

(別紙様式-3)
(Attached Form 3)

平成 29 年 1 月 6 日
Date: 2017. 1. 6

学位 (博士) 論文内容の要旨 Summary of Thesis Contents

1. 論文申請者 環境園芸学専攻 生物資源科学 コース
Thesis Applicant Division of Environmental Horticulture Course: Bioresource science

(ふりがな) ナンタ プンタリカ

平成 24 年度入学 学生証番号 _____ 氏名 NUNTHA BUNTARIKA
Year of Enrollment Student ID No. Name

2. 論文題名 (外国語の場合は, その和訳を併記)

Title of Thesis (foreign language titles must be accompanied by a Japanese translation)

*Cytogenetic Study on Genomic Affinity Between *Torenia fournieri* and *Torenia baillonii**

Torenia fournieri と *Torenia baillonii* の間のゲノム親和性に関する細胞遺伝学的研究

3. 論文概要 (600字程度)

Abstract (Approx. 300 words)

To analyze the genomic affinity between *Torenia fournieri* and *Torenia baillonii*, a diploid hybrid ($2n = 2x = 17$) and a triploid hybrid ($2n = 3x = 26$) were produced. The behavior of meiotic chromosomes in diploid hybrid and triploid hybrid was examined by fluorescence in *situ* hybridization (FISH). The FISH analysis revealed formation of inter-specific pairing. The mean pairing configuration of the diploid hybrid was $1.95 \text{ I} + 6.75 \text{ II} + 0.48 \text{ III}$ and that of the triploid hybrid was $5.6 \text{ I} + 6.74 \text{ II} + 2.44 \text{ III}$. Genome analysis in the triploid hybrid showed that the genomic affinity (x) between the two species was 0.79. The relative low x value indicated that the two genomes have high genome affinity. In addition, the hybrid and its BC_1F_1 plants contained 34 chromosomes, but the chromosome compositions were deviated from regular allotetraploid: these plants had 1-3 extra *T. fournieri* chromosomes and lost *T. baillonii* chromosome complementarity. In conclusion, *T. fournieri* and *T. baillonii* might share homoeologous chromosome with high affinity, in spite of difference in chromosome number.

4. 学位に付記する専攻分野の名称 博士 (学術)

Degree Name Doctor of Philosophy

主任研究指導教員氏名 Takato Koba
Name of Main Academic Advisor