Cultural method suitable for routine to show the production of aerobactin by strains of Enterobacteriaceae

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A plate assay to show the production of aerobactin in an agar medium was optimized by using a mutant *Escherichia coli* strain as indicator (from V. Braun, Tübingen). This strain is deficient in producing and transporting enterochelin and in producing aerobactin, but able to transport aerobactin. A number of various species of Enterobacteriaceae was tested to check the accuracy of this method. We found that almost all of the strains coding for aerobactin production are bearing plasmids and, in certain cases, were able to localize the aerobactin information on conjugative R-plasmids. This underlines the fact that aerobactin genes are rarely found on the chromosome.
The usefulness of the aerobactin assay in the routine laboratory as well as a possible relationship between aerobactin production and virulence is discussed.

Meningococcal meningitis in association with complement factor P (properdin) deficiency

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A previously healthy 13-year-old Swiss boy with purulent meningitis due to *Neisseria meningitidis* group D responded well to intravenous cefuroxime therapy. The initial symptomatology included high fever, marked meningeal signs, reduced consciousness, transient abducens palsy and petechial rash.
In our center each patient with invasive meningococcal disease undergoes screening evaluation of the complement system. Total hemolytic complement activity was normal, whereas hemolytic activity of the alternative pathway was extremely reduced. Radial immunodiffusion assays showed complete absence of immunologically detectable factor P. Addition of purified factor P to patient serum resulted in P concentration of 8% or normal but restored alternative pathway hemolytic activity almost completely. All these complement system studies were normal in the other four family members.
After the sporadic meningococcal meningitis the patient was given group A and C meningococcal polysaccharide vaccination. So far he is doing well and no other invasive bacterial infection became manifest.

Rotavirus electrophorotypes around Bern from 1981 to 1984

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We analyzed from 1981 to 1984 the rotavirus genome pattern from antigen positive stools to see the different rotavirus types appearing in the region of Bern, Switzerland.
90 isolates belonged to subgroup 2 and were divided into 15 electrophorotypes, and 6 isolates belonging to subgroup 1 were subdivided into 3 electrophorotypes. 25 isolates could not be allied to a specific electrophorotype due to a faint intensity of the dsRNA bands on the gel or due to lacking segments.
The appearance and disappearance of the different types and the correlation of the isolates to nosocomial infections are demonstrated.

Reactivity of enterovirus specific immunoglobulin M and G antibodies from sera of echovirus 11 infected newborns

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The reactivity of enterovirus specific IgM and IgG antibodies from sera of echovirus 11 infected newborns with the structural proteins of different enteroviruses by the immunoblot technique was analyzed. Whereas immunoglobulin G antibodies reacted with the capsid polypeptide VP1 of echoviruses 11 and 9, coxsackievirus B3 and poliovirus 2, immunoglobulin M antibodies reacted with the capsid polypeptides VP2/VP3 and VP1 of echovirus 11 and cross-reacted with VP2 and VP3 of poliovirus 2. No cross-reactions were observed for IgM antibodies with the structural proteins of coxsackievirus B3 and echovirus 9. Sera from umbilical cord blood showed IgG reactions with VP1 of the viruses tested, but no IgM reactions to viral structural proteins were observed.
The results from the immunoblot technique were compared to data from neutralization tests and MACRIA.

Alteration of cellular functions after Semliki Forest virus induced fusion at low pH of *Aedes albopictus* cells

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Semliki Forest virus (SFV) infected *Aedes albopictus* cells (clone C6/36) form a syncytium upon lowering the pH of the culture medium below 6.2. A prolonged exposure (> 14 days) to a mildly acidic pH finally leads again to single cells, which then can be cultured at either pH 6 or 7. This treatment renders such cells fusion incompetent. Two cell lines obtained in this way were partially characterized. Cell line 673 showed most characteristics of a persistently infected cell, except for its ability to fuse. Cell line 676 on the other hand did no more produce SFV. RNA analysis indicated that 673 contained both, the genomic 49S and the subgenomic 26S SFV-RNA, whereas in 676 only the genomic RNA was detectable, suggesting a 'latent infection'. Conclusively, fusion and growth of SFV infected *Aedes* cells at pH 6 seems to alter viral or viral induced as well as cellular functions and/or structures.

Long-term cultivation of Semliki Forest virus (SFV) infected *Aedes albopictus* cells at pH 6

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Aedes cells fuse if the pH of the medium is lowered to 6 at 16 h after SFV infection. The resulting syncytia survive at pH 6, thus allowing coevolution of the infected cells and virions to be studied under long-term fusogenic conditions. Twenty identical cultures were therefore infected, fused and kept at pH 6. The cells resumed growth 10 days later forming a monolayer at about 20 days. Fusion of the cells ceased spontaneously at about the 5th weekly passage. Hereafter subcultures were grown at pH 7. In all of these subcultures no fusion was observed upon reexposure to pH 6; some subcultures fused at pH 5. All the cells were persistently infected producing thermosensitive and small plaque forming viruses. Acute infection was obtained in Vero and Aedes cells with these viruses and two strains proved to be afusogenic when acutely infected cells were exposed to pH 6.