

台灣獼猴前白蛋白型與白蛋白型的遺傳多態性

趙明杰* 宋永義**

趙明杰 宋永義 1991。台灣獼猴前白蛋白型與白蛋白型的遺傳多態性。動物園學報 3:35-40

摘要：為瞭解台灣獼猴前白蛋白型與白蛋白型的遺傳變異，並與馬來猴、豬尾猴及日本猴間比較，供做親子鑑別之參考。取自台北市立動物園99頭台灣獼猴、33頭馬來猴、7頭豬尾猴及1頭日本猴，合計140個血液樣本，以直立式聚丙烯酰胺膠體進行電泳分析。結果前白蛋白型發現有四種表型，泳動最快的帶命名為D帶，其次為F帶，泳動最慢者為S帶，在F帶與S帶間出現三條較淡泳動帶的FS型。台灣獼猴前白蛋白型變異有F、FS與S三種表型，PAf佔優勢(0.773)；馬來猴亦具多態性，PAf的頻率高達0.833；豬尾猴則發現泳動較快的D與F型，其基因頻率分別是0.574與0.421，日本猴為泳動慢的S型。白蛋白型在此分析中不具多態性，而呈現獼猴共同表型的A型。

關鍵詞：獼猴、遺傳多態性、聚丙烯酰胺膠體電泳、前白蛋白、白蛋白

前言

獼猴前白蛋白型遺傳變異的研究很少，而且都沒有發現變異(Kawamoto & Ischak, 1981; Nozawa et al., 1982; Kawamoto et al., 1984)。至於 Weiss et al. (1971)以免疫電泳技術(Immuno electrophoretic technique)探討8種獼猴甲狀腺素結合前白蛋白(Thyroxine-binding prealbumin, TBPA)的遺傳變異，結果發現有F、FS與S三種表型，受PAF與PAS二共顯性對偶基因的控制。台灣獼猴呈多態性以PAf佔優勢，日本猴不具多態性全是S型，豬尾猴只有泰南發現過

1例FS型，餘全是F型。馬來猴呈多態型，仍以PAf佔優勢。

有關獼猴白蛋白的文獻亦不多。Shotake (1979)將獼猴白蛋白的共同表型命名為Albmac AA，變異表型為Albmac AB與BB，由二個共顯性基因Albmac A與Albmac B所控制，Albmac BB泳動帶的泳動率較Albmac AA快，而Albmac AB則含有二條主帶(main band)；Kawamoto & Ischak (1981)則在印尼蘇門答臘島上的猴群發現較Albmac A慢的泳動帶命名為Albmac C。

本篇旨在分析台灣獼猴前白蛋白與白蛋白的遺傳變異，並與馬來猴、豬尾猴與日本猴間

* 臺北市立動物園動物組

** 臺灣大學畜牧研究所

GENETIC POLYMORPHISMS OF PREALBUMIN AND ALBUMIN TYPES IN FORMOSAN MACAQUES, *Macaca cyclopis*

Ming-Chieh Chao* and Yung-Yi Sung**

ABSTRACT: In order to understand the genetic variation of prealbumin type and albumin type of Formosan macaques and to make a comparison among different species of macaques kept at Taipei Zoo, 99 from *Macaca cyclopis*, 33 from *M. irus*, 7 from *M. nemestrina* and one from *M. fuscata* were examined by vertical polyacrylamide gel electrophoresis. Four prealbumin types were found in the four macaque species. The fastest migrating band was designated as D band. The second band was designated as F band, and the slowest band was designated as S band. The three weakly stained bands between F and S band were designated as FS bands. In the *M. cyclopis* and *M. irus*, F, FS and S type of prealbumin were observed, and the frequency of allele PAF was as high as 0.773 and 0.833 respectively. In the *M. nemestrina*, the fast migrating D and F band of prealbumin were found, and the frequency was 0.571 and 0.429. In the *M. fuscata*, the slower migrating S type of prealbumin was observed. As far albumin, no polymorphism was found. Only A type of albumin was observed in all of the four species.

KEY WORDS: *Macaca*, genetic polymorphism, PAGE, prealbumin, albumin

*Collection Department, Taipei Zoo, Taipei, Taiwan, R. O. C.

**Graduate Institute of Animal Husbandry, National Taiwan University, Taipei, Taiwan, R. O. C.