

## Functionality of the Lateral Geniculate Nucleus After Retinal Photoprotection and Photodegeneration in Rat

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**Purpose:** Changes in the neuronal response of the Lateral Geniculate Nucleus (LGN), evoked by retinal stimulation with flashes with different wavelengths ( $\lambda$ ), have been compared in intact, photodegenerated and photoprotected Wistar albino rats.

**Material and Methods:** After the adaptation to the darkness (4 hours), the extracellular multiunitary activity of the LGN neurons after stimulation (Flashes irradiance:  $1,65 \cdot 10^{-3} \pm 1 \cdot 10^{-5}$  mW/cm<sup>2</sup>) with  $\lambda$  (nm): 400 (HUVL400-510. Hero Electronics Limited), 470, 510, 532, 550 y 600 (I.F. Edmund Optics: NT43-114, NT43-119, NT43-122, NT43-126 y NT43-130) have been recorded. The latencies of the response beginning and of the maximum response, response duration and spikes rate have been measured in three experimental groups: A: control (12 hours light-dark cycles), B: photoexposed to D65 white light ( $2,33 \pm 0,18$  W/m<sup>2</sup>; Radium NL 18W/965 Biosun) y C: photoexposed to D65 white light and photoprotected with yellow filter ( $1,29 \pm 0,13$  W/m<sup>2</sup>; Roscollux Supergel#007). The photoexposition consisted of 72 hours of continuous light and 24 hours of recovery in the same conditions of the control group.

**Results:** The percentage of stimulations with neural response in A, B y C were for 400 nm: 83,3%, 14,3% and 52,9%, and for 600