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STUDY AND MELANOCYTE ADRENOCORTICOTROPIC EFFECTS ON SUGAR METABOLISM AND IMMUNE RESPONSE IN RABBITS, *ORYCTOLAGUS CUNICULUS*

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ABSTRACT

The functioning of the pineal gland, the transducer body of environmental information to the neuroendocrine system was subjected to a circadian rhythm.

Melatonin is the main neuro-hormone expressing this operation. It is synthesized in the pinealocytes after conversion of serotonin via N-acetyl-transferase enzyme, the same subject to a photoperiodic modulation (activation of dark inhibition by light). Some scientists have suggested that melatonin is involved in diabetic disease and which expresses have a diabetogenic effect. To this study the effect of this hormone on glucose metabolism has long been subject to controversy agreeing in effect and hyperinsulinemic hypoglycaemic effect. In order to illustrate the level of interaction of melatonin with neuro-immune- corticotrophin axis and its impact on carbohydrate metabolism, we studied the impact homeostatic (glucose) through the solicitation of two control systems (gland pineal and corticotrophin axis). We and found that melatonin could have an indirect influence on insulin control (glucose metabolism) to the levels of the growth hormone axis (somatostatin) and adrenocorticotropic (corticotrophin). In addition, we have suggested that melatonin might limit the hyperglycaemic action of corticosteroids by direct action at peripheral level.

KEYWORDS: Pineal Gland, Melatonin, Neuro-Immuno-Corticotrop