

# Accepted Manuscript

Biological response of zebrafish after short-term exposure to azoxystrobin

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PII: S0045-6535(18)30469-7

DOI: [10.1016/j.chemosphere.2018.03.055](https://doi.org/10.1016/j.chemosphere.2018.03.055)

Reference: CHEM 20999

To appear in: *ECSN*

Received Date: 7 December 2017

Revised Date: 7 March 2018

Accepted Date: 8 March 2018

Please cite this article as: Jiang, J., Shi, Y., Yu, R., Chen, L., Zhao, X., Biological response of zebrafish after short-term exposure to azoxystrobin, *Chemosphere* (2018), doi: 10.1016/j.chemosphere.2018.03.055.

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1 Biological response of zebrafish after short-term exposure to  
2 azoxystrobin

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## 11 ABSTRACT

12 Azoxystrobin (AZ) is a broad-spectrum systemic fungicide that widely used in the  
13 world. The present study investigated the toxicity effects on zebrafish after short-term  
14 exposure of AZ. Results demonstrated that the larval stage was most susceptible to  
15 AZ in the multiple life stages of zebrafish, with 96 h-LC<sub>50</sub> value of 0.777 mg/L.  
16 Zebrafish larvae were exposed to different AZ concentrations (0, 0.1, 1, 10, 100 µg/L)  
17 and examined on 24, 48 and 72 h. It was found that AZ induced ROS accumulation,  
18 increased GST, GPX and POD activity and the transcriptions of antioxidant and stress  
19 response related genes, while the opposite trend occurred for SOD and CAT activity  
20 in 24-h or 48-h exposure period. The increased E<sub>2</sub> and VTG levels in zebrafish larvae,  
21 and altered transcription levels of regulatory and steroidogenic genes in the  
22 hypothalamus-pituitary-gonad (HPG) axis indicated the endocrine disruption capacity

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