# CYTOPROTECTIVE EFFECT OF MELATONIN ON GONADAL TOXICITY INDUCED BY LOCAL LINURON HERBICIDE IN WISTAR RATS.

**Sakina Chaib**

**Faculty of Sciences, Badji Mokhtar University, 23000-Annaba, Algeria.**

[**https://orcid.org/0000-0001-8563-5694**](https://orcid.org/0000-0001-8563-5694)

**Ouali kheireddine**

**Faculty of Sciences, Badji Mokhtar University, 23000-Annaba, Algeria.**

**http://orcid.org/0000-0002-5842-0767**

**Trea Fouzia [[1]](#footnote-1)\***

**Faculty of Sciences, Badji Mokhtar University, 23000-Annaba, Algeria.**

**https://orcid.org/0000-0002-9950-8239**

|  |
| --- |
| **ABSTRACT** This study was conducted to evaluate the effectiveness of supplementation of an antioxidant Melatonin on oxidative status (antioxidant defense system) in an animal model Showing pathological lesions induced by a local herbicide: linuron.Indeed, the administration of [1, 2]. caused pathophysiology which was revealed on the one hand, by the formation of pre-tumoral cells located within the seminiferous tubes and on the other hand by the reduction of glutathione -S - transferase (GST), and a significant decrease in reduced glutathione (GSH) levels, which are biomarkers of oxidative stress.Melatonin preventive treatment of rats with linuron decreased Significantly the incidence of pre-tumoral lesions, with improved activity of the antioxidant defense status GSH, GST.This suggests that melatonin can act as an effective chemo-preventive agent against Testicular cancer via the reduction of radical attacks on the testicles [3, 4].**References:** [1] Bai J, Han H, Wang F, Su L, Ding H, Hu X, Hu B, Li H, Zheng W, Li Y (2017) Maternal linuron exposure alters testicular development in male ofspring rats at the whole genome level. Toxicology 389:13–20 [2] Magierowski M, Jasnos K, Pawlik M, Krzysiek-Maczka G, PtakBelowska A, Olszanecki R, Kwiecien S, Korbut R, Brzozowski T (2013) Role of angiotensin-(1–7) in gastroprotection against stress-induced ulcerogenesis. The involvement of mas receptor,nitric oxide, prostaglandins, and sensory neuropeptides. J Pharmacol Exp Ther 347:717–726 [3] Manchester LC, Coto-Montes A, Boga JA, Andersen LPH, Zhou Z,Galano A, Vriend J, Tan DX, Reiter RJ (2015) Melatonin: an ancient molecule that makes oxygen metabolically tolerable. JPineal Res 59(4):403–419 [4] Reiter RJ, Mayo JC, Tan DX, Sainz RM, Alatorre-Jimenez M, Qin L (2016) Melatonin as an antioxidant: under promises but over delivers. J Pineal Res 61(3):253–278 |

# Keywords: testicles; melatonin; linuron; oxidative stress.

1. \* Corresponding author. *e-mail address:* *sakina.chaib@univ-annaba.org* *.* *sakinachaib15@yahoo.com* [↑](#footnote-ref-1)