

Survey of literature on guinea pigs

Year 2006

Author: Zinke, J.

Title: Treatment of infectious diseases in rabbits and guineapigs. (Behandlung infektiöser Erkrankungen bei Kaninchen und Meerschweinchen).

Source: Biologische Tiermedizin (2006), 23(1): 12-17.

Language: German.

Address: Praktischer TA, Biologische Tiermedizin, Langener Landstr. 270, 27578 Bremerhaven, Germany.

Abstract: Infectious diseases play an important role in rabbits and guineapigs in veterinary practice. In this paper, remarks on the most frequent of these diseases (myxomatosis, viral pneumonia, infections with Rotavirus, clostridia, colibacteria, Pasteurella, Salmonella, Staphylococcus and Streptococcus spp., Encephalitozoon cuniculi, rhinitis contagiosa) and the therapeutic options with homeopathic preparations are described. Well proven therapeutic protocols are also presented.

Authors: Spotorno, A. E., Marin, J. C., Manriquez, G., Valladares, J. P., Rico, E., Rivas, C.

Title: Ancient and modern steps during the domestication of guinea pigs (*Cavia porcellus* L.).

Source: Journal of Zoology (2006), 270(1): 57-62.

Language: English.

Address: Praktischer TA, Biologische Tiermedizin, Langener Landstr. 270, 27578 Bremerhaven, Germany.

Abstract: To test whether there are differences between living lineages of domestic guineapigs (*C. porcellus*), we studied 118 specimens from six breeds collected along six Andean countries (Argentina, Bolivia, Chile, Peru, Ecuador and Colombia) as well as 15 from the wild cavy species (*C. tschudii*). The mean weight and body length of 15 adult wild cavies (295 plus or minus 31 g, 242 plus or minus 8.3 mm) were significantly smaller than 25 creole guineapigs from Bolivia and Chile (639 plus or minus 157 g and 287 plus or minus 23.7 mm, respectively). Eighteen laboratory/pet guineapigs (including the English Pirbright breed) were also smaller (900 plus or minus 173 g and 308 plus or minus 21 mm) than 25 improved ones from Peru (Tamborada breed, 1241 plus or minus 75.4 g and 317 plus or minus 12 mm) and Ecuador (Auqui breed, 1138 plus or minus 65.5 g and 307 plus or minus 8 mm). Phylogenetic and haplotype analyses of complete cytochrome b gene sequences consistently joined all 22 domestic individuals (13 shared unambiguous substitutions, 100% bootstrap in 1000 replicates), probably from a single first ancient domestication in the western Andes. Six laboratory/pet sequences were also joined within a common branch (six shared substitutions, 96% bootstrap), probably from a documented European second phase. By contrast, those from improved Auqui joined a northern creole subgroup (one shared substitution, 84% bootstrap) and those from Nativa and improved Tamborada clustered together and with a southern creole subgroup (four shared substitutions, 86% bootstrap); this suggests at least two independent modern events during a more complex third phase, producing two improved guineapigs selected for size and meat.

Authors: Burk, R. F., Christensen, J. M., Maguire, M. J., Austin, L. M., Whetsell, W. O., Jr., May, J. M., Hill, K. E., Ebner, F. F.

Title: A combined deficiency of vitamins E and C causes severe central nervous system damage in guinea pigs.

Source: Journal of Nutrition (2006), 136(6): 1576-1581.

Language: English.

Address: Division of Gastroenterology, Department of Medicine, Vanderbilt University, Nashville, Tennessee, USA.

Abstract: A short period of combined deficiency of vitamins E and C causes profound central nervous system (CNS) dysfunction in guinea pigs. For this report, CNS histopathology was studied to define the nature and extent of injury caused by this double deficiency. Weanling guinea pigs were fed a vitamin E-deficient or -replete diet for 14 d. Then vitamin C was withdrawn from the diet of some guinea pigs. Four diet groups were thus formed: replete, vitamin E deficient, vitamin C deficient, and both vitamin E and C deficient. From 5 to 11 d after institution of the doubly deficient diet, 9 of 12 guinea pigs developed paralysis, and 2 more were found dead. The remaining guineapig in the doubly deficient group and all animals in the other 3 groups survived without clinical impairment until the experiment was terminated at 13-15 d. The damage consisted mainly of nerve cell death, axonal degeneration, vascular injury, and associated glial cell responses. These results indicate that the paralysis and death caused by combined deficiency of vitamins E and C in guinea pigs is caused by severe damage in the brainstem and spinal cord.

Authors: Adu, E., Paterson, R., Rojas, F., Laswai, G., Fielding, D., Osafo, E.

Title: Grasscutters, guinea pigs and rabbits.

Source: Livestock and wealth creation: improving the husbandry of animals kept by resource-poor people in developing countries (Owen, E.; Kitalyi, A.; Jayasuriya, N.; Smith, T. eds), 2005(1): 325-341, Nottingham University Press, UK (ISBN: 1-904761-32-1)

Language: English.

Address: Animal Research Institute, Council for Scientific and Industrial Research (CSIR), Achimota, P.O. Box AH 20, Achimota, Ghana.

Abstract: not available

Author: Zinke, J.

Title: The treatment of non-infectious diseases in rabbits and guinea pigs. (Behandlung nichtinfektioser Erkrankungen bei Kaninchen und Meerschweinchen).

Source: Biologische Tiermedizin (2005), 22(3): 59-64.

Language: German.

Address: Biologische Tiermedizin, Langener Landstr. 270, 27278 Bremerhaven, Germany.

Abstract: Common internal diseases of organ systems and non-infectious diseases in rabbits and guinea pigs are discussed. Therapeutic approaches with biological products are described for the presented diseases.