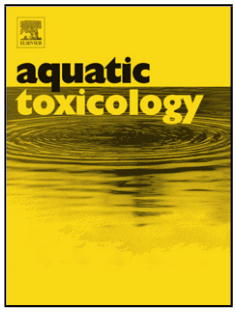

Title: Epigenetic, histopathological and transcriptomic effects following exposure to depleted uranium in adult zebrafish and their progeny

Author: Kewin Gombeau Jean-Paul Bourdineaud Jean-Luc Ravanat Olivier Armant Virginie Camilleri Isabelle Cavalie Magali Floriani Christelle Adam-Guillermin

PII: S0166-445X(16)30355-1
DOI: http://dx.doi.org/doi:10.1016/j.aquatox.2016.12.004
Reference: AQTOX 4547

To appear in: *Aquatic Toxicology*

Received date: 23-8-2016
Revised date: 29-11-2016
Accepted date: 5-12-2016

Please cite this article as: Gombeau, Kewin, Bourdineaud, Jean-Paul, Ravanat, Jean-Luc, Armant, Olivier, Camilleri, Virginie, Cavalie, Isabelle, Floriani, Magali, Adam-Guillermin, Christelle, Epigenetic, histopathological and transcriptomic effects following exposure to depleted uranium in adult zebrafish and their progeny.Aquatic Toxicology http://dx.doi.org/10.1016/j.aquatox.2016.12.004

Epigenetic, histopathological and transcriptomic effects following exposure to depleted uranium in adult zebrafish and their progeny

*Kewin Gombeau[a], Jean-Paul Bourdineaud[b], Jean-Luc Ravanat[c, d], Olivier Armant[a], Virginie Camilleri[a], Isabelle Cavalie[a], Magali Floriani[a] and Christelle Adam-Guillermin[a, *]*

[a] Institut de Radioprotection et de Sûreté Nucléaire (IRSN), PRP-ENV/SERIS/LECO, Cadarache, Saint-Paul-lez-Durance 13115, France.
e-mail: kewin.gombeau@gmail.com; virginie.camilleri@irsn.fr; isabelle.cavalie@irsn.fr; magali.floriani@irsn.fr; christelle.adam-guillermin@irsn.fr; olivier.armant@irsn.fr;

[b] Université de Bordeaux, CNRS, UMR 5805, EPOC, 33400 Talence, France
e-mail: jean-paul.bourdineaud@u-bordeaux.fr;

[c] Univ. Grenoble Alpes, INAC-SyMMES, 38000 Grenoble, France
[d] CEA, INAC-SCIB Laboratoire des Lésions des Acides Nucléiques, 38000 Grenoble, France
e-mail: jean-luc.ravanat@cea.fr;

***Corresponding author**

Phone: + 33442199401 e-mail: christelle.adam-guillermin@irsn.fr;

Highlights:

- The parental DU-exposure induced a significant transfer of uranium into eggs
- Du-exposed progeny exhibited a significant 2-fold increased DNA methylation level
- The transcriptomic response was deeply modified in the DU-exposed organisms
- DU-exposed adult and offspring presented significant histopathological injuries