Supplementary Material

The Mitochondria-Targeted Metabolic Tubular Injury in Diabetic Kidney Disease

Hong Jiang^{a,b,c,d,e} Xue Shao^{a,b,c,d,e} Sha Jia^{a,b,c,d,e} Lihui Qu^{a,b,c,d,e} Chunhua Weng^{a,b,c,d,e} Xiujin Shen^{a,b,c,d,e} Yucheng Wang^{a,b,c,d,e} Hongfeng Huang^{a,b,c,d,e} Yingying Wang^{a,b,c,d,e} Cuili Wang^{a,b,c,d,e} Shi Feng^{a,b,c,d,e} Meizhen Wang^f Huajun Feng^f Sudarshanee Geekiyanage^g

Alan James Davidson^h Jianghua Chen^{a,b,c,d,e}

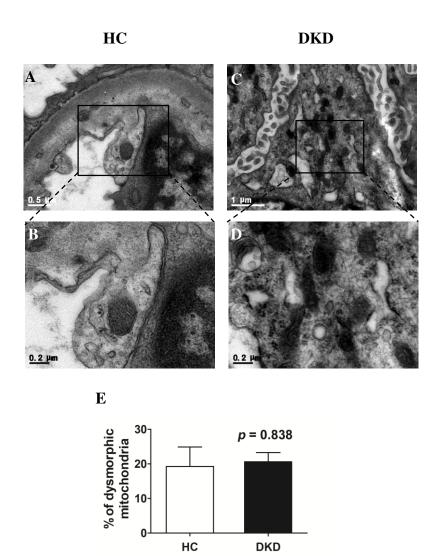
aKidney Disease Center, the First Affiliated Hospital, College of Medicine, Zhejiang University, Hangzhou, China, bKey Laboratory of Nephropathy, Hangzhou, China, cKidney Disease Immunology Laboratory, the Third-Grade Laboratory, State Administration of Traditional Chinese Medicine of China, Hangzhou, China, dKey Laboratory of Multiple Organ Transplantation, Ministry of Health of China, Hangzhou, China, eInstitute of Nephropathy, Zhejiang University, Zhejiang, China, fSchool of Environmental Science and Engineering, Zhejiang Gongshang University, Hangzhou, China, Department of Agricultural Biology, Faculty of Agriculture, University of Ruhuna, Mapalana, Kamburupitiya, Sri Lanka, hDepartment of Molecular Medicine & Pathology, School of Medical Sciences, The University of Auckland, Auckland, New Zealand

Supplemental Figure 1. Alterations in mitochondrial dynamics in podocytes. Electron microscopy showed no significant difference of the mitochondrial morphology in podocytes between HC (n=3) and DKD group (n=3). HC, healthy control; DKD, diabetic kidney disease.

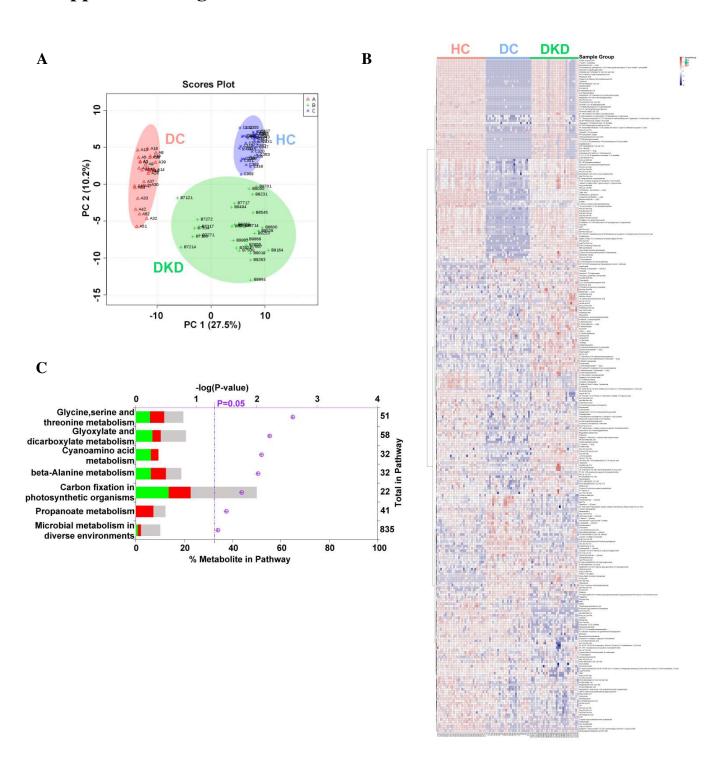
Supplemental Figure 2. Serum metabolic profiles in HCs, DCs and DKDs. (A) PCA score plot of data from HCs (n=30), DCs (n=27) and DKDs (n=30). (B) Heatmap (red=higher, green=lower) of 291 significantly different metabolites in HC, DC and DKD groups. (C) Pathway analysis of DKDs compared to DCs. Plots showed significantly changed pathways organized by their -log (P-value) (top x-axis); bars showed percentage of metabolites (bottom x-axis). (D) Overview of the metabolites and involved pathways that were altered in DKDs. Altered metabolites were shown as large red or green circles (red=higher, green=lower) and placed in a general schematic of metabolic pathways where important metabolites were depicted by colored dots. Different colors represented distinct pathways. Figure prepared using iPATH. HC, healthy control; DC, diabetic control; DKD, diabetic kidney disease. TCA cycle, tricarboxylic acid cycle.

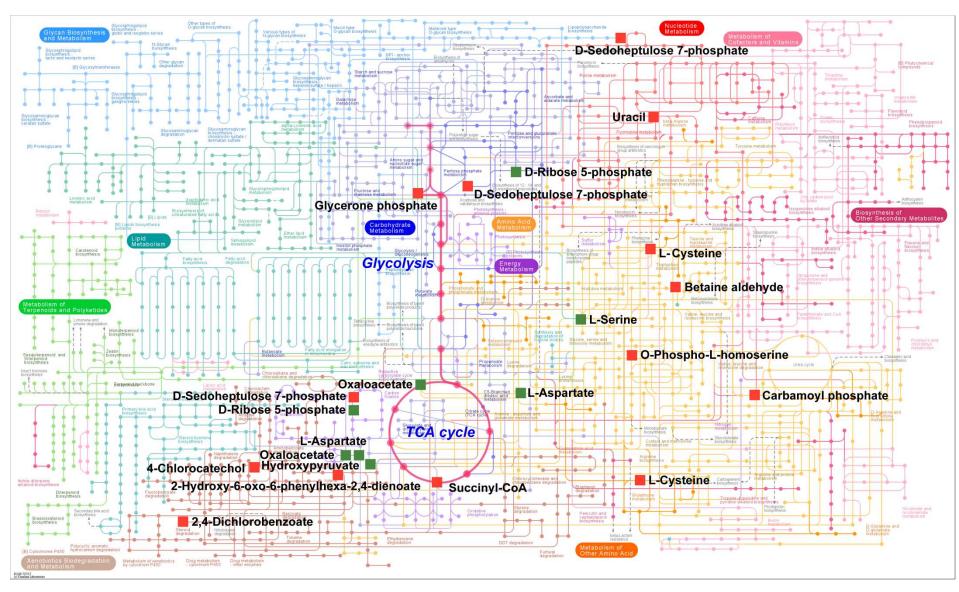
Supplemental Table 1. The list with data and names on detected metabolites in the heatmap of Supplemental Figure 2B. C for HC group, A for DC group and B for DKD group. HC, healthy control; DC, diabetic control; DKD, diabetic kidney disease.

Supplemental Figure 1



Supplemental Figure 2





The content of the co