

## **SUPPLEMENTARY FIGURES**

Heatmap reporting leading edge genes (genes that drive the significance of a gene set) for gene sets significantly altered ( $FDR < 0.05$ ) between MSC and NP samples. Red: genes included in the gene set; grey: genes not included in the gene set.

KEGG\_LYSOSOME

REACTOME\_INSULIN\_RECEPTOR\_RECYCLING

REACTOME\_TRANSFERRIN\_ENDOCYTOSIS\_AND\_RECYCLING

REACTOME\_LATENT\_INFECTON\_OF\_HOMO\_SAPIENS\_WITH\_MYCOBACTERIUM\_TUBERCULOSIS

REACTOME\_RESPIRATORY\_ELECTRON\_TRANSPORT

KEGG\_ALZHEIMERS\_DISEASE

REACTOME\_TCA\_CYCLE\_AND\_RESPIRATORY\_ELECTRON\_TRANSPORT

KEGG\_PARKINSONS\_DISEASE

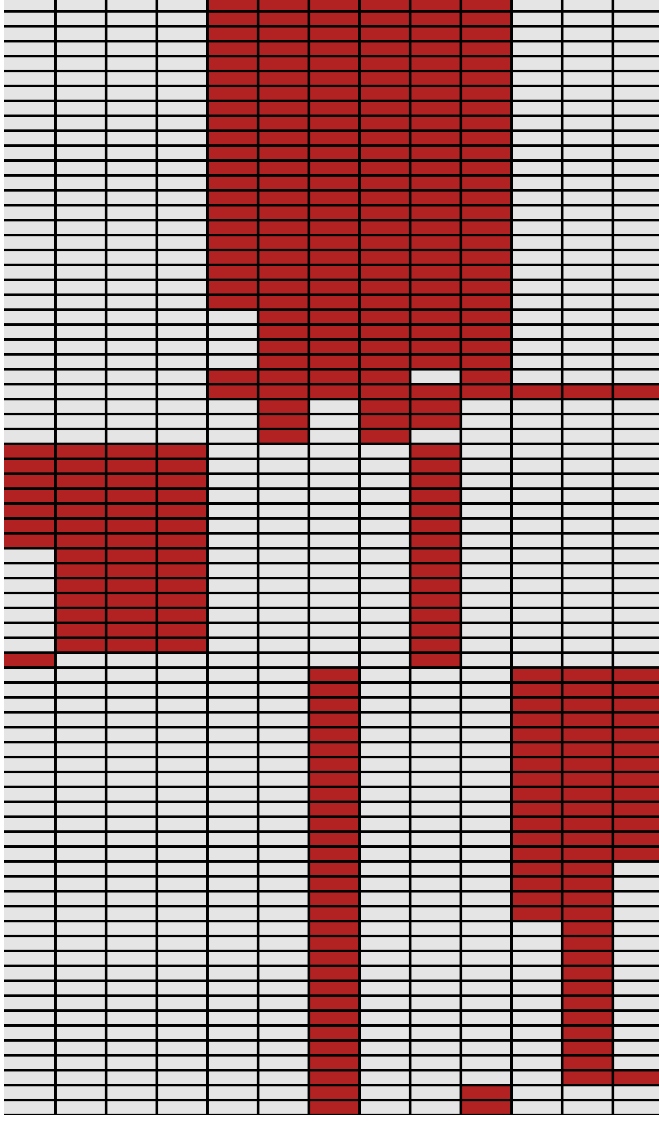
KEGG\_OXIDATIVE\_PHOSPHORYLATION

REACTOME\_RESPIRATORY\_ELECTRON\_TRANSPORT\_ATP\_SYNTHESIS\_BY\_CHEMIOSMOTIC\_COUPLING\_AND\_HEAT\_PRODUCTION\_BY\_UNCOUPLING\_PROTEINS

KEGG\_CITRATE\_CYCLE\_TCA\_CYCLE

REACTOME\_PYRUVATE\_METABOLISM\_AND\_CITRIC\_ACID\_TCA\_CYCLE

REACTOME\_CITRIC\_ACID\_CYCLE\_TCA\_CYCLE



COX6C  
COX5A  
COX7A2L  
COX7B  
COX7C  
COX8A  
CYC1  
NDUFA1  
NDUFA4  
NDUFA5  
NDUFA9  
NDUFB3  
NDUFC2  
NDUFS1  
NDUFS2  
NDUFS3  
NDUFS4  
NDUFS8  
UQCRC1  
UQCRC2  
UQCRH  
ATP5B  
ATP5A1  
ATP5C1  
ATP5F1  
CYCS  
SDHA  
COX6B2  
ATP5G3  
CASP3  
ATP6V0A4  
ATP6V0A2  
ATP6V0C  
ATP6V0D1  
ATP6V0D2  
ATP6V1H  
TCIRG1  
ATP6V1B1  
ATP6V0E1  
ATP6V1B2  
ATP6V1C1  
ATP6V1D  
ATP6V1F  
ATP6V1G3  
ATP6AP1  
DLI  
ACO2  
DLST  
FH  
IDH2  
IDH3A  
IDH3B  
IDH3G  
MDH2  
OGDH  
SUCLA2  
SUCLG1  
SUCLG2  
IDH1  
DLAT  
PDHA1  
PDHB  
BSG  
ADHFE1  
D2HGDH  
LDHA  
LDHB  
PDK1  
PDK3  
PDP1  
PDP2  
SLC16A1  
NNT  
NCP1  
ATP5L