

褐家鼠精母细胞中联会复合体的研究IV.常染色体联会复合体的发育和偶线期节的研究 Study of the Synaptonemal Complexes in Spermatocytes of the Brown Rat (*Rattus norvegicus* Caraco) IV. The Study of Zygotene Nodules and Development of Autosomal Synaptonemal Complexes

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摘要 采用表面铺展—SDS处理、硝酸银和磷钨酸(Phosphotungstic acid, PTA)染色电镜技术,研究了褐家鼠精母细胞中常染色体联会复合体(Synaptonemal complex, SC)的发育及偶线期节(Zygotene nodule, ZN)。在褐家鼠精母细胞的细线期,常染色体轴心(Axial cores, ACs)已形成,同源轴心在空间上靠近,偶线期SCs开始形成,到粗线期SCs完全形成,于双线期SCs开始解体。在双线期除了个别SCs侧生组分分开外,大多数SCs发生碎片化(fragmentation)。在偶线期未配对的ACs和SCs侧生组分及中央组分上均发现电子密度高的球形或椭圆形的节状结构——偶线期节,ZNs在同源染色体配对过程中起很重要的作用。

Abstract Zygotene nodules (ZNs) and development of the brown rat *Rattus norvegicus* caraco have been studied, by surface spreading with SDS treatment, silver and phosphotungstic acid (PTA) staining techniques. The results as follows: Chromosomal axial cores (ACs) formed during leptotene nuclei in spermatocytes of the brown rat, some homologous axial cores were close to each other. The formation of SCs starts at zygotene, completed at pachytene and disintegrates at diplotene. In diplotene, lateral elements of a few SCs separate and the presence of fragmented SCs takes place. During zygotene on unpaired ACs and lateral elements and central elements of SCs, there are dense spherical or elliptical nodules—zygotene nodules (ZNs). They play an important part in the process of homologue pairing.

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