

## **Effect of thidiazuron on somatic embryogenesis and micro-tuber formation in *Penellia ternata* Breit.**

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This experiments were conducted to determine the effect of thidiazuron on somatic embryogenesis and microtuber formation of *Penellia ternata* B. The leaf segments of *P. ternata* B. were excised and cultured on Murashige and Skoog medium with auxins and thidiazuron. Callus was subcultured on liquid medium until a fine suspension cells were obtained. 3 ml of well suspension cultured cells were transferred to 100 ml flask containing 20 ml liquid medium with different salt strength. The rate of shoot regeneration differed depending on the growth regulators. The addition of TDZ to the medium had better regeneration than that of any other treatments of growth regulators. Microtubers were formed on medium with auxin and TDZ. The single addition of thidiazuron to the medium produced more microtubers per explant than that of auxin. When 5  $\mu$ M TDZ was supplemented on medium, about 25 microtubers per explants on 30 day culture, about 88 microtubers on 60 day culture were formed. These microtubers could be valuable materials for direct mass propagation and pharmaceutical uses as chinese medicine. Formation of somation of somatic embyos was induced on liquid medium with 2,4-D or without 2,4-D. Treatment of 1mg/L ABA at globular stage of somatic embryos was effective for increasing uniformity and inhibitory abnormality.