Isolation of *Aeromonas* spp. from human feces

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Following our observation that *Aeromonas* spp. grow on Cefsulodin-Irgasan-Novobiocin (CIN) agar (Altorfer et al., Abstr. A. Meet. Am. Soc. Microbiol. (1985)) we looked for the presence of *Aeromonas* spp. in stool specimens using CIN medium during 3 months in summer 1984. From 1282 specimens plated on CIN directly and after enrichment in PBS and Rappaport broth (the same procedur as used for recovery of yersiniae) 31 strains of *Aeromonas* spp. were isolated (2.4%). In addition, one strain from water was found.
Of these 32 strains, 21 were *A. caviae*, 5 were *A. sobria*, 1 was *A. hydrophila*, and 5 were atypical isolates. These findings were surprising in two ways: 1) *A. caviae*, our most frequent isolate, is often considered not to be pathogenic, 2) most of our isolates were from patients with intestinal disorders from whom no other enteropathogenic organisms could be isolated. So far, the role of *Aeromonas* spp. in diarrheal disease is controversial, but our results imply a clinical significance of isolates of all three species.

Correlation of antibody patterns in western blot with different chlamydial diseases

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Chlamydial infection in humans is associated with different diseases such as urethritis, cervicitis, pelvic inflammatory disease, perihepatitis, pneumonia and arthropathy. The analysis of the immune response by classical techniques of antibody detection (IIF, CF, ELISA) does not allow the differentiation of these clinical entities. We, therefore, applied Western blot technology in order to investigate the antibody response in different isotypes to various chlamydial antigens. The LGV-2 strain of *C. trachomatis* was grown in McCoy-cells, elementary bodies were purified and used as antigen (Wunderli et al., SGM, Lugano 1984). Cross reactivity of the major outer membrane protein (MOMP) of LGV-2 with the various serotypes of *C. trachomatis* and *C. psittaci* was ascertained by using monospecific mouse sera prepared and kindly provided by M.F. Paccaud, Geneva. Detection of IgM against MOMP is used as a marker for active infection with chlamydiae. However, it has not yet been analyzed how long MOPMP-IgM antibody persists. We show that western blot analysis reveals different patterns of immune response which correlate to a certain extent with distinctive clinical subsets.

Procedure to detect antibodies to staphylococcal protein A in human sera by ELISA

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Human IgG molecules combine with staphylococcal protein A (SpA) nonspecifically by both Fc and F (ab') 2 fragments (Biguzzi, Scand. J. Immun. *15* (1982) 605). We have developed a procedure which allows the detection of human antibodies reacting with SpA specifically.
Sera to be tested are precipitated by ammoniumsulfate and the Ig fraction is treated with pepsin to obtain F (ab') 2 fragments. The separated F (ab') 2 fragments are then allowed to react with solid phase SpA. After binding, free peroxidase-labeled SpA is added.
By use of this procedure we have tested 12 sera from healthy individuals, and 1 serum from a patient with staphylococcal sepsis. While F (ab') 2 fragments of all sera tested combined with solid phase SpA, free peroxidase-labeled SpA was taken up only by F (ab') fragments of the patient with deep-seated staphylococcal infection, suggesting specific reactivity for SpA. The usefulness of the procedure, especially in comparison with testing for antibodies to other staphylococcal antigens, e.g. teichoic acid, has to be further evaluated.

Benefits of a computerized system for the determination of activity spectrum of new antibiotics

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Our study is devoted to the comparison of the activity of some new cephalosporins with other antimicrobial agents of regular use. All the strains tested have been isolated in current practice in the Geneva area. The identification of the species has been done with the API 20-E system and/or by slide agglutination. All the sensitivity tests have been executed according to the method of Chabbert. The MIC's have been determined with a special home-made program using an HP-41C coupled with a Grappler interface and an Epson FX-80.
The computerized determination of 'convergence trends' can allow to determine the situation of different resistance levels of the most important pathogenic bacteria. The graphical presentation of the different spectra of resistance or sensitivity permits a very easy comparison either between antibiotics or between different strains.
We think that this model can be proposed and should be used for a continuous survey of evolution of drug resistance in bacteria.

Production of hydrogen peroxide by *Streptococcus sanguis II* in glucose-free medium

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Alpha-hemolytic streptococci are known to produce hydrogen peroxide in glucose-based solid media (e.g. Hamon and Klebanoff, J. exp. Med. *137* (1973) 438). We have tested the capacity of a strain of *Streptococcus sanguis II* to produce hydrogen peroxide in a glucose-free solid medium. Production of hydrogen peroxide in Phenol Red Agar (Difco) could be demonstrated 1) directly, by a peroxidase enzyme assay using ABTS as a highly sensitive chromogen (Müller, J. microbiol. Meth. *2* (1984)101) and 2) indirectly, by the bactericidal effect on staphylococci in a double layer test (will be published). When catalase was added, ABTS peroxidase assay was negative and bactericidal activity was lost. The results show that *Streptococcus sanguis II* produces hydrogen peroxide also in solid medium devoid of glucose.

Iron regulation of desferrioxamine biosynthesis in *Streptomyces pilosus*

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Streptomyces pilosus A 21748 secretes a range of structurally related iron chelators of which the most important, desferrioxamine B, is the active substance in Desferal® marketed by Ciba-Geigy AG for therapeutic treatment of iron overload. Production of the desferrioxamines by large scale submerged cultures is regulated by the content of iron in the nutrient medium. This paper describes the most recent model for regulation of siderophore synthesis in microorganisms, studies in *S. pilosus* using a defined medium, investigations with a resting cell system and a procedure for the screening of isolates for reduced sensitivity to iron.