

Distribution of lectin-bindings in the testis of the lesser mouse deer, *Tragulus javanicus*

ABSTRACT

The distribution of lectin bindings in the testis of the smallest ruminant, lesser mouse deer (*Tragulus javanicus*), was studied using 12 biotinylated lectins specific for d-galactose (peanut agglutinin PNA, *Ricinus communis* agglutinin RCA I), N-acetyl-d-galactosamine (*Dolichos biflorus* agglutinin DBA, *Vicia villosa* agglutinin VVA, Soybean agglutinin SBA), N-acetyl-d-glucosamine and sialic acid (wheat germ agglutinin WGA, s-WGA), d-mannose and d-glucose (*Lens culinaris* agglutinin LCA, *Pisum sativum* agglutinin PSA, Concanavalin A Con A), l-fucose (*Ulex europaeus* agglutinin UEA I), and oligosaccharide (*Phaseolus vulgaris* agglutinin PHA-E) sugar residues. In Golgi-, cap-, and acrosome-phase spermatids, lectin-bindings were found in the acrosome (PNA, RCA I, VVA, SBA, WGA and s-WGA), and in the cytoplasm (PNA, RCA I, VVA, SBA, WGA, LCA, PSA, Con A and PHA-E). s-WGA binding was confined to the spermatid acrosome, but other lectins were also observed in spermatocytes. In spermatogonia, VVA, WGA, Con A, and PHA-E bindings were observed. Sertoli cells were intensely stained with DBA and Con A, and weakly with PHA-E. In interstitial Leydig cells, RCA I, DBA, VVA, Con A, PSA, LCA, WGA and PHA-E were positive. UEA I was negative in all cell types including spermatogenic cells. Unusual distribution of lectin-bindings noted in the testis of lesser mouse deer included the limited distribution of s-WGA only in the spermatid acrosome, the distribution of DBA in Sertoli cells, Leydig cells and lamina propria, and the absence of UEA I in all type cells. The present results were discussed in comparison with those of other animals and their possible functional implications.

Keyword: Lectin-bindings; Testis; Lesser mouse deer; *Tragulus javanicus*