Accepted Manuscript

Early-life perturbations in glucocorticoid activity impacts on the structure, function and molecular composition of the adult zebrafish (*Danio rerio*) heart

K.S. Wilson, J. Baily, C.S. Tucker, G. Matrone, S. Vass, C. Moran, K.E. Chapman, J.J. Mullins, C. Kenyon, P.W.F. Hadoke, Dr M.A. Denvir

PII: S0303-7207(15)30032-0

DOI: 10.1016/j.mce.2015.07.025

Reference: MCE 9233

To appear in: *Molecular and Cellular Endocrinology*

Received Date: 25 March 2015

Revised Date: 24 July 2015

Accepted Date: 24 July 2015

Please cite this article as: Wilson, K.S., Baily, J., Tucker, C.S., Matrone, G., Vass, S., Moran, C., Chapman, K.E., Mullins, J.J., Kenyon, C., Hadoke, P.W.F., Denvir, M.A., Early-life perturbations in glucocorticoid activity impacts on the structure, function and molecular composition of the adult zebrafish (*Danio rerio*) heart, *Molecular and Cellular Endocrinology* (2015), doi: 10.1016/j.mce.2015.07.025.

Title: Early-life perturbations in glucocorticoid activity impacts on the structure, function and molecular composition of the adult zebrafish (*Danio rerio*) heart

Short title: Wilson, Cardiac embryonic glucocorticoid manipulation

Authors: K.S. Wilson, J. Baily, C.S. Tucker, G. Matrone, S. Vass, C. Moran, K.E. Chapman, J.J. Mullins, C. Kenyon, P.W.F. Hadoke, M.A. Denvir

Institute: The British Heart Foundation Centre for Cardiovascular Science, University of Edinburgh, The Queen's Medical Research Institute, Edinburgh, EH16 4TJ, UK

Corresponding author: Dr Martin A Denvir, The BHF Centre for Cardiovascular Science, University of Edinburgh, The Queen's Medical Research Institute, 47 Little France Crescent, Edinburgh, EH16 4TJ, UK. Tel: 44(0) 131 242 9236 email: martin.denvir@ed.ac.uk

Total number of words: 7650

Acknowledgements: The authors are grateful for the technical help and support of Adrian Thomson in performing and analysing echocardiograms. The glucocorticoid receptor antibody was a kind gift from Dr M Vijayan, University of Waterloo, Canada.

Funding statement: This study was funded by a British Heart Foundation PhD Fellowship award (KW) grant number RE/09/053. The work was also supported by the British Heart Foundation Centre of Research Excellence award (CoRE) grant number RE/08/001/23904.

Conflicts: No conflicts of interest. All authors takes responsibility for all aspects of the reliability and freedom from bias of the data presented and their discussed interpretation.