S14-3 Natural glycosides have fascinations of a natural medicine

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The progress of recent glycobiology reveals that a sugar chain plays a crucial role concern about cells-cells recognition between immunity, inflammation, and malignant tumor among the living bodies. In a recent study, it shared that it had activity for resistant bacteria when it changed a sugar chain part of antibiotic vancomycin that sugar chain region of a glycoside carried an important role on biological activity. To study a mechanism of action, a sample of enough quantity is necessary. However, isolating a sugar chain and a glycoside in pure form, difficulty follows sugar chain composition again, and a study is limited to some sugar chains. By the way, a glycoside is a group of compounds well known as an active principle of a nature drug. We have isolated a triterpene glycoside in Leguminosae plant having improved the liver disorder, and a steroid glycoside in Solanaceous genus plant having cytotoxic activity against human cancer cell lines and anti-HSV-1 activity. As a result, that an important role was suggested with aglycone part together with a sugar chain part of those glycosides by biological activity. However, many studies of sugar chains for glycoprotein and glycolipid are well known, a study of a sugar chain function of a glycoside of a natural drug has few examples, and a role of a sugar chain of a glycoside for pharmacologic action expression is almost non-elucidation. Therefore, as a biological tool investigating a function of a sugar chain of a natural glycoside, we start to study the synthesis of useful "glycoside" which, in addition, will utilize as a lead compound having biological activity.