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Regeneration of plants from *Murraya koenigii* Spreng by tissue culture

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Abstract : Regeneration of *Murraya Koenigii* Spreng by tissue culture was carried out to induce regeneration of plants on MS medium supplemented with various hormones. Different concentration of BAP and KN were used. Small plants parts were used as explants.

Keywords : Regeneration, *M. koenigii*, Tissue culture

INTRODUCTION

Murraya koengii Spreng is commonly known as "Curry Leaf" which belongs to the family Reetaceae. The plant oil contains about 39 compounds of which the major are 3 - carene and caryophullene[1]. The curry leaf tree often forms under growth in forest throughout India and Andaman Islands upto an attitude of 1500m. It is evergreen deciduous small shrub reaches a maximum height about 2.5 meter. The main stem is dark green to brownish with numerous dots on its surface. The root extract also attributes many medicinal properties like anti-bacterial, anti inflammatory and anti-feedant etc. which have been used to relieve pain associated with kidney[2].

MATERIALS & METHODS

Green young explants of 4 - 6 months old *Murraya koengii* Spreng. Were collected from our garden. They were washed with running tap water and 1 – 2 drop of savlon for 2 minutes. They were surface sterilized in 70% ethanol for 30 secondes and immersed in 0.1% $HgCl_2$ for ½ minutes. Then rinsed with autoclaved distilled water (5 times). Small parts of plants were inoculated in test tubes containing MS basal medium.

Culture Medium — Solid MS medium containing 4% sucrose with varying concentrations of BAP and Kinetin were used for direct regeneration. The pH of the media was adjusted to 5.8 before gelling with agar (0.8% w/v) and autoclaved for 15 to 20 minutes at 15^{P81} at 120^0C. The small parts of plants were inoculated into incubated in culture room.

Culture Condition — Cultures were incubated at 25 ± 2^0C under cool fluorescent light (1500 – 2000 Lux) with 16 H/8h light dark cycle. Each treatment consisted of minimum 100 explants and all experiments were repeated at least 5 times.

OBSERVATION

Regeneration of *Murraya koenigii* Spreng. In various combination of cytokines incorporated in MS medium on the different explant.

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Effect of different concentrations of BAP + KN in MS Medium showing regeneration of Plants of *Murraya koengii* Spreng.

Phytochromosomes added to MS Medium	% showing regenerated plants			
	2nd Week	3rd Week	4th Week	5th Week
BAP 1.5 mg/l + KN 0.2 mg/l	00	01	01	02
BAP 2.0 mg/l + KN 0.5 mg/l	00	02	03	03
BAP 2.5 mg/l + KN 1.0 mg/l	05	11	16	30
BAP 3.0 mg/l + KN 1.5 mg/l	10	30	46	60

RESULT AND DISCUSSION

In this investigation small part of explants 2 – 2.5 c.m. were cultured on MS medium with different combination and concentration of hormones. Regeneration of plants were obtained after 35 days. Likewise regeneration of chrysanthemum plants has also been reported from florets[3-4].

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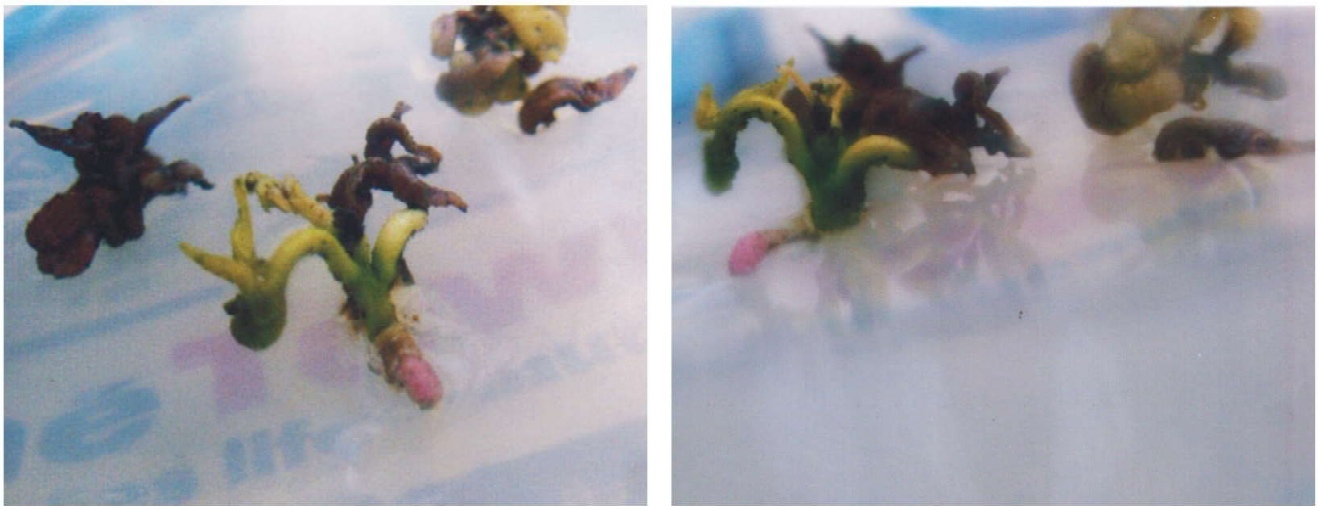

Regenaration of plants of *Murraya koengii* Spreng.

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