In the course of our search for new bioactive compounds from basidiomycetes, four new compounds were isolated from fermentations of *Limacella illinita*. Illinitone A (1) exhibited weak phytotoxic and moderate nematicidal activities against *Caenorhabditis elegans*, illinitone B (2) was moderately cytotoxic, while limacellone (3) exhibited weak cytotoxic and phytotoxic activities. The muurolane sesquiterpene 4a was found to be inactive in the assays performed here. Limacellone (3), which appeared to be related with the illinitones 1 and 2, has a new C_{15} carbon skeleton. It is possible that compounds 1, 2 and 3 are terpenoids/secoterpenoids, but their biosyntheses were not investigated.

*Key words: Limacella illinita, Illinitones, Limacellone, 11-Desoxyeleganthol*