

Molecular Characterization of Five Medicinally Important Species of *Typhonium* (Araceae) through Random Amplified Polymorphic DNA (RAPD)

Laxmikanta Acharya^a, Arup Kumar Mukherjee^a, Pratap Chandra Panda^{b,*}, and Premananda Das^c

^a DNA Fingerprinting Laboratory, Plant Biotechnology Division, Regional Plant Resource Centre, Nayapalli, Bhubaneswar 751 015, Orissa, India

^b Taxonomy and Conservation Division, Regional Plant Resource Centre, Nayapalli, Bhubaneswar 751 015, Orissa, India. E-mail: pcpanada2001@yahoo.co.in

^c Indian Institute of Technology, Kharagpur, West Bengal, India

* Author for correspondence and reprint requests

Z. Naturforsch. **60c**, 600–604 (2005); received January 7/February 16, 2005

The interrelationship of five medicinally important species of *Typhonium* (Araceae) including *T. venosum*, which was previously placed under the genus *Sauromatum*, was inferred by analysis of random amplified polymorphic DNA (RAPD). DNA from pooled leaf samples was isolated and RAPD analysis was performed using 20 decamer oligonucleotide primers. Out of a total of 245 bands amplified, 12 were found to be monomorphic while 233 bands were polymorphic including 86 species-specific bands. The genetic similarities were analyzed from the dendrogram constructed by the pooled RAPD data using a similarity index. The dendrogram showed two distinct clades, one containing *T. roxburghii*, *T. trilobatum* and *T. venosum* and the other containing the remainder two species, i.e. *T. diversifolium* and *T. flagelliforme*. Both the clusters shared a common node approx. at 23.7% level of similarity. The maximum similarity of 31.2% was observed between *T. venosum* and *T. trilobatum*. In view of its close genetic similarity with other members of *Typhonium*, transfer of *Sauromatum venosum* to the genus *Typhonium* and merger of the two genera was supported.

Key words: Molecular Taxonomy, Genomic Relationship, RAPD, *Typhonium*