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TITLE

Transcriptomic signatures induced by Zn nanoparticle in Hydra magnipapillata

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ydra is a Cnaidarian model, which is the most primitive multicellular animal showing tissue organization. Diverse approaches with hydra have been accelerated since its genome and EST database was reported in 2010. We extracted 17741 genes from Hydra magnipapillata genome and EST database (http://hydrazome.metazome.net/cgibin/browser/hydra) and established hydra oligoarray to investigate its transcriptomic signatures induced by Zn nanoparticle. We examined 50% lethal concentration to ZnO nanoparticles first and exposed hydra to ZnO nanoparticles at 1/50 of LC50. We detected unique and diverse transcriptome of hydra induced by exposure to ZnO nanoparticles and reported the categorized genes showing significant transcriptional changes.