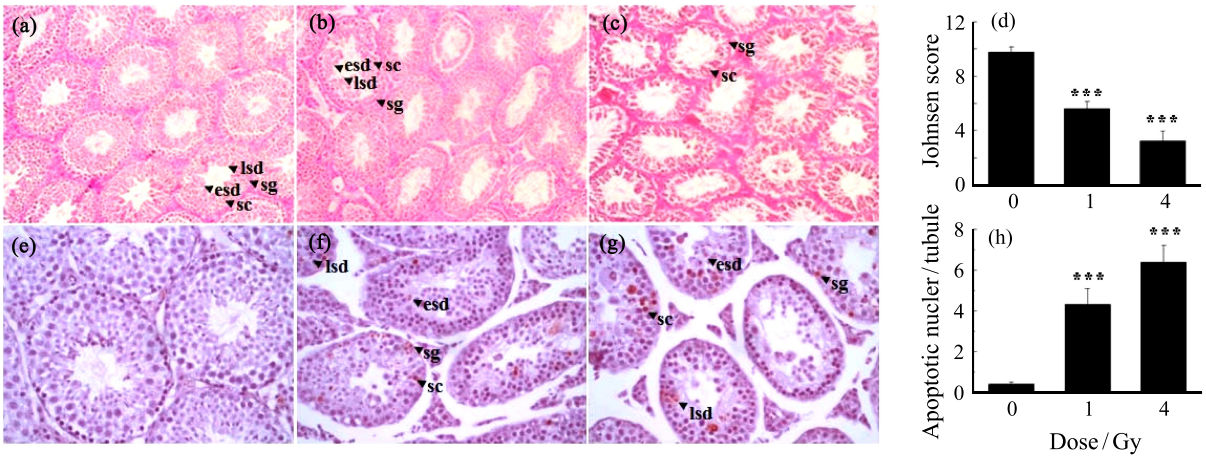

Fig. 1 (color online) 0 Gy (a), 1 Gy (b), 4 Gy (c). Photomicrographs of sections stained with H&E (magnification 200 ×): sg, spermatogonia; sc, spermatocytes; esd, early spermatids; lsd, late spermatids; lc, Leydig cell. Severe degeneration of spermatogenic cells in the seminiferous tubule (*), arrows indicate Sertoli cells in the seminiferous tubule (c). Representative photomicrographs of TUNEL staining: 0 Gy (e), 1 Gy (f), 4 Gy (g). Arrows indicate TUNEL-positive cells in the seminiferous tubule (magnification 400 ×): sg, spermatogonia; sc, spermatocytes; esd, early spermatids; lsd, late spermatids. Testicular damage as evaluated by the Johnsen score (d). Histogram of apoptotic-positive spermatogenic cells from mouse testis (h). Values represent the average ± S.E.M. Asterisks indicate a statistically significant difference from control: $***P < 0.001$ on one-way ANOVA with Duncan's post hoc analysis.

Reference

[1] H. Zhang, B. Liu, Q. Zhou, et al., Int. J. Androl, 29(2006)592.

3 - 63 Toxicity of Mitochondrial Singlet Oxygen Inducer on Zebrafish Embryo*

Zhou Xin, Wang Yupei and Zhang Hong

Mitochondrial singlet oxygen is a potential signal molecule to regulate mitochondrial biogenesis[1]. However, it is hard to distinguish mitochondrial ROS from cytoplasmic ROS in vitro. To overcome this issue, we recently developed a specific mitochondrial singlet oxygen inducer-Mitochondros. The toxicity of Mitochondros has been verified in vitro. However, the in vivo toxicity of mitochondros has not been investigated. Here we employed the zebrafish embryo to study the toxicity of mitochondros in vivo.

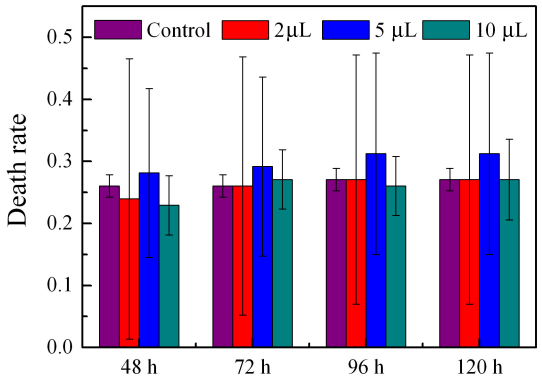

Fig. 1 (color online) The death rate of zebrafish embryo within 120 hours after exposure to various concentration of Mitochondros.

Zebrafish embryos were kept in E3 medium with the addition of various concentration of mitochondros ranging from 2∼10 μl/mL. The embryo death, as indicated by cardiac arrest and/or Egg condensation was scored at 48, 72, 96 and 120 hpf. The embryo death rate was calculated by dead embryo versus the total number of embryo scored. As shown in Fig. 1, no significant embryo death was observed at this concentration range of mitochondros within 120 h after egg fertilization.

Reference

[1] R. J. Mailloux, Redox Biol, 4(2015)381.

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