

ABSTRAK

DISTRIBUSI GLIKAN N-ASETILGALAKTOSAMIN (GalNAc) DAN N-ASETILGLUKOSAMIN (GlcNAc) PADA FOLIKEL RAMBUT MUSANG LUWAK (*Paradoxurus hermaphroditus*)

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Musang luwak (*Paradoxurus hermaphroditus*) merupakan satwa endemik Indonesia dengan ciri rambut berwarna gelap pada bagian dorsalnya. Pertumbuhan rambut musang luwak dipengaruhi oleh komponen esensial matriks ekstraseluler, yaitu glikosaminoglikan (GAG) yang terbentuk dari heksosamin (N-asetilglukosamin (GlcNAc) atau N-asetilgalaktosamin (GalNAc)) dan asam uronat. Diduga ekspresi GAG maksimal selama anagen, mulai berkurang saat katagen hingga telogen. Penelitian ini bertujuan mengetahui distribusi N-asetilgalaktosamin dan N-asetilglukosamin pada pertumbuhan folikel rambut musang luwak dengan pewarnaan histokimia lektin *Dolichos biflorus Agglutinin* (DBA) dan *Wheat Germ Agglutinin* (WGA). Satu ekor musang luwak dewasa digunakan pada penelitian ini. Blok paraffin dipotong setebal 5 μm untuk dijadikan *slide*. *Slide* diwarnai dengan lektin DBA dan WGA. Pengamatan hasil dilakukan menggunakan mikroskop cahaya dan didokumentasikan dengan *OptiLab Viewer*. Analisis hasil dilakukan secara semi-kuantitatif (*Lectin Score*) untuk menjelaskan intensitas dan distribusi yang terlihat berupa warna kromogen. Hasil penelitian ini adalah *lectin score* tertinggi ditemukan pada folikel rambut regio bulbar dan saat fase anagen. Berdasarkan hasil penelitian, dapat disimpulkan bahwa folikel rambut musang luwak memiliki residu N-asetilgalaktosamin dan N-asetilglukosamin yang cukup sehingga berpotensi direkomendasikan sebagai hewan model pertumbuhan rambut.

Kata kunci: folikel rambut, musang luwak, N-asetilgalaktosamin, N-asetilglukosamin, *Paradoxurus hermaphroditus*

ABSTRACT

DISTRIBUTION OF N-ACETYL GALACTOSAMINE (GalNAc) AND N-ACETYL GLUCOSAMINE (GlcNAc) GLYCAN IN THE HAIR FOLLICLES OF ASIAN COMMON PALM CIVET (*Paradoxurus hermaphroditus*)

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Asian Common Palm Civet (*Paradoxurus hermaphroditus*) is Indonesia's endemic fauna and characterize by dark-colored hair located on its dorsal. Hair growth is influenced by essential components of the extracellular matrix, namely glycosaminoglycans (GAGs) formed from hexosamines (N-acetylglucosamine (GlcNAc) or N-acetylgalactosamine (GalNAc)) and uronic acid. It is suspected that GAG expression is maximized during anagen, starting to decrease during catagen to telogen. This study aims to map the distribution of N-acetylgalactosamine and N-acetylglucosamine in growing civet hair follicles by histochemical staining of *Dolichos biflorus* Agglutinin (DBA) and Wheat Germ Agglutinin (WGA) lectins. One adult Asian Common Palm Civet was used in this study. Its skin paraffin block was cut into 5µm slides. Slides were stained with DBA and WGA lectins. Observation were made under light microscope and documented with OptiLab Viewer. The results were analyzed semi-quantitatively (Lectin Score) to explain the intensity and distribution of visible chromogen color. The results of this study were the highest lectin score found in bulbar region and during the anagen phase of hair follicles. Based on the results of the study, it can be concluded that Asian Common Palm Civet hair follicles have sufficient N-acetylgalactosamine and N-acetylglucosamine residues so that they may be recommended as an animal model in hair growth.

Keywords: Asian common palm civet, hair follicles, N-acetylgalactosamine, N-acetylglucosamine, *Paradoxurus hermaphroditus*,