

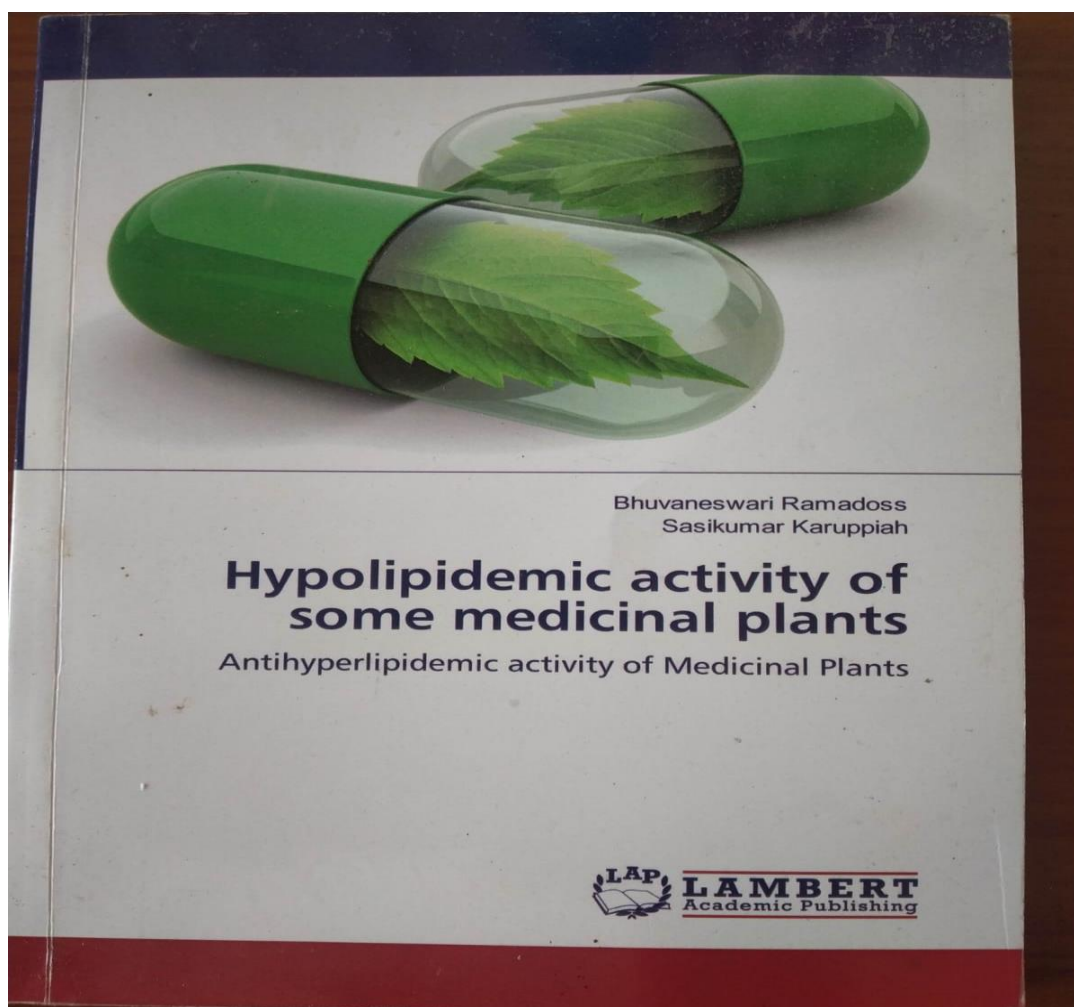
Criterion III - Research, Innovations and Extension

3.4.4 Number of books and chapters in edited volumes published per teacher during the last five years

3.4.4.1 ECOPIES OF BOOKS AND CHAPTERS IN EDITED VOLUMES PUBLISHED PER TEACHER DURING THE LAST FIVE YEARS

Year 2018

37. Dr. K. SASIKUMAR	HYPOLIPIDEMIC ACTIVITY OF SOME MEDICINAL PLANTS	---
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38. Dr.G.SUJATHA

THIDIAZURON: FROM UREA
DERIVATIVE TO PLANT
GROWTH REGULATOR

Chapter
THIDIAZURON: A POTENT
PHYTOHORMONE FOR IN
VITRO REGENERATION

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Thidiazuron: A Potent Phytohormone for In Vitro Regeneration

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Sujatha Govindaraj

Abstract

Thidiazuron ($C_9H_8N_2OS$) is one of the most effective substituted phenylureas that has been examined for cytokinin-like activity in plant tissue cultures. A wide range of physiological responses were ascertained in response to TDZ application in several plant species. Apart from its cytokinin-like activity, TDZ has been steered to modulate the endogenous auxin levels. However, it remains to be resolved whether it possesses an auxin activity or if it is concerned with auxin metabolism. It induces numerous morphogenic responses, starting from tissue proliferation to induction of shoot buds and somatic embryos. It has been shown to promote shoot regeneration expeditiously than that of other cytokinins, and organized centers of growth are attained at much lower concentrations. Other prospects embody modification in cell membrane, energy levels, nutrient absorption, transport, assimilation, etc. TDZ exhibits the distinctive property of mimicking both auxin and cytokinin effects on growth and differentiation of cultured explants, though structurally it is different from either auxins or purine-based cytokinins. The effectiveness of TDZ as an inductive chemical for ontogenesis is not restricted to tissue culture systems, and the regeneration is settled in vivo further. During this review, many recently revealed studies on characterization of TDZ-induced in vitro regeneration are bestowed and mentioned.

Keywords

Thidiazuron · In vitro morphogenesis · Callusing · Somatic embryos · Metabolism

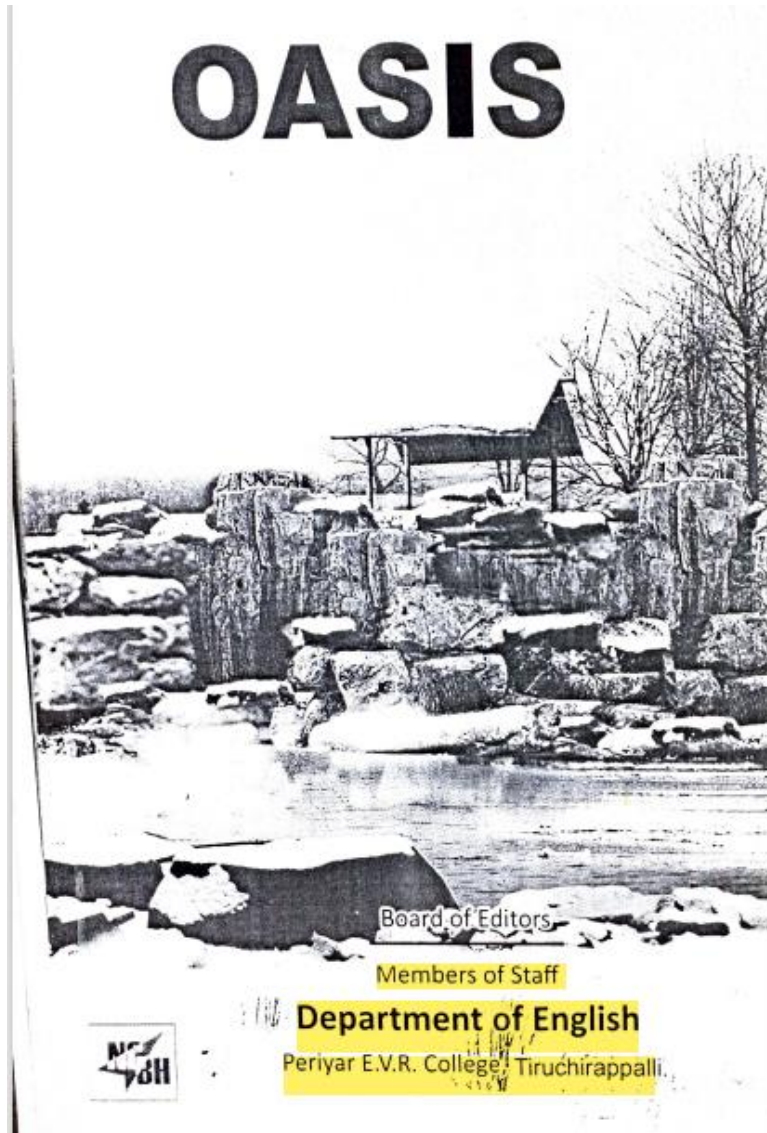
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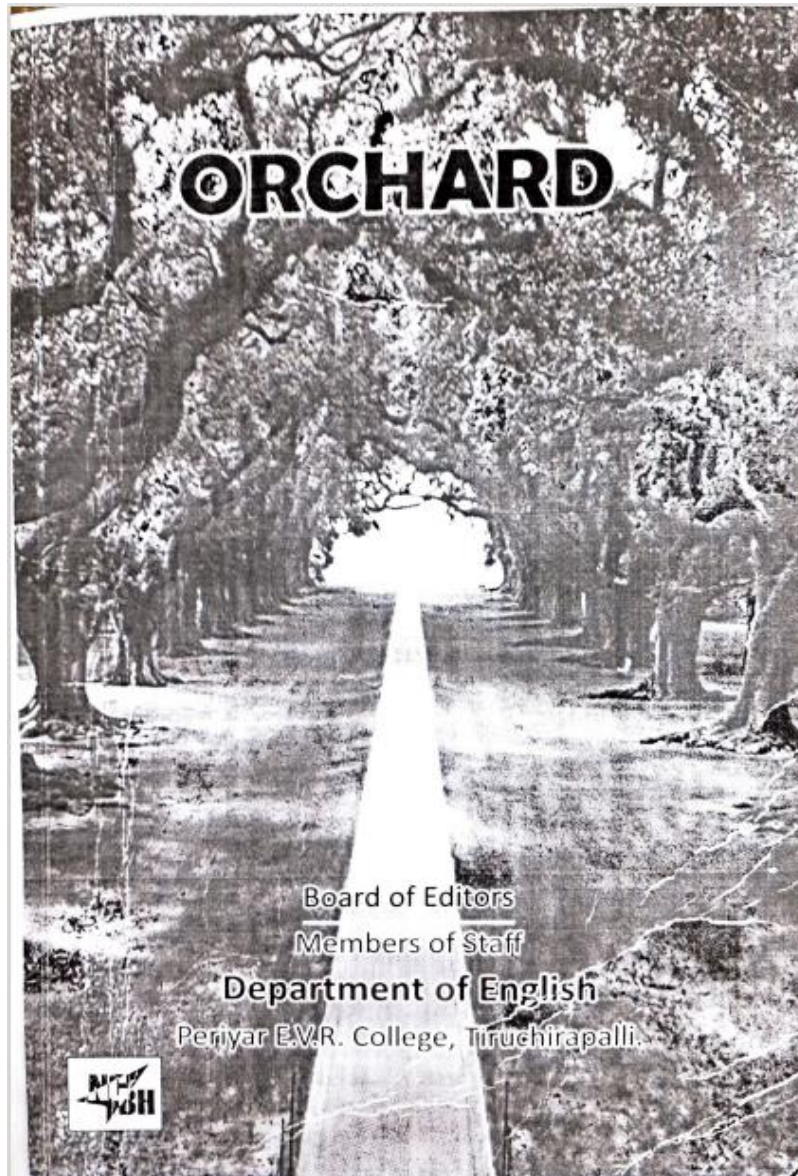
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