

38



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# Book of Abstracts

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# CHOLESTEROL DIET EFFECTS ON ATHEROSCLEROTIC PLAQUE COMPOSITION AND BINDING CAPACITY OF THE MITOCHONDRIAL 18 KDA TRANSLOCATOR PROTEIN IN AORTA OF APO E KO MICE

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## Introduction

Apo E has long been known to play a key role in cholesterol transport and metabolism. In addition, it has indicated that 18 kDa translocator protein (TSPo) is involved in the regulation of cholesterol transport into mitochondria in relation to bile production and steroidogenesis. Dysregulation of apoE in humans and animals is associated with several conditions that in separate studies also have been linked to TSPo function.

## Materials and Methods

With the present study we sought to address in the 5 weeks old animal model (C57BL/6 Apolipoprotein E knockout mice), whether Apo E deficiency and 3% cholesterol supplementation in the diet for a period of 10 weeks, can be correlated with altered TSPo binding characteristics in aorta tissue. Biochemical and histopathological examination were carry out.

## Results

Feeding ApoE KO mice with high -cholesterol diet results with significant thickening of aorta's wall, accelerated atherosclerosis and deposition of cholesterol crystals with calcifications. The in vivo findings in apoE knockout mice revealed that TSPo levels appear to be reduced in aorta of Apo E KO mice treated with cholesterol diet comparing to the control counterparts.

## Conclusion

Although these data suggest reduced density of TSPo in aorta of Apo E KO mice, the potentially modulating role of 18kDa TSPo in the arterial wall deserves further attention.

# INTERVERTEBRAL DISKS DEGENERATION: PRELIMINARY STUDIES ON PATHOLOGICAL FEATURES OF 42 SURGICAL SPECIMENS

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## Introduction

Intervertebral disks (ID) can exhibit normal aging changes and degenerative alterations leading to disk extrusion into the spinal canal.

## Materials and Methods

The authors report the histological features of n. 42 canine spinal surgery specimens comparing the observations between spinal level and breed - chondrodystrophoid (CD) and non chondrodystrophoid (NCD) dogs - by means of the Fisher test.

## Results

N.22 ID of CD and n. 20 ID of NCD, aging from 3 to12 years old, were evaluated. N. 34 samples were collected in thoracic/lumbar spine, and n. 8 in cervical spine. N. 40 samples were composed mainly by nucleus pulposus; two specimens showed lamellar structures of anulus fibrosus or cartilaginous laminae. Chondroid clusters in degenerate matrix occurred frequently (72.7% of CD e 45 % dei NCD). Chondroid metaplasia was detected in 80.5% of cases; it was significantly more frequent in CD (94.7%), but it was also present in 64.7% of NCD. Calcium deposits were observed in 100% of CD (80% I NCD). Granulation tissue and neovascularisation were detected in 71.43% of cases. In contrast with the literature (Hansen, 1952) the most interesting features were chondroid metaplasia and calcium deposits in NCD.

## Conclusion

A breed predisposition could induce the chondroid metaplasia, but probably a multifactorial aetiology induces disk degeneration. Further investigations are in progress in order to verify this hypothesis.