S43-3 **Synthetic studies on natural products derived from amino acids using cycloaddition reactions of a nitrone**

◯Osamu TAMURA[1]

[1]Showa Pharm. Univ.

Nitrones **1** bearing ester group at α-position may have possibility as good synthetic precursors for α-amino acids. However, nitrones **1** exist as equilibrating mixtures of (*Z*)-**1** and (*E*)-**1**, hence 1,3-dipolar cycloaddition of nitrones **1** with alkenes often give mixture of *cis*- and *trans*-cycloadducts. As an alternative method, we designed and synthesized cyclic nitrone **2**, in which the geometry of nitrone is fixed in (*E*)-form and chirality is incorporated. It was found that cycloaddition of nitrone **2** with allyl alcohol **3** in the presence of $MgBr_2$ gave cycloadduct **5** exclusively whereas reaction of **2** with acrylic acid ester **4** afforded cycloadducts **6** in highly stereoselective manner. The synthetic applications of these reactions for neodysiherbaine A (**7**), maremycin A (**8**), and maremycin D_1 (**9**) will be presented.