KARYOTYPE AND CHROMOSOME CHARACTERIZATION OF *HERSILIA SAVIGNYI* (ARANEAE: HERSILIDAE)

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Spiders represent the most diverse group of arachnids. However, cytogenetic studies on Indian spider taxa are scarce, with only four species characterized so far in Hersilidae. In this study, cytogenetic characterization of Hersilia savignyi was performed using conventional, C- and NOR banding techniques for the first time. The karyotype data revealed a diploid number of 2n♂ = 31 (28 autosomes + $X_1X_2X_3$♂), consisting of acrocentric chromosomes, and exhibiting $X_1X_2X_3$ type of sex chromosome system (SCS). Early pachytene stage of male meiosis showed the presence of 'bouquet' formation. C-banding presented the localization of Centromeric constitutive heterochromatin at the distal ends of chromosomes. Silver nitrate staining of Nucleolar Organizer regions (NORs) at the distal telomeric regions of 3rd and 6th pair of chromosomes in the karyotype. The cytogenetic information obtained from this study is a valuable addition to the existing data on Hersilid spiders and also to infer evolutionary relationships within and among spider species.

Key words: *Hersilia savignyi, meiotic chromosomes, bouquet formation, karyotype, C- banding, NOR impregnation.*

ХАРАКТЕРИСТИКА КАРІОТИПУ Й ХРОМОСОМ *HERSILIA SAVIGNYI* (ARANEAE: HERSILIDAE)

Павуки становлять найрізноманітнішу групу павукоподібних. Однак, цитогенетичні дослідження індійських таксонів павуків є нечисленними, і до цього часу охарактеризовано лише чотири види з родини Hersilidae. У цьому дослідженні було вперше використано традиційну техніку, C- та NOR-бендинг для визначення цитогенетичної характеристики *Hersilia savignyi*. Дані каріотипу продемонстрували диплоїдну кількість 2n♂ = 31 (28 аутосом + $X_1X_2X_3$♂), що складалися з акроцентричних хромосом, і $X_1X_2X_3$ тип системи статевих хромосом (SCS). Рання стадія пахінеми чоловічого мейозу показала наявність формування «букета». C-бендинг визначив локалізацію центрометричного конститутивного гетерохроматину на дистальних кінцях хромосом, а зафарбовування області ядерцевих організаторів (NOR) за допомогою нітрату срібла — в дистальних теломерних областях 3-ї та 6-ї пари хромосом у каріотипі. Цитогенетична інформація, отримана в цьому дослідженні, є цінним доповненням до поточних даних про павуків Hersilid та припускає еволюційні відносини всередині окремих видів павуків та між ними.

Ключові слова: *Hersilia savignyi*, хромосоми мейозу, формування «букета», каріотип, C-бендинг, імпрегнація NOR.

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