268. THE PAT FAMILY OF PROTEINS IN THE NORMAL AND PATHOLOGICAL LIPOLYSIS

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Introduction. Investigations of the structure of fat droplets (PL), intracellular deposits of excess fat have revealed the presence of several proteins on their surface that are involved in theirs metabolism. Like any other cellular organelles, their surface is rich in a lot of proteins that regulate their functions. Of these, five were reunited in the PAT family: perilipin (perilipin1), adipophilin (perilipin 2), TIP47 (perilipin 3), S3-12 (perilipin 4) and OXPAT (perilipin 5). Conflicting hypotheses proposed for explaining the role of the PAT family of proteins in different pathologies motivated us into initiating this study.

Point. To study the role and the properties of the proteins included in the PAT family, their expression in various cells and their possible involvement in different pathologies.

Material and methods. Using the literature in the last 10 years we have investigated the role perilipins play in different pathologies.

Result. The PAT family of proteins, in addition to the major role it plays in the metabolism of PL, was found to have a lot of implications in human pathology. Perilipins are one of the pathogenetic factors in hepatic steatosis, atherosclerosis, myocardial infarction and obesity. Besides their use in the prognosis of these diseases, a possibility of intervention on the PAT family of proteins arises at the molecular level, with implications in treatment. Perilipin 2 along with aquaporin 1 may serve as a marker of clear cell kidney cancer, can help differentiating renal malign masses from benign ones. In other cancers, perilipin analysis may be useful for determining the type of cancer growth or its primary origin.

Conclusion: (1) Perilipin 1 subtype A is expressed in adipose tissue and the C subtype in the steroidogenic cells. Perilipin 5 is expressed primarily in cardiac muscle, where it influences the lipid metabolism. Perilipin 2 and 3 becomes expressed in some types of cancers. (2) Understanding the major role the perilipins play in the metabolism of PL can move us forward understanding pathologies involving them, allowing us to predict or prevent the occurrence of some diseases. (3) Genetic interventions on perilipin gene could be a real opportunity for treating and slowing down some diseases.

Keywords: PAT family of proteins, lipid droplets, perilipin

269. RESPIRATORY PATTERN'S MODIFICATIONS AT HEALTHY SUBJECTS,UNDER THE INFLUENCE OF EMOTIONS.

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