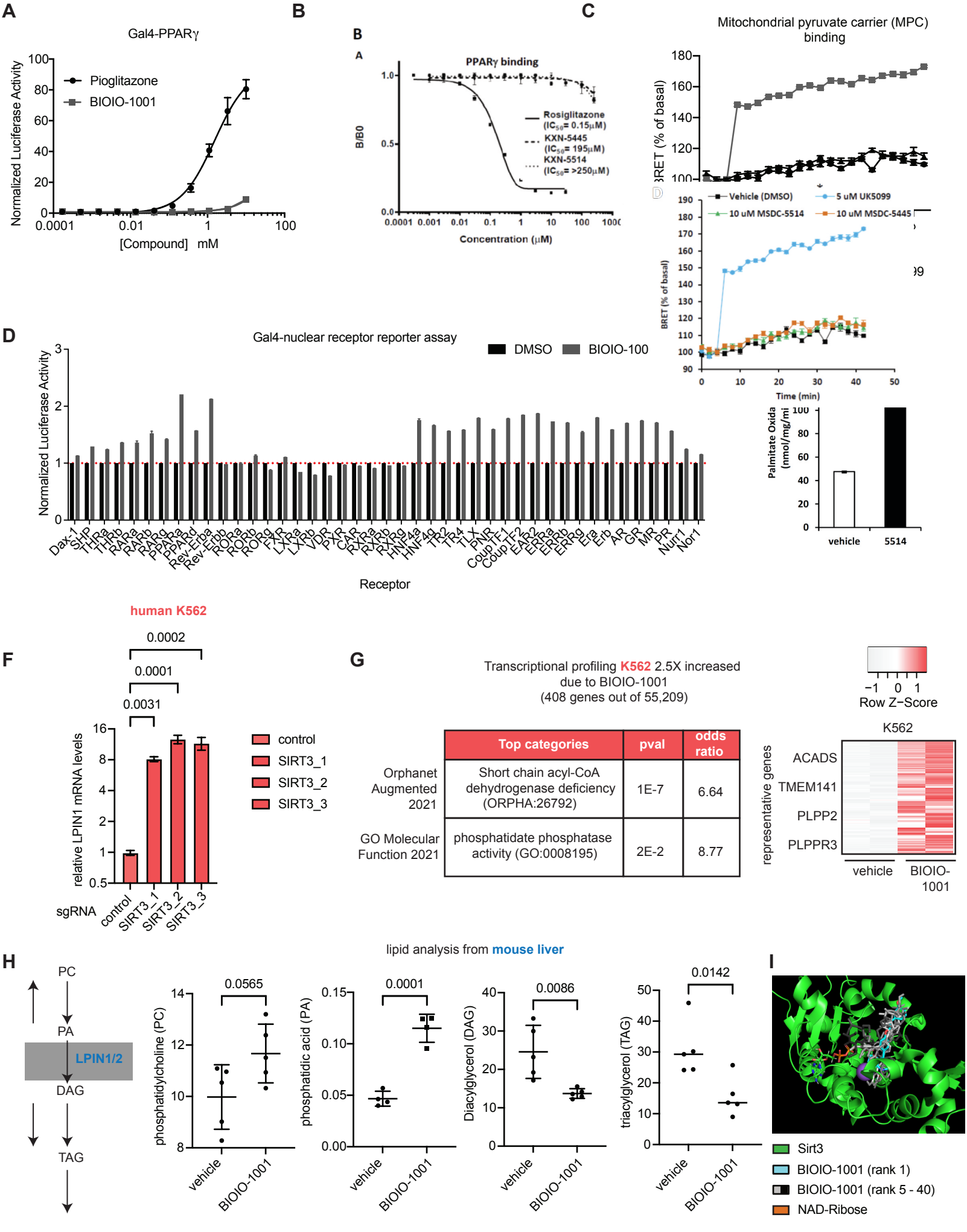
Figure S1


A
Gal4-PPARγ
Normalized Luciferase Activity
Pioglitazone
BIOIO-1001
[Compound] mM
B
PPARγ binding
B/B0
Rosiglitazone (IC50= 0.15μM)
KXN-5445 (IC50= 195μM)
KXN-5514 (IC50= >250μM)
Concentration (μM)
C
Mitochondrial pyruvate carrier (MPC) binding
BRET (% of basal)
Vehicle (DMSO)
5 uM UK5099
10 uM MSDC-5514
10 uM MSDC-5445
Time (min)
D
Gal4-nuclear receptor reporter assay
DMSO
BIOIO-100
Normalized Luciferase Activity
Receptor
Palmitate Oxida (nmol/mg/mi
vehicle
5514
human K562
F
0.0002
0.0001
0.0031
relative LPIN1 mRNA levels
control
SIRT3_1
SIRT3_2
SIRT3_3
sgRNA
G
Transcriptional profiling K562 2.5X increased due to BIOIO-1001
(408 genes out of 55,209)
Row Z−Score
Top categories
pval
odds ratio
Orphanet Augmented 2021
Short chain acyl-CoA dehydrogenase deficiency (ORPHA:26792)
1E-7
6.64
GO Molecular Function 2021
phosphatidate phosphatase activity (GO:0008195)
2E-2
8.77
K562
representative genes
ACADS
TMEM141
PLPP2
PLPPR3
vehicle
BIOIO-1001
H
lipid analysis from mouse liver
PC
PA
LPIN1/2
DAG
TAG
phosphatidylcholine (PC)
phosphatidic acid (PA)
Diacylglycerol (DAG)
triacylglycerol (TAG)
0.0565
0.0001
0.0086
0.0142
vehicle
BIOIO-1001
I
Sirt3
BIOIO-1001 (rank 1)
BIOIO-1001 (rank 5 - 40)
NAD-Ribose