

3RD WORLD PLANT GENOMICS AND PLANT SCIENCE CONGRESS & 4TH WORLD MYCOLOGY AND MUSHROOM CONGRESS

July 15-16, 2019
Osaka, Japan

Molecular characterization of ten *Heliconia* (*Heliconiaceae*) genotypes by means of RAPD markers

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Heliconia a trendiest specialty cut flower of tropics is securing popularity for its inflorescence's charismatic form and alluringly blended hues in the world and in Indian market too. It is a monophyletic genus with roughly 200 to 250 species of neotropical origin. It resides alone in Heliconiaceae family of Zingiberales order former incorporated in Musaceae for fusion of inverted flowers, single staminode and drupe type fruits elite for it (Berry and Kress, 1991). Exploitation of molecular markers may aid in perceptive recognition of several species and varieties of them since taxonomic confusions and uncertainties subsist amid them (Kumar et al., 1998). In this context, ten species and varieties were analyzed using RAPD (Williams et al., 1990) markers. Chosen thirty primers among seventy, amplified 1281 polymorphic DNA fragments with each primer giving a mean of 42.7 polymorphic bands. The genetic similarity matrix constructed with Jaccard's coefficient using RAPD marker scores showed that the highest value was

between *H. psittacorum* var. 'Choconiana' and *H. psittacorum* var. 'Lady Di' (0.384), while the lowest was between *H. psittacorum* var. 'Choconiana' and *H. stricta* var. 'Dwarf Jamaican Red' (0.244). Ten species and varieties of *Heliconia* formed three distinct clusters at similarity coefficient value of 0.33, implying a parallelism between genetic and morphologic or taxonomic variability of *Heliconia* genotypes. 'Golden Torch', 'Choconiana', 'Lady Di' and *H. wagneriana* included in cluster I while 'Choconiana', 'Lady Di' formed a more cohesive entity. On the contrary, *H. stricta* var. 'Dwarf Jamaican Red' produced a separate cluster validating that taxonomically related entries clustered together and distant ones segregated. So, the current sequels demonstrate that RAPD is a rapid, relatively economical and functional for the characterization of genetic divergence between different *Heliconia* genotypes.

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