---|---|---|---|---|
| + / % | 23/15,8 | 32/31,4 | 8/13,3 | 63/20,5 |
| - / % | 117/80,7 | 64/62,7 | 52/86,7 | 233/75,9 |
| +/- / % | 5/ 3,4 | 6/5,9 | - | 11/3,6 |
| TOTAL | 145/100 | 102/100 | 60/100 | 307/100 |

A comparative study of : 20 (-)[a], 11 (+/-)[b], 10 low positive (TV< 200)[c] and 10 high positive (TV>500)[d] specimens, by VCHL with DIF (bioMe'rieux) used as a gold standard, was made.

The all negative and positive VCHL had same results by DIF.

From the 11 VCHL (+/-), with repeated VCHL 3 were (+), but 4 (+) with DIF, what is not statistical significant, $p>0,05$ ( $\chi^2 = 0,210$, DF=3, $p=0,976$ ).

Three urine from VCHL high positive men were (+) with VCHL too, but 3 urine, from VCHL low positive, were VCHL negative, which indicates that urine samples from VCHL low positive men could be false negative.

Five samples with less than 10 elementary bodies by DIF ( DIF negative results), were negative with VCHL, as well.

These results showed high specificity and sensitivity of VCHL, compared with DIF. The technique is easy to perform and the results are obtained in less than 2 hours after sample delivering.

Although manufacturer did not mark it, we used VCHL in diagnosis of Chlamydial conjuctivitis and the results were the same as with DIF, but further studies are needed.

a = 10 U and 10 EC, b = 5 U and 6 EC
c = 5 U and 5 EC, d = 5 U and 5 EC

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# XV INTERNATIONAL SYMPOSIUM

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## ABSTRACTS

# SALMONELLOSIS
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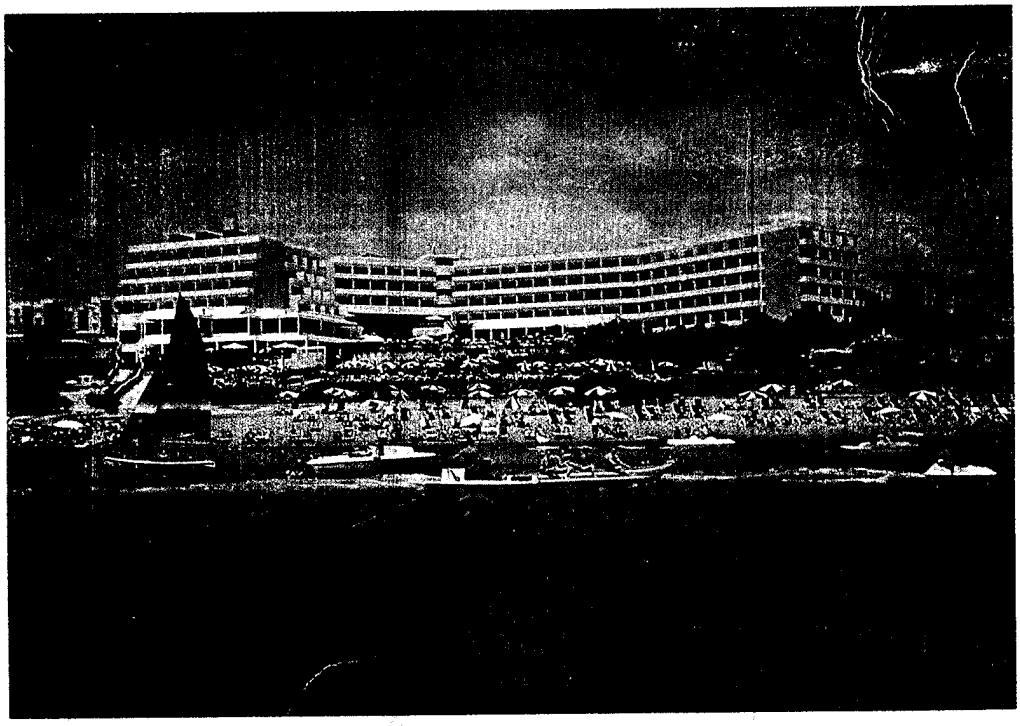
## As World Health Problems in Humans and Animals

Chairman of XV International Symposium of W.A.V.M.I.: Dr K. Polydorou



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|---|---|
| TITLE : | **ASSESSMENT OF THE DIGNOSTIC VALUE OF 2-MERCAPTOETHANOL TEST IN THE SEROLOGIC DIAGNOSIS OF HUMAN BRUCELLOSIS** |
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The mostly used serological test for diagnosis of human brucellosis in our Republic, (RBT test, Serum agglutination test-Wright, Coombs Antihuman Globulin Test, Complement Fixation Test-CFT), has the weakness that it can not indicate which antibodies are present in the serum, and determine stage of the disease.

The aim of this study was to improve the serological diagnosis of human brucellosis with introduction of the 2-Mercaphtoethanol test (2-ME).

2-Mercaptoethanol disrupts the disulfide bonds of the IgM antibodies, so IgG antibodies remain as sole aagglutinable antibodies in the serum.

A total of 725 examined sera were divided in five groups: A (Patients in acute stage of disease), B (Persons with a prior history of the disease), C (Healthy persons from endemic areas), D (Professionally exposed workers) and E (Volunteer blood donors).

From a total of 149 first sera of group A. Wright (+) were 114 (76,5%), 2-ME (-) were 61 (53,5%) - patients in the first few weeks of the beginning of the disease, 2_ME (+) were 53 (46,5%) - patients inn the first three to six months of the disease. From a total of 71 second sera of same group, Wright (+) were 21, 2-ME (+) were in 7 (9,9%), presenting with clinical signs and symptoms, indicating the activity of disease and need of further antibiotic treatment. In the group B, 2-MEE(+) were 6 (6,5%) and one (+) from 17 second sera, out of 93 first serums. This group consisted of cases with chronic brucellosis, and for all of them antibiotic treatment was necessary. In the group C, D and E 2-ME and Wright were negative.

These results indicate that:

2-ME is an important indicator of the activity and chronic course of the disease, and indicator of the response to antibiotic treatment.

2-ME should be used concomitantly with the Wrightest,

MAT 2-ME (Michrotechnicque of 2-ME) test can be used with great accurance of results as 2-ME. MAT 2-ME has some advantages: the amount of antigen needed is fivefold less than in other techniques, the method is simple and fast, and it causes lesser irritation of mucoses than 2-ME.