

Renal effects of fetal reprogramming with pentaerythritol tetranitrate in spontaneously hypertensive rats

Andy W C Man^{1†}, Min Chen^{1,2†}, Zhixiong Wu¹, Gisela Reifenberg¹, Andreas Daiber^{3,4}, Thomas Münzel^{3,4}, Ning Xia¹, Huige Li^{1*}

¹ Department of Pharmacology, Johannes Gutenberg University Medical Center, 55131 Mainz, Germany; ² Department of Anaesthesiology, Institute of Anaesthesiology and Critical Care Medicine, Union Hospital, Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China. ³ Center for Cardiology, Cardiology I - Laboratory of Molecular Cardiology, Johannes Gutenberg, University Medical Center, Mainz, Germany; ⁴ German Center for Cardiovascular Research (DZHK), Partner Site Rhine-Main, Mainz, Germany.

Correspondence:

Dr. Ning Xia or Prof. Dr. Huige Li, Department of Pharmacology, Johannes Gutenberg University Medical Center, Obere Zahlbacher Str. 67, 55131 Mainz, Germany. E-Mail: xianing@uni-mainz.de (N.X.); huigeli@uni-mainz.de (H.L.)

† These authors contributed equally to this work and should be both considered as first author.

Running title: fetal reprogramming in kidney

Original article

Key words: fetal programming; epigenetics; spontaneously hypertensive rats; pentaerythritol tetranitrate; kidney fibrosis

Supplementary Files

Supplementary Tables.

Supplementary Table 1. Primer list for gene expression studies using qPCR

ACE -F	CAGAGGCCAACTGGCATTAT
ACE -R	CTGGAAGTTGCTCACGTCAA
FGF2 -F	TCCATCAAGGGAGTGTGTGC
FGF2 -R	TCCGTGACCGGTAAGTGTTG
NHE3 -F	AACTCTCCAGCAACTTCCG
NHE3 -R	GCCTGTATCATGTGTGTGGA
TNF α -F	ATGGGCTCCCTCTCATCAGT
TNF α -R	GCTTGGTGGTTTGCTACGAC
Wnt4 -F	AGGTGGTGACACAAGGGACC
Wnt4 -R	CCATAGGCGATGTTGTCCGA
MMP2 -F	CAAGCCCAAGTGGGACAAGA
MMP2 -R	CCATGCTCCCATCGACCAA
MMP9 -F	AGCCGACGTCCTGTAAGT
MMP9 -R	AACAGGCTGTACCCTTGGTC
TGF β -F	CTGCTGACCCCACTGATAC
TGF β -R	AGCCCTGTATTCCGTCTCCT
Nr3c2 -F	AATAACGTCCCTCTGCGCTC
Nr3c2 -R	GCCTGAAGTGGCATAGCTGA
Rac1 -F	CAATGCGTTCCTGGAGAGT
Rac1 -R	AACACGTCTGTTTGCGGGTA
Sgk1 -F	TAGCCTCACCATCCCGTTTG
Sgk1 -R	CATCTGCGTACCCGCTTCTT
CD74 -F	TCCCTGGACACAACAATGA
CD74 -R	AAATGGGGGTCCCTTAGATG
CD45 -F	AGGAAACTTGCTCCCCATCC
CD45 -R	TGTTCCCTTGCCCTGTGACAA
CD11b -F	GGCCTGTACAAGCTTGGCTTT
CD11b -R	GCTGTTGGTCTGACCGTCTA
CD3e -F	AGTAATGAGCCAGCCGTGTC
CD3e -R	AGACTTCATACTTTCCTGGCA
CD19 -F	CACCCATGGTTCATTGCCCA
CD19 -R	GCACAACATTGTCTCCCTCTTC
ICAM -F	CGGGAGATGAATGGTACCTACAA
ICAM -R	TGCACGTCCCTGGTGATACTC
VCAM -F	GAAGCCGGTCATGGTCAAGT
VCAM -R	GGTACCCTTGAACAGTTCTATCTC
NF κ B1-F	GCTTACGGTGGGATTGCATT
NF κ B1-R	TTATGGTGCCATGGGTGATG
Pol II-F	AACGAACTGCCCGGCTTAC
Pol II-R	CCCTTCAACCGTTGCTTCAC

Supplementary Table 2. Primer list for chromatin accessibility and CHIP-qPCR studies

Primer	Primer sequence	Target Gene ID
FGF2 -F	GCGGTTTTTCATCTTCCCACG	54250
FGF2 -R	GAGACAGAGGCCAGGAATGG	
NHE3 -F	GGTGGCCTTTAATCCCGCTG	24784
NHE3 -R	ACTGTTTGCATTACGTGCG	
ACE -F	TTTATAATCCGCAGGGCGGT	24310
ACE -R	CCCATGGCGCGGTGC	