

## S43-4 Synthetic investigation of catechins for development of probe molecule

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Epigallocatechin gallate (EGCG: **1**), which exhibits various biological activities, including cancer prevention, antiviral, or antimicrobial activities, is a major component of catechin derivatives derived from tea. The therapeutic potential of **1** and safe feature as food ingredient have attracted a great deal attention in recent years. Since these unique bioactivities are expected to be candidates for drug development, the detailed structure-activity relationship (SAR) study has been a significant work. However, investigations of such bioactivities have been limited to natural products and/or their derivatives. Thus, developing an efficient and flexible synthetic method has strongly been desired. During the course of our synthetic investigation on the gallo catechins, we have found that synthetic 5,7-dideoxy-epigallocatechin gallate (DO-EGCG) (**2**) possesses more potent anti-influenza activities than natural EGCG (**1**). Inspired by this finding, we have launched an investigation into the synthesis of aminopentyl 5,7-dideoxy-gallo catechin gallate (APDOEGCG: **3**). The amino group of **3** would be enable for readily incorporation of probe units (biotin, fluorescent and radioactive compounds) and immobilization with gel