

Prolactinstandard (vom Rind) verglichen. Sie betrug 5,0–7,0 E/mg, d.h. etwa 30% des Standards. Die wachstumsfördernde Wirkung, gemessen im Tibia-Test, lag unter 5% des WHO-Standards für Somatotropin.

**Summary.** A purification of human placental lactogen (HPL) by crystallisation is described. The hormone is characterized by the determination of its sedimentation

constant, biuret color value and extinction coefficient. The absence of impurities was checked by immunochemical methods using rabbit immune sera to whole human serum as well as to a crude fraction of HPL.

H. BOHN

*Behringwerke AG, Postfach 1130,  
D-3550 Marburg/Lahn (Deutschland), 5. Mai 1971.*

### Chromosomes of the Asian Flying Squirrel *Petaurista petaurista* (Pallas)

North American species of the subfamily Sciurinae exhibit diploid chromosome numbers ( $2n$ ) that range between  $2n = 30$ – $50$  and a  $2n$  of  $38$ – $40$  predominates in many genera<sup>1–6</sup>. Species from the Asian genera *Dremomys*, *Callosciurus* and *Sciurus* also possess  $2n$  of  $38$ – $40$ <sup>7</sup>. These and other observations suggested that a  $2n$  approximating  $2n = 38$ – $40$  characterized ancestral Sciurinae<sup>7</sup>.

Among the genera comprising the subfamily Petauristinae, only *Glaucomys* has been examined cytologically and both *G. volans* and *G. sabrinus* displayed  $2n = 48$  and a fundamental number of chromosome arms (NF) of  $74$ <sup>4</sup>. The present report describes the chromosomes of *Petaurista*, a second genus of the subfamily.

**Materials and methods.** Chromosomes were analyzed from a juvenile female giant flying squirrel collected from an unknown locality in the general vicinity of Bombay (India). The specimen was tentatively identified as *Petaurista petaurista* Pallas; the specimen is in the collection of the Museum of Zoology, University of Michigan. Chromosome preparations were made from a skin biopsy grown in culture by Dr. T. C. Hsu, M. D. Anderson Hospital and Tumor Institute, Houston, Texas, and his cooperation is gratefully acknowledged.

**Results.** This *Petaurista* had a  $2n = 38$  and karyotype containing 6 pairs of metacentrics, 12 pairs of submetacentrics, and 1 pair of subtelocentric chromosomes (Figure); the sex chromosomes were not identified. NF (autosomal arms) was 72.

**Discussion.** Compared with other Sciuridae, *Petaurista* ( $2n = 38$ ) differs from *Glaucomys* ( $2n = 48$ ) in diploid number but both share a nearly similar NF. There is also a close morphological resemblance between the chromo-

somes of *Petaurista* and 4 North American species of *Sciurus* from the tribe Sciurinae which possess  $2n = 40$  and NF =  $74$ – $76$ <sup>4</sup>. Similarities also exist between *Petaurista* and *Callosciurus flavimanus* with  $2n = 40$ , NF =  $74$  and *Dremomys rufigensis*  $2n = 38$ , NF =  $62$  which belong to the tribe Callosciurinae<sup>7</sup>.

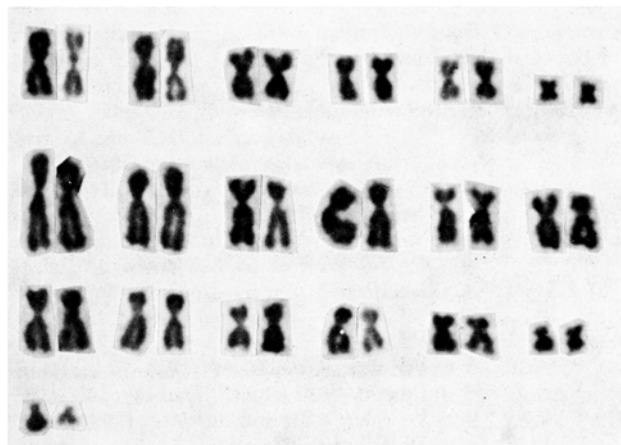
The chromosomal similarities between *Sciurus* and *Petaurista* with respect to  $2n$  and NF and *Glaucomys* with respect to NF conform to the postulate of BLACK<sup>8</sup> that flying squirrels share many similarities with *Sciurus*. However, direct relationships are difficult to establish because BLACK<sup>8</sup> believes that several lineages of flying squirrels have arisen independently from different ancestral sciurids. This view is supported by MEIN<sup>9</sup> who recognized 3 lineages of flying squirrels among European fossil material.

Regardless of the derivation of the extant flying squirrels, the finding of  $2n = 38$  in *Petaurista* strengthens the concept that the  $2n$  of ancestral Sciuridae was in the range of  $38$ – $40$ <sup>7</sup>.

Выводы. Хромосомы были изучены леги *Petaurista petaurista* из Индии; диплоидное число ( $2n$ ) было 38 и число аутомом плечи (NF) было 72. Родство между хромосомами рода *Petaurista* и рода *Glaucomys* подсемейства Petauristinae, и между *Petaurista* и *Sciurus* (подсемейство Sciurinae) было описывано. Находка, что диплоидное число *Petaurista* было 38, оказывала понятие, что родовые *Sciuridae* обладали  $2n = 38$ – $40$ .

C. F. NADLER and D. M. LAY<sup>10</sup>

*Department of Medicine,  
Northwestern University Medical School,  
303 East Chicago Avenue, Chicago (Illinois 60611, USA)  
and Museum of Zoology, University of Michigan,  
Ann Arbor (Michigan 48104, USA), 7 May 1971.*



Karyotype of a female *Petaurista petaurista* ( $2n = 38$ ).  $\times 2800$ .

<sup>1</sup> C. F. NADLER and M. H. BLOCK, *Chromosoma* 13, 1 (1962).

<sup>2</sup> C. F. NADLER, *J. Mammalogy* 47, 579 (1966).

<sup>3</sup> C. F. NADLER, *Syst. Zool.* 15, 199 (1966).

<sup>4</sup> C. F. NADLER and D. A. SUTTON, *Experientia* 23, 249 (1967).

<sup>5</sup> R. S. HOFFMANN and C. F. NADLER, *Experientia* 24, 740 (1968).

<sup>6</sup> C. F. NADLER, R. S. HOFFMANN and J. PIZZIMENTI, *J. Mammal.* 52, 545 (1971).

<sup>7</sup> C. F. NADLER and R. S. HOFFMANN, *Experientia* 26, 1383 (1970).

<sup>8</sup> C. C. BLACK, *Bull. Mus. comp. Zool. Harv.* 130, 109 (1963).

<sup>9</sup> P. MEIN, *Geobios* 3, 7 (1970).

<sup>10</sup> Supported by National Science Foundation Grant No. GB 5676X. We thank Doctors R. S. HOFFMANN and C. C. BLACK for their suggestions and review of the manuscript.