

DNA 配列解析及び形態観察に基づく *Sida* 属植物製品の実態調査

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Surveying studies on the botanical source of the herbal materials sold as the *Sida* products based on the genetic and the microscopic features

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## Abstract

During the course of our study on the borderline of pharmaceuticals to non-pharmaceuticals, the morphological features and the internal transcribed spacer (ITS) sequences in the nuclear rDNA of *Sida* plants and the crude drugs/health foods so called *Sida* products were investigated. As the results, we revealed that 7 of 11 products tested contained *Sida* plants and 3 products among them included the other plant material(s) together with *Sida*. The ITS sequences of *Sida* plants observed in this study were classified into 6 genotypes. One of them is identical with that of *Sida fallax* whereas the others had no identical sequence on the international nucleotide sequence databases. On the other hand, other species including *Urena*, *Malva* and *Triumfetta* plants of the family, Malvaceae were detected from 7 products.

In field survey on Oahu Island, the state of Hawaii, USA, Malvaceus plants possessing a *Sida* like flower were observed at the same place together with *Sida* plant. This growing environment in field is likely to be one of the reasons for the contamination in the products. Simultaneously, our field survey suggests that the appearances of the flowers were not critical points for the identification of *Sida* plants. Based on microscopic observations, we found that the stellate hair on leaves and the features of mericarps were suitable for the purpose.

In conclusion, the exact identification of their botanical origin is important for regulation of *Sida* products on the borderline of pharmaceuticals to non-pharmaceuticals.

Keywords : 食薬区分、*Sida* 属植物、DNA 配列解析、形態観察Borderline of pharmaceuticals to non-pharmaceuticals, *Sida* species, DNA sequence analysis, morphological observation

## I 緒言

*Sida* 属は、熱帯—温帯地域を中心に、世界に 100 種以上が分布するアオイ科 (Malvaceae) 最大の属である<sup>1-3)</sup>。

*Sida* 属植物の中には、アーユルヴェーダやユナニー、中医学などの伝統医学において、リウマチや淋病治療、解熱鎮痛、利尿、消炎など、様々な目的で使用される *S. cordifolia* L., *S. rhombifolia* L., *S. acuta* Burm. f. など、強い薬理作用

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