



### ZnO NPs exposure impairs cranial neural crest development by inducing excessive oxidant stress level during chick embryogenesis

**Yu Yan**

Medical College, Jinan University, Guangzhou, 510632, China

**Abstract:**

**Introduction:** Zinc oxide Nanoparticles (ZnO NPs) could lead to defects in chick craniofacial skeleton during embryogenesis, but the further mechanism is still not clear. In this study, we found ZnO NPs exposure cause craniofacial development defect, including shorten coracoids, curved coracoids and impaired parietal bone, which is derived from the cranial neural crest cells. we observed that ZnO NPs could inhibit the production and migration of cranial neural crest cells, which mainly caused by altering expression of epithelial-mesenchymal transitions-related adhesion molecules. Moreover, we observed that ZnO NPs significantly induced the extent apoptosis in cranial neural crest cells but not affect the cell proliferation. Then, the level of oxidant stress of cranial neural crest cells is elevated by ZnO NPs treatment.



**Biography:** Dr. Yan Yu got her bachelor's degree from Southern Medical University, China in 2013, got the master's degree from Jinan University, China in 2017, and now she is studying for the Ph.D. degree at basic medical school of Jinan University, China. She had already published six articles on SCI. She always aim at studying the effect of various environmental compounds on early embryos, including the nervous system and bones and now she is focusing on the effects of nanoparticles on the embryonic nervous system

**Publications:**

1. Assessing the contribution of ENSO and MJO to the modulation of Australian dust activity based on satellite and ground-based observations
2. Genetic Diversity Using Random Amplified Polymorphic DNA (RAPD) Analysis for *Aspergillus niger* isolates
3. Au-Ag-Cu nanoparticles alloys showed antifungal activity against the antibiotics-resistant *Candida albicans*
4. Induce mutations for Bavistin resistance in *Trichoderma harzianum* by UV-irradiation
5. Disproving the Bodélé depression as the primary source of dust

[16th World Congress on Gastroenterology & Therapeutics October 30-31, 2020](#)

**Abstract Citation:** [Yu Yan, ZnO NPs exposure impairs cranial neural crest development by inducing excessive oxidant stress level during chick embryogenesis October 30-31, 2020](#)