

**USE OF GENETIC AND PROTEIN MARKERS FOR  
CHARACTERIZATION OF MEDICINAL AYURVEDIC PLANTS**

*Gursimran Kaur P. Matharu*<sup>1</sup>, Damodar Thappa<sup>2</sup>, Vivek Kamble<sup>2</sup>, Archana  
Krishnan<sup>2</sup>, Ramesh T. Sane<sup>1</sup>

<sup>1</sup>Guru Nanak Institute for Research and Development, Guru Nanak Khalsa College  
of Arts, Science & Commerce, Matunga, Mumbai – 400 019 and <sup>2</sup>BioGenomics  
Research Center, Thane- 400607, India

*E-mail Address:* [simran\\_matharu29@hotmail.com](mailto:simran_matharu29@hotmail.com)

**Presenting author** = Gursimran Kaur P. Matharu

**First author**

Gursimran Kaur P. Matharu

Guru Nanak Institute for Research and Development, Guru Nanak Khalsa College of  
Arts, Science & Commerce, Matunga, Mumbai – 400 019

*E-mail Address:* [simran\\_matharu29@hotmail.com](mailto:simran_matharu29@hotmail.com)

**Second author**

Ramesh T. Sane

Guru Nanak Institute for Research and Development, Guru Nanak Khalsa College of  
Arts, Science & Commerce, Matunga, Mumbai – 400 019

*E-mail Address:* [drrtsane@rediffmail.com](mailto:drrtsane@rediffmail.com)

**Third author**

Archana Krishnan

BioGenomics Research Center, Thane- 400607

*E-mail Address:* archana.krishnan@biogenomics.co.in

**Fourth author**

Damodar Thappa

BioGenomics Research Center, Thane- 400607

*E-mail Address:* damodarthappa@gmail.com

**Five author**

Vivek Kamble

BioGenomics Research Center, Thane- 400607

*E-mail Address:* vivekmkamble@gmail.com

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Gene based coding of medicinal plants has become an important international intellectual property rights issue along with tracking biodiversity. Correct identification and characterization using macroscopy, microscopy and chemical profiling have limitations in identifying closely related species and adulterants that may resemble the genuine botanical material<sup>1</sup>.

In the present study we have developed DNA/Protein fingerprint for identification of contaminants and adulterants in herbal medicine formulations taking *Hemidesmus indicus* as case example.

Plant selected is found in a few parts of Southern India and the roots, especially, have been found to have very high medicinal properties<sup>2</sup>. However, roots of these plants are extremely deep below the ground and hence there is tendency of plant collectors or

traders to adulterate plant material with easily available substitute plants. It is used to make beverages and also used in traditional medicine. Plant enjoys a status as tonic, alterative, demulcent, diaphoretic, diuretic and blood purifier.

The major outcomes of this study includes, RAPD fingerprint for all the plants selected under study, RAPD-SCAR marker for identification of main plant and protein fingerprinting for identification of plant parts used.

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