Supporting Information to:

Molecular Authentication of the Traditional Dai Medicinal Plant

*Croton caudatus*

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Dai Medicine

Dai Medicine is associated with the Theravada Buddhism and is practiced in the South Yunnan Province, China.

Detection of Mixtures of *Croton caudatus* and Adulterants

We mixed commercial *C. caudatus* and *C. kongensis* to simulate the presence of a *C. kongensis* contaminant and isolated DNA from it as well as pure material of *C. caudatus*, *C. kongensis*, *C. cascarilloides* and *C. crassifolius*. DIG-labeled probes of *Croton caudatus* and *Croton kongensis* were hybridized to a gDNA array of the five samples. The hybridization images are shown in Figure 2S. Figure 2S.A shows that both the *C. caudatus* and the mixed sample were correctly detected by probes of *Croton caudatus*. Figure 2S.C shows that both the mixed sample and *C. kongensis* were definitely detected by probes of *Croton kongensis*. The identification experiments revealed that each of the species-specific probes is capable of specifically identifying the gDNA from the species it represents. These results demonstrate that DNA identification and verification in herbal mixtures can be performed by multiple species-specific probes screened.
### Fig. 1S Aligned sequences of rDNA ITS from Croton caudatus, C. kongensis, C. cascarilloides, C. crassifolius and C. lachnocarpus in the region. Dashes are gaps required for alignment.

<table>
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<th>Species</th>
<th>Sequence 1</th>
<th>Sequence 2</th>
<th>Sequence 3</th>
<th>Sequence 4</th>
<th>Sequence 5</th>
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<td>C. caudatus</td>
<td>TTTGTCAGG</td>
<td>GCGTTGCGG</td>
<td>CACGTGTG</td>
<td>TGGCACTG</td>
<td>CTCATTC</td>
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Fig. 2S Images and signal intensity plots of hybridization of the species-specific probes to the gDNAs array of mixed samples. Columns of spots on each array from left to right are (1) *C. cascarilloides*, (2) *C. caudatus*, (3) mixed samples of *C. caudatus* and *C. kongensis*, (4) *C. kongensis*, (5) *C. crassifolius*. A Hybridization of the species-specific probes of *Croton caudatus* to the five gDNAs arrays. C Hybridization of the species-specific probes of *Croton kongensis* to the five gDNAs arrays. B and D Signal intensities of (A) and (C).