

[*Jpn. J. TDM*, 17, 315-322 (2000)]

[Lab. of Pharmaceutics]

Toxic Shock Syndrome and Pharmacokinetics of Vancomycin.Ikuo WADA, Kouzoh MINO, Nobuyoshi ABO, Susumu IIZUKA, Yoshi HATAE,
Kazuhiro MYOUJIN, Takeo TAKEDA and Kazuyuki HIRANO*

Two cases of methicillin-resistant *staphylococcus aureus* (MRSA) infected patients, who were given vancomycin (VCM) immediately after MRSA was detected and died within 8 days of renal and multiple organ failure, was studied. MRSA detected from both cases were coagulase type II, toxic shock syndrome toxin-1 + enterotoxin C producing strains. The pharmacokinetics of VCM was investigated after the initial VCM dose and several days of administration. Renal insufficiency in these patients was initially doubted to be due to VCM. The period during which trough levels of VCM were more than 15.0 $\mu\text{g/mL}$ was 3 days in case 1, whereas in case 2, the trough level was never above 15.0 $\mu\text{g/mL}$. The probability is discussed that the renal and multiple organ insufficiency seen in these patients was the results of toxic shock syndrome rather than VCM nephrotoxicity.

[*Biosci. Biotechnol. Biochem.*, 64, 417-419 (2000)]

[Lab. of Pharmaceutics]

Effect of a Polysaccharide (TAP) from the Fruiting Bodies of *Tremella aurantia* on Glucose Metabolism in Mouse Liver.Tadashi KIIHO,* Hotaka MORIMOTO, Takashi KOBAYASHI, Shigeyuki USUI, Shigeo UKAI,
Koichi AIZAWA and Takahiro INAKUMA

An acidic polysaccharide (TAP) obtained from the fruiting bodies of *Tremella aurantia* significantly increased the activities of glucokinase, hexokinase, and glucose-6-phosphate dehydrogenase, and decreased the activity of glucose-6-phosphatase in normal and streptozotocin (STZ)-induced diabetic mouse liver at 3 h and/or 6 h after intraperitoneal administration of 50 mg/kg, while the glycogen content in the liver was reduced. Furthermore, TAP lowered the plasma cholesterol level in normal and STZ-induced diabetic mice.

[*Chem. Pharm. Bull.*, 48, 1793-1795 (2000)]

[Lab. of Pharmaceutics]

Structural Features of an Anti-Diabetic Polysaccharide (TAP) from *Tremella aurantia*.Tadashi KIIHO,* Takashi KOBAYASHI, Hotaka MORIMOTO, Shigeyuki USUI, Shigeo UKAI,
Kazuyuki HIRANO, Koichi AIZAWA and Takahiro INAKUMA

The structure of an anti-diabetic polysaccharide (TAP) obtained from the fruiting bodies of *Tremella aurantia* was investigated by methylation analysis, Smith degradation, partial acid hydrolysis, ^{13}C -NMR spectroscopy, and enzymatic digestion. The results suggested that TAP was composed of (1 \rightarrow 3)-linked α -D-mannopyranosyl residues as a backbone, some of which were substituted at position 2 with (1 \rightarrow 3)-linked β -D-xylopyranose side chains and with β -D-glucopyranosyluronic acid at position 4 linked to terminal α -D-mannopyranose.

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[Lab. of Hygienics]

**Application of Ion-exchange Cartridge Clean-up in Food Analysis V
Simultaneous Determination of Sulphonamide Antibacterials in Animal Liver and Kidney Using High-performance Liquid Chromatography with Ultraviolet and Mass Spectrometric Detection.**

Yuko ITO, Hisao OKA, Hiroshi IKAI, Hiroshi MASUMOTO, Yutaka MIYAZAKI and Hisamitsu NAGASE*

A simple, rapid, and reliable method for the determination of residual sulphonamide antibacterials (SAs) in animal liver and kidney was developed using a combination of clean-up on a Bond Elut PSA cartridge and HPLC with UV detection. The SAs were extracted with ethyl acetate and then dissolved in 5 ml of 50 v/v % ethyl acetate-n-hexane after being evaporated to dryness. For clean-up, the extract was applied to a Bond Elut PAS (primary / secondary amine cartridge), and then SAs were eluted with 20 v/v % acetonitrile - 0.05 M ammonium formate to be analysed by HPLC. Recoveries of the SAs at the levels of 0.5 and 0.1 $\mu\text{g/g}$ were 70.8 - 98.2 %, the relative standard deviation were less than 7.0 %, and the detection limits were 0.03 $\mu\text{g/g}$.