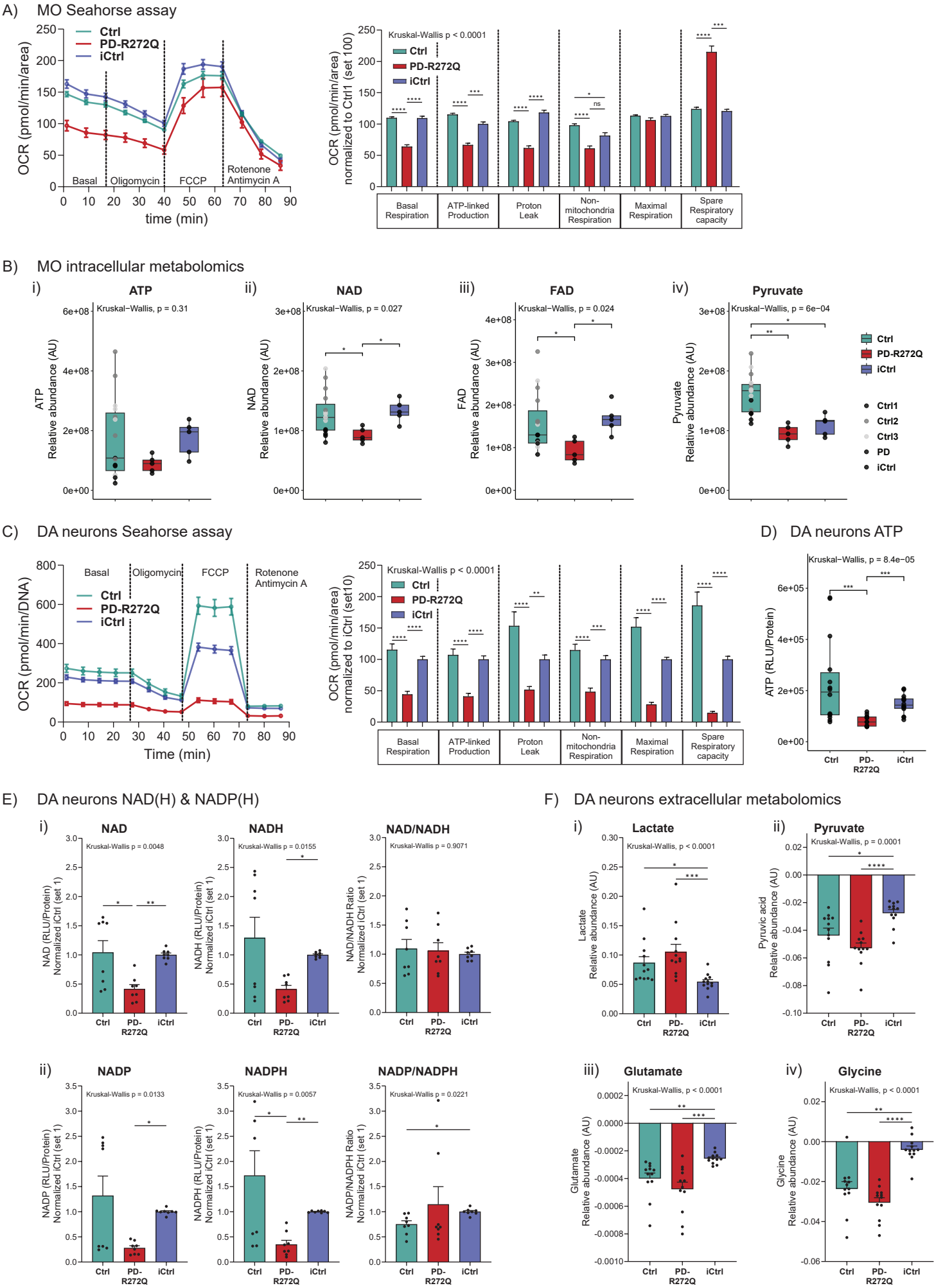
A) MO Seahorse assay
Ctrl
PD-R272Q
iCtrl
OCR (pmol/min/area)
Basal
Oligomycin
FCCP
Rotenone
Antimycin A
time (min)
Kruskal-Wallis p < 0.0001
OCR (pmol/min/area) normalized to Ctrl1 (set 100)
Basal Respiration
ATP-linked Production
Proton Leak
Non-mitochondria Respiration
Maximal Respiration
Spare Respiratory capacity
B) MO intracellular metabolomics
i) ATP
Kruskal−Wallis, p = 0.31
ii) NAD
Kruskal−Wallis, p = 0.027
iii) FAD
Kruskal−Wallis, p = 0.024
iv) Pyruvate
Kruskal−Wallis, p = 6e−04
Relative abundance (AU)
Ctrl1
Ctrl2
Ctrl3
PD
iCtrl
C) DA neurons Seahorse assay
OCR (pmol/min/DNA)
Time (min)
OCR (pmol/min/area) normalized to iCtrl (set10)
D) DA neurons ATP
Kruskal−Wallis, p = 8.4e−05
ATP (RLU/Protein)
E) DA neurons NAD(H) & NADP(H)
i) NAD
Kruskal-Wallis p = 0.0048
NAD (RLU/Protein) Normalized iCtrl (set 1)
NADH
Kruskal-Wallis p = 0.0155
NADH (RLU/Protein) Normalized iCtrl (set 1)
NAD/NADH
Kruskal-Wallis p = 0.9071
NAD/NADH Ratio Normalized iCtrl (set 1)
ii) NADP
Kruskal-Wallis p = 0.0133
NADP (RLU/Protein) Normalized iCtrl (set 1)
NADPH
Kruskal-Wallis p = 0.0057
NADPH (RLU/Protein) Normalized iCtrl (set 1)
NADP/NADPH
Kruskal-Wallis p = 0.0221
NADP/NADPH Ratio Normalized iCtrl (set 1)
F) DA neurons extracellular metabolomics
i) Lactate
Kruskal-Wallis, p < 0.0001
Lactate Relative abundance (AU)
ii) Pyruvate
Kruskal-Wallis, p = 0.0001
Pyruvic acid Relative abundance (AU)
iii) Glutamate
Kruskal-Wallis, p < 0.0001
Glutamate Relative abundance (AU)
iv) Glycine
Kruskal-Wallis, p < 0.0001
Glycine Relative abundance (AU)
Ctrl
PD-R272Q
iCtrl