

Accepted Manuscript

Title: Aflatoxin B1 impairs sperm quality and fertilization competence

Authors: A. Komsky-Elbaz, M. Saktsier, Z. Roth

PII: S0300-483X(17)30330-X
DOI: <https://doi.org/10.1016/j.tox.2017.11.007>
Reference: TOX 51975

To appear in: *Toxicology*

Received date: 9-10-2017
Revised date: 2-11-2017
Accepted date: 3-11-2017



Please cite this article as: Komsky-Elbaz, A., Saktsier, M., Roth, Z., Aflatoxin B1 impairs sperm quality and fertilization competence. *Toxicology* <https://doi.org/10.1016/j.tox.2017.11.007>

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Aflatoxin B1 impairs sperm quality and fertilization competence

Running title: AFB1 effects on sperm fertilization competence

A. Komsky-Elbaz¹, M. Saktsier¹, and Z. Roth^{1,*}

¹Department of Animal Sciences, Robert H. Smith Faculty of Agriculture, Food and Environment, The Hebrew University, Rehovot 76100, Israel

*Correspondence: Zvi Roth, E-mail: roth@agri.huji.ac.il

Prof. Zvi Roth, Department of Animal Sciences, Robert H. Smith Faculty of Agriculture, Food and Environment, the Hebrew University, Rehovot 76100, Israel.

Phone: 972-8-9489103; Fax: 972-8-9465763

Abstract

Aflatoxins are poisonous byproducts of the soilborne fungus *Aspergillus*, involved in the decomposition of plant materials. Aflatoxins can be found in various food products, such as maize, sorghum, millet, rice and wheat. AFB1 is the most toxic of these, classified as a carcinogen and mutagen for both humans and animals. AFB1 has been detected in human cord blood and placenta; however, its toxic effect on sperm is less known. The current study examines sperm responses associated with AFB1 exposure. These included acrosome integrity and function, mitochondrial polarity, DNA fragmentation, fertilization competence and early embryonic development. Spermatozoa were obtained from bull ejaculate and epididymis and capacitated *in vitro*

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