

### Supplementary Figure 1

**Metadata corresponding to figure 2.** Shown are blood glucose, weight, sex, age, RNA-seq batch, and genetic background as they correspond to each sample in the dendrogram.

### Supplementary Figure 2

**Comparison of differentially expressed genes between the present work and Ref. 41 (Neelankal John *et al.*, 2018).** Distributions of gene expression of those genes found to be differentially expressed by Neelankal John *et al.*, (2018) **(A)** Genes more highly expressed in WT than in  $LepR^{db/+}$ . **(B)** Genes more highly expressed in  $LepR^{db/+}$  than WT. **(C)** Genes more highly expressed in  $LepR^{db/db}$  than  $LepR^{db/+}$ . **(D)** Genes more highly expressed in  $LepR^{db/+}$  than  $LepR^{db/db}$ . **(E)** Genes more highly expressed in WT than  $LepR^{db/db}$ . **(F)** Genes more highly expressed in  $LepR^{db/db}$  than WT. For each comparison, the distribution of gene expression between analogous mouse strains in the two studies is shown. The gene name labels along the x-axes are colored if the gene was also found to be differentially expressed in our data (FDR <0.1). Differentially expressed gene labels are colored according to the condition in which the gene is more highly expressed.

### Supplementary Figure 3

**Differentially expressed genes between groups of NOD samples.** **(A)** Genes whose expression increased from T1ND samples that clustered with healthy adult samples (ND(HA)) to T1ND samples that clustered with diabetic samples (ND(D)) and increased from ND(D) to T1D samples. **(B)** Genes whose expression decreased from ND(HA) samples ND(D) samples and decreased from ND(D) samples to T1D samples.