The utility of antisera to canine growth hormone and canine prolactin for immunocytochemical staining of the dog pituitary gland

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Abstract:

Using the immunoperoxidase technique and specific homologous antisera to highly purified canine prolactin (PRL)1 and canine growth hormone (GH), selective immunocytochemical staining was localized in two different cell types in the pars distalis of the dog pituitary gland. The specificity and validity of both antisera were demonstrated by elimination of their immunostaining capacity after prior absorption with their respective antigens, while absorption with other antigens failed to decrease staining intensity. This was further confirmed by studying the immunologic behavior of both antisera in the agar gel double diffusion immunoprecipitin test and by competitive radioactive binding analysis. The specific heterologous antisera to ovine PRL and human GH were shown to be just as useful as antisera to canine hormones for immunocytochemical demonstration of the individuality of PRL and GH cells in the dog pituitary. This confirms the validity and specific of our hitherto heterologous immunocytochemical procedure. However, because of their high potency the anti-canine GH and anticanine PRL sera seem to be more efficient for immunocytochemical staining of the dog pituitary. The immunoreactive PRL and GH cells were also distinguished with reasonable certainty in two different populations of acidophils according to their tinctorial affinity. Both cell types differed further from each other in respect of their relative proportion, morphology and topography, which were variously pronounced for each sex.

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