Rhine and are generally considered to be recalcitrant. Knackmuss' group, however, has managed to obtain biodegradation of a few naphthalene sulfonic acids as carbon sources for growth (degradation rate about 1 mkat/kg of protein) and the first reaction is desulfonation.
We decided to test whether the sulfur rather than the carbon in 7 'non-biodegradable' sulfononaphthalenes (2–4 substituents) was available to microorganisms. Sulfur-limited batch enrichments were inoculated with washed material from industrial sewage plants. Substrate-dependent growth with substrate disappearance was observed with each substrate.
Strain Z63 utilized SO_4^{--} or e.g. 2-amino-5-hydroxy-7-sulfononaphthalene with a growth yield of about 3 kg of protein/mole of S (degradation rate about 20 µkat/kg of protein). The observations, that the sulfur but not the carbon of these compounds is readily available to microorganisms from native environments, lead us to believe that desulfonation and ring-degradation reactions occur naturally with different specific activities in different organisms.

Microbial degradation of benzenesulfonic acid and its derivatives

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Sulfonated aromatic compounds (e.g. metabolites of dyestuffs) are observed to be major pollutants of rivers and lakes. We have enriched for organisms that are able to utilize as sole source of carbon and energy for growth benzenesulfonate, its 2-amino-, 4-amino-, 4-hydroxy-, 4-methyl- or 4-carboxy-derivative. Pure cultures (18) were isolated. All were bacteria.
One organism, OS-1, isolated to utilize 2-amino-benzenesulfonate, also metabolized benzenesulfonate and 4-methyl-benzenesulfonate. The specific growth rates on these substrates were 0.11, 0.19 and 0.07 h^{-1}, respectively. Each substrate was utilized quantitatively with growth yields of about 5 g of protein/mole of C. Sulfite tended to accumulate towards the end of growth and was then oxidized to sulfate which accumulated stoichiometrically.
Cell extracts of strain OS-1 were prepared and NAD(P)H-dependent substrate disappearance and sulfite release were observed. Specific activities in non-optimized assays were 0.1 and 0.3 mkat/kg of protein for benzenesulfonate and 2-amino-benzenesulfonate, respectively.

ELISA test application on food intoxication at CHUV (Centre Hospitalier Universitaire Vaudois)

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The use of ELISA test (recommended by Prof. Dr H. Fey from the University of Bern), confirmed the presence of staphylococcus enterotoxics strains in prepared dishes served at CHUV, which have been suspected to be the cause of food intoxication. 88 samples have been analyzed according to the standard criterions meaning the research of *Staphylococcus*, the *Salmonella* and the *Clostridium perfringens*. 10 samples have been revealed as highly infected by staphylococcus coagulase positive. 4 samples contained the strains which showed, due to ELISA test, the capacity of producing a great quantity of enterotoxin D.
On the other hand, the strains produced from the nose of some CHUV kitchen's employees with the same lysotype as the strains produced by the infected food, showed also the capacity of producing a great quantity of enterotoxin D.

Anaerobic degradation: catabolism of xylene under denitrifying conditions

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The microbial degradation of m-xylene (1,3-dimethylbenzene) under denitrifying conditions was studied in a perfusion column filled with river sediment material. This column represented a typical river water/ground water infiltration system. After several months of adaption, as much as 0.3 mM m-xylene at a flow rate of 2.4 cm/h was completely degraded in a column with a total length of 26 cm. Using radiolabeled substrate, 80% of the [^{14}C] m-xylene was mineralized to $^{14}CO_2$. The conversion of m-xylene was coupled with a reduction of NO_3^- to NO_2^-. No rapid metabolism of m-xylene was observed upon substitution of NO_3^- by either oxygen or sulfate. Studies to elucidate the mechanism of the anaerobic m-xylene metabolism are in progress. The crucial step in the anaerobic degradation appears to be the introduction of a functional group followed by a conversion to an intermediate such as a phenol.

Surface proteins and Western Blot analysis of *Listeria* monocytogenes

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Most clinical isolates of *Listeria* monocytogenes (Lm) belong to only two serotypes, i.e. 1/2b and 4b, which does not allow sufficient discrimination for epidemiological studies. Disc SDS PAGE of Lm after light sonication showed about 50 different bands, including eight major bands. All the 17 known serotypes presented similar patterns. A 160 kd protein had a shorter migration for serotypes 4ab, 6a, 6b. Differences in intensity have also been found in 25 kd doublet. Serotype 1/2c is characterized by a dense band at 36 kd. Most of the bands found on the SDS-PAGE react with rabbit anti 4b antiserum at Western Blot analysis. With this technique, four major immunodominant components were found, with apparent mol. wt of respectively 40 kd, 50 kd, 70 kd and 95 kd.
In conclusion, SDS-PAGE of surface proteins in Lm might be a useful tool for epidemiological studies.

New Antibiotics and Resistance

DNA homology of a transferable *Clostridium difficile* resistance determinant with transposon TN*551*

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Clostridium difficile, described as a causative agent of antibiotic associated pseudomembranous colitis, shows resistance to many antimicrobial agents. Resistance to either clindamycin/erythromycin (CC^r/Ery^r) or tetracycline was found to be transferable to susceptible *C. difficile* strains. Our present results suggest that the two resistance determinants are located on the chromosome. Further results, achieved by DNA-DNA hybridization experiments, indicate DNA homology of the CC^r/Ery^r determinant with transposon Tn*551* which is found in *Staphylococcus aureus*. Tn*551* belongs to a group of related transposable elements coding for resistance to macrolide, lincosamide and streptogramin B in a variety of gram positive bacteria. – Experiments are in process to determine whether the CC^r/Ery^r determinant may