29amA-294

植物由来物質の行動薬理学的研究（26）：ムスカリン性アセチルコリン拮抗薬スコポラミンの作用を減弱するゼラニウム精油の GC/MS による分析

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We have previously shown that essential oil of geranium (GER) (*Pelargonium graveolens*) does not produce any significant effect on ambulation but reduces the ambulation-promoting effect of scopolamine (SCP), a muscarinic cholinergic antagonist, in mice, suggesting that GER reduces an SCP effect specifically. The present study analyzed GER using GC/MS to determine its constituents. Used apparatus and conditions were as follow:

GC: Agilent 6890N, Capillary Column: DB-5MS (30 m × 0.25 mm)

Split Ratio: Splitless, Carrier Gas: He (Flow Rate 1.0 ml/mi n), Injection Temp.: 250℃, Column Temp.: 40℃(1min)→280℃(5℃/min, 10min), Separator Temp.　280℃

MS: JMS-700KII, Ion Source: EI, Ionization Current 300 μA, Ionization Energy: 70 eV, Sample Temp. 40℃ →280℃

The mass spectrum of each peak appeared on chromatogram of GER was analyzed, followed by a search of the library of mass spectra of known chemicals. Then, we determined candidates for each peak of GER chromatogram. Next, authentic standard substances for each candidate were analyzed using GC/MS under the same condition and the results for the two analyses were compared. When the retention time on the chromatogram and the mass spectrum pattern of each authentic standard substance were identical to one peak of GER, we concluded that the GER peak was that of the authentic standard substance. Finally, we determined 10 major constituents of GER. Those identified constituents of GER might include pharmacologically active chemical(s).