〔Chem. Pharm. Bull., **40**, 2110-2114 (1992)〕 [Lab. of Hygienic Chemistry]

Polysaccharides in Fungi. XXX. Antitumor and Immunomodulating Activities of Two Polysaccharides from the Fruiting Bodies of *Armillariella tabescens*.

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The effects of two polysaccharides, AT-HW and AT-AL on murine sarcoma 180 tumor and peritoneal macrophages were examined at i.p. administration. At-HW and AT-AL significantly inhibited the tumor, and it was suggested that the mechanism of AT-AL differed from that of AT-HW and branched (1→3)-β-D-glucans. AT-HW and AT-AL showed reticuloendothelial system-potentiating activity, increased the number of peritoneal exudate cells, activated on macrophages, and enhanced mitogenic reaction, although AT-HW did not produce superoxide anion *in vitro*.

〔Yakugaku Zasshi, **112**, 393-400 (1992)〕 [Lab. of Hygienic Chemistry]

Hypoglycemic Activity of Polysaccharide Fraction from Rhizome of *Rehmannia glutinosa* LIBOSCH. *f. hueichingensis* HSIAO and the Effect on Carbohydrate Metabolism in Normal Mouse Liver.

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The ethanol precipitate fraction (RG-WP) obtained from the hot water extract from rhizome of *Rehmannia glutinosa* LIBOSCH. *f. hueichingensis* HSIAO is mainly composed of pectin-like polysaccharide, and exhibited hypoglycemic activity in normal and streptozotocin-induced mice by i.p. administration of the fraction. RG-WP affected the activities of enzymes responsible for the glucose metabolism in the liver of normal mouse. Furthermore, RG-WP stimulated the secretion of insulin and reduced the glycogen content in the liver of normal mouse.

〔Carbohydr. Res., **224**, 201-208 (1992)〕 [Lab. of Hygienic Chemistry]

The Distribution of Carboxymethyl Groups in *O*-(Carboxymethyl) ated (1→3)-β-D-Glucans and (1→3)-α-D-Glucans.

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The distribution of the substituents in *O*-(carboxymethyl) ated, linear (1→3)-β-D-glucans, branched (1→3)-β-D-glucan, and (1→3)-α-D-glucans was analyzed by GLC and GLC-MS. The results indicated that the distribution of the substituents in *O*-(carboxymethyl) ated glucans was characteristic of glucan type, especially at position 2 on the glucosyl residues, and suggested that the conformation of the D-glucans affected the *O*-carboxymethylation pattern.