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## Animal Profile: The Short Life of Justin

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## GROWTH HORMONE

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hormone, growth factors and thyroid hormone. All three are necessary. If one is absent or deficient, normal growth will not take place.

In man hypothyroidism (low levels of thyroid hormone) is the second most frequent endocrine disorder of childhood. In the dog this juvenile hypothyroidism appears to be rare. Instead it was found that dwarfism in the dog is of pituitary origin. It is postulated that these dogs may have a cyst of the pituitary and that this interferes with growth hormone production. Another possibility is that the pituitary cells are not properly developed. At this time it is not known why growth hormone production is lessened in the affected dogs. Pedigree analysis of affected German shepherds points to the condition being transmitted by autosomal recessive inheritance.

The animals are small, they only grow for a few weeks after birth. Their skin is fragile and they do not develop an adult haircoat. Eventually the puppy coat starts to fall out and the dog becomes bald. Tests show that the animals are deficient in growth hormone and insulin-like growth factors. They can be treated with injections of growth hormone. "Treatment is quite expensive," said Dr. Eigenmann. "The growth hormone injections will cause the haircoat to grow, also the skin will lose its fragility. Treatment will have to be repeated when the hair falls out again." The injections of growth hormone do not cause the animals to grow as most are presented to Dr. Eigenmann when the growth plates have closed or are about the close.

Underproduction of growth hormone can also occur in older dogs. "This happens in some smaller breeds," Dr. Eigenmann explained. "These dogs develop normally and then at about age one to three years, begin to show signs similar to those of the dwarfs. The hair falls out and no new coat growth take place." These dogs can be treated by injections of growth hormone. It is not known why the production of growth hormone ceases. "The condition is not yet studied, though it is possibly genetic in origin," Dr. Eigenmann said.

His current work involves the study of dwarfs and the older dogs which underproduce growth hormone. He is also studying several breeds to evaluate growth hormone secretion potential and the levels of growth factors. Growth factors have only recently been identified and Dr. Eigenmann's project is designed to gather further knowledge about the importance of these factors. The dwarf dogs, the adult dogs with insufficient growth hormone levels, and dogs of different body size may provide some important answers. He is collaborating with Dr. D. F. Patterson from the Section of Medical Genetics, and Dr. E. R. Froesch, Metabolic Unit, University Hospital, Zurich, Switzerland.

Dr. Eigenmann came to the University of Pennsylvania in December 1980. He arrived here from the University of Utrecht where he received his Ph.D. in 1981. Prior to his work in Holland Dr. Eigenmann had been a visiting research fellow at the "Laboratoire Hormones," Department of Biochemistry and "Institut National de la Santé et de la Recherche Médicale," University of Paris. He received his veterinary degree from the University of Zurich in 1972 and the advanced Dr. med. vet. degree from the same institution in 1975.

## ANIMAL CRACKERS

### "NEW" DOG BREEDS



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The American Kennel Club recognizes 125 breeds of dogs which may compete in championship shows. Beginning January 1, 1984, three breeds will be added to the show classification. These are the Pharaoh Hound in the Hound Group, Portuguese Water Dog in the Working Group and the Tibetan Spaniel in the Non-Sporting Group.

There is a Miscellaneous Class at A.K.C. shows. These dogs are not admitted to registration in the Stud Book and are not eligible for championship points. They may compete in obedience trials and earn obedience titles. In addition to the three breeds named above, the following may compete in Miscellaneous at this time: Australian Kelpies, Border Collies, Cavalier King Charles Spaniels and Spinoni Italiani.

The Federation Cynologique Internationale which governs dog shows in 50 nations, mostly in Europe (not Great Britain), accepts 325 breeds. The latest breeds they have recognized are a long-haired Weimaraner developed in Czechoslovakia and a South Russian Sheepdog.

## ANIMAL PROFILE

### THE SHORT LIFE OF JUSTIN

#### *A baby gorilla dies.*

Justin, the Philadelphia Zoo's youngest gorilla, died May 20, 1983.

Since April 27, the four-month-old had been ill with shigella, a condition that resembles dysentery in human beings. According to Dr. Keith Hinshaw, Zoo veterinarian, the shigella caused a severe inflammation of the bowels. From this, the infant developed the blood poisoning (septicemia) which led to his death.

The gorilla had been removed from mother Snickers on April 27 when he was first taken ill. After intensive care by the Zoo staff and after showing signs of improvement, it was decided to place him back with Snickers on May 7 in order to allow him to nurse. He had not been feeding well for the Zoo staff. On May 18, the staff noticed that the infant had become depressed and was not nursing. The next day Justin was again taken from his mother to be given treatment, including intravenous fluids and antibiotics. Following treatment he had appeared to be improving, however, he began to lapse in and out of consciousness until he died at 6:15 am.

The Spring issue of *Bellwether* carried a story announcing the birth of the baby gorilla.



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