B135 New active compounds from the soft coral *Muricea* c.f. *austera* (Gorgonaceae, Plexauridae)

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The pacific gorgonian *Muricea* c.f. *austera* (Plexauridae) was selected for study, because of the antibacterial activity shown (1). The specimen (1.52 kg) was extracted with methylene chloride:methanol (7:3), 2.5 Lx3 at room temperature and then the extract concentrated. This extract (72 g) was suspended in the same solvent mixture (200 mLx3) and the supernatant after concentration (45.3 g) was chromatographed on a silica gel column with hexane, hexane:toluene (1:1), toluene 100%, toluene:ethyl acetate (1:1), ethyl acetate 100 %,and methanol: H_2O (1:1) to give 6 fractions. Fraction 4 (1.34 g) was crystalized with methanol to yield 83 mg of pregna-5-ene-3β,20α,21-triol previously reported (2) which was active against *Bacillus subtilis* and *Sthaphylococcus aureus* at 250 µg/disc. Fraction 5 (400 mg) from several chromatographic column and HPLC gave two new pregnane derivatives: 3β-O-(β-D-glucopyranosyl)-pregna-5,20-diene (7.0 mg) and 3-β-D-(6'-O-acetyl-β-D-glucopyranosyl)-pregna-5,20-diene (7.4 mg).

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B136 Studies on the structures of the exopolysaccharides produced by the cyanobacteria *Nostoc insulare*, *Chroococcus minutus* and *Synechocystis aquatilis*

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Some cyanobacteria are known for producing exopolysaccharides at a high level. (1) These are of great interest for example as thickeners, antitussiva or immunstimulants. (2) One exopolysaccharide each from *Nostoc insula - re, Chroococcus minutus* and *Synechocystes aquatilis* was isolated and purified from 8L-Batch cultures. Studies on the composition and structure were carried out by derivatization, gas chromatography and mass spectrometry. Furthermore the molecular weight was determined by size exclusion chromatography. The results show a high variability of the different exopolysaccharides in sugar composition and type of linkage. Interestingly many uncommon sugars were found. Especially in the exopolysaccharide from *Chroococcus minutus* methylated monosaccharides were dominant. A short characterization of the exopolysaccharides is given in the table below.

Cyanobacteria	Molecularweight	Sugar composition
Chroococcus minutus	995 kD	Glucose, Galactose, 6-Desoxy-2-O-methyl-hexose 2-O-methyl-hexoses, 3-O-Methyl-hexose
Nostoc insulare	1081 kD	Glucose, Arabinose,3-O-Methyl-pentose
Synechocystis aquatilis	996 kD	Fucose, Arabinose

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