國立中興大學
National Chung Hsing University

國立中興大學農藝學系-分子細胞遺傳學研究室
Department of Agronomy National Chung Hsing University
Laboratory of Molecular Cytogenetics

實驗室主持人

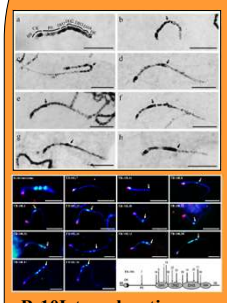
鄭雅銘
(Ya-Ming Cheng)

Eduction:
PhD: Institute of Molecular Biology, National Chung Hsing University, Taiwan
BSc: Department of Botany, National Chung Hsing University, Taiwan

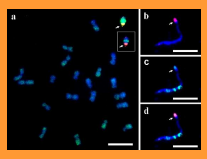
Professional Experience:
Professor in Agronomy Department, National Chung Hsing University, Taiwan
Postdoctoral Research Fellow in the Department of Medical Research, China Medical University Hospital, Taiwan

研究主題

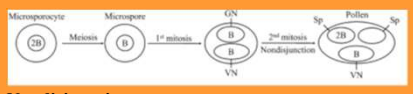
Maize B-chromosome


B-10L translocations

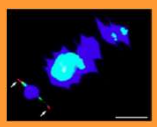

B deficiencies


FISH analysis


Pachytene chromosomes

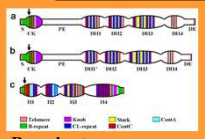

Nondisjunction

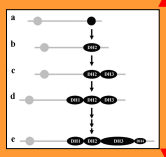

Pollen grain


Anaphase I

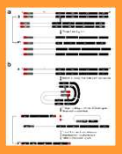
Chromosome structure

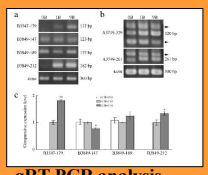
Genetic behavior

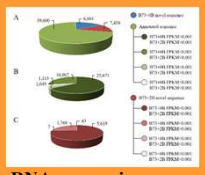

B variants

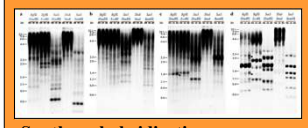


Evolution & Origin




qRT-PCR analysis

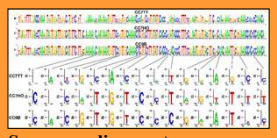

RNA sequencing

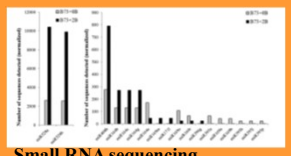

Southern hybridization

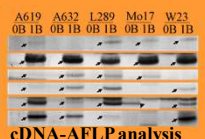
Molecular organization

Physiological Function

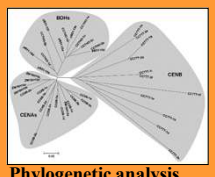
Gene expression

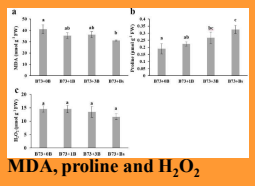

Sequence alignment

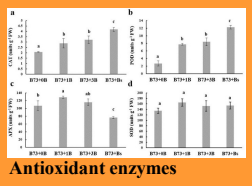

Small RNA sequencing

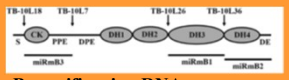


cDNA-AFLP analysis


Phylogenetic analysis


MDA, proline and H_2O_2


Antioxidant enzymes


B-specific microRNA

研究成果

Li CH, Wu PH, **Cheng YM*** (in press) Identification of cDNA-AFLP fragments associated with the B chromosome from different developmental stages of maize anthers. Chromosome Res. (SCI)

Cheng NY, Hsu YT, Lin TC, **Cheng YM*** (2025) Physiological responses of maize (*Zea mays* L.) seedlings to the B chromosome. Nucleus. DOI: 10.1007/s13237-025-00534-5. (**ESCI**)

Huang YH, Lin TC, Chiou WY, **Cheng YM*** (**2021**) The *r-X1* deletion induces terminal deficiencies in the maize B chromosome. Chromosome Res 29: 351-360. DOI: 10.1007/s10577-021-09671-4. (SCI)

Hong ZJ, Xiao JX, Peng SF, Lin YP, **Cheng YM*** (**2020**) Novel B-chromosome-specific transcriptionally active sequences are present throughout the maize B chromosome. Mol Genet Genomics 295: 313-325. DOI: 10.1007/s00438-019-01623-2. (SCI)

Huang YH, Peng SF, Lin YP, **Cheng YM*** (**2020**) The maize B chromosome is capable of expressing microRNAs and altering the expression of microRNAs derived from A chromosomes. Chromosome Res 28: 129-138 DOI: 10.1007/s10577-019-09620-2. (SCI)

Tseng SH, Peng SF, **Cheng YM*** (2018) Analysis of B chromosome nondisjunction induced by the *r-X1* deficiency in maize. Chromosome Res 26: 153-162. DOI: 10.1007/s10577-017-9567-7. (**SCI**)