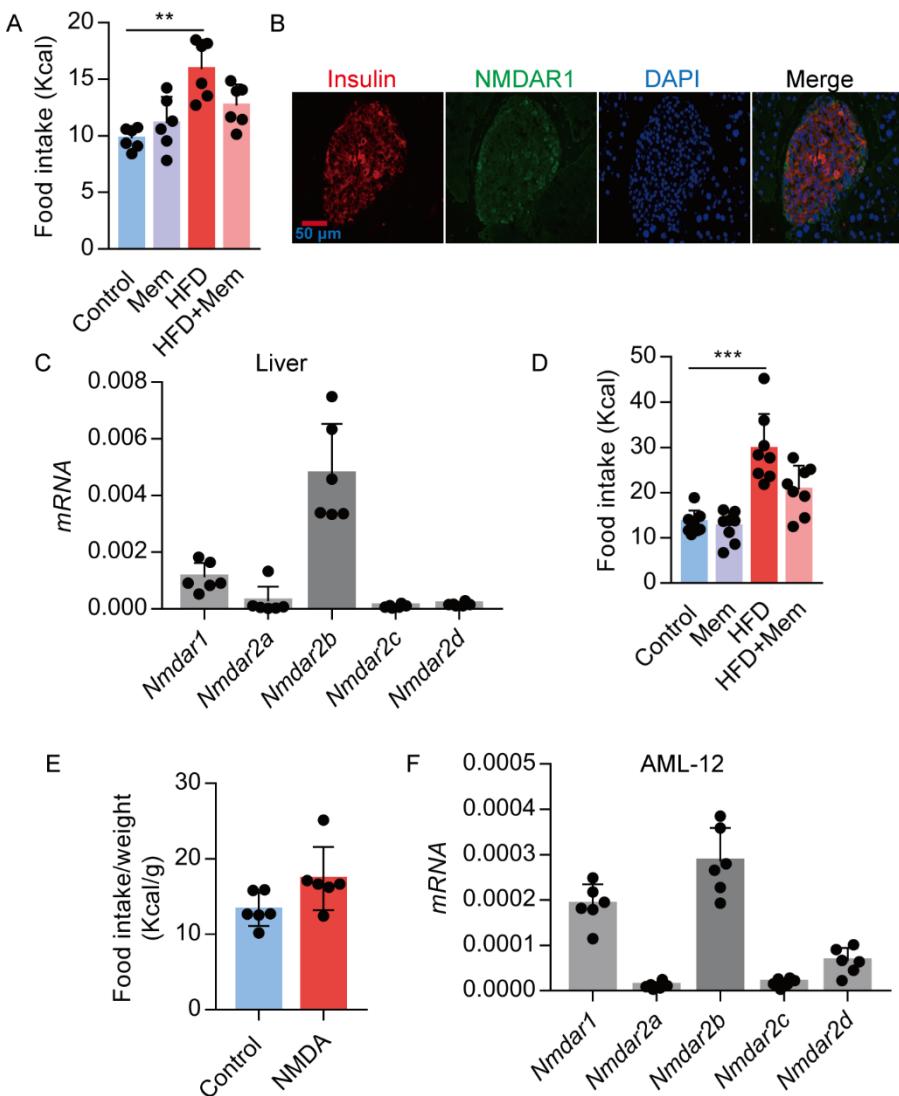


## Supplementary Figure



**Sup Figure 1.** (A) Determination of food intake of mice fed with HFD or normal chow diet for 12 weeks ( $n = 6$ ). (B) Representative immunofluorescence staining images of pancreases in control mice (Insulin: red, NMDAR1: Green, DAPI: blue,  $n = 4$ ). (C) RT-PCR analysis of NMDAR genes in liver tissue of mice ( $n = 6$ ). (D) Determination of food intake of mice fed with HFD or normal chow diet for 24 weeks ( $n = 8$ ). (E) Determination of food intake of mice treated with NMDA for 6 months ( $n = 6$ ). (F) RT-PCR analysis of NMDAR genes in AML-12 hepatocytes ( $n = 6$ ). \*\* $P < 0.01$ , \*\*\* $P < 0.001$ . All data are presented as the mean  $\pm$  SEM.

**Supplementary Table**

Gene	Species	Forward primer (5'-3')	Reverse primer (5'-3')	Table
<i>Acox1</i>	mouse	CCTGATTCAAGCAAGGTAGGG	TCGCAGACCCTGAAGAAATC	1.
<i>Cpt1a</i>	mouse	AGTGGCCTCACAGACTCCAG	GCCCATGTTACAGCTTCC	Seq
<i>Hmgcs2</i>	mouse	ATACCACCAACGCCTGTTATG	CAATGTCACCACAGACCACCA	unc
<i>Cyp4a10</i>	mouse	AAGGGTCAAACACCTCTGGA	GATGGACGCTCTTACCCAA	es of
<i>Pparγ</i>	mouse	GCTGTTATGGGTGAAACTCT	TGGCATCTCTGTGTCAACCA	spec
<i>Cox7a1</i>	mouse	GTCTCCCAGGCTCTGGTCCG	CTGTACAGGACGTTGTCCATT	ific
<i>Pgclα</i>	mouse	TCCTCCTCATAAAGCCAACC	GCCTTGGTACCAAGAACACT	prim
<i>Mcad</i>	mouse	CCAGAGAGGAGATTATCCCCG	TACACCCATACGCCAATCTT	ers
<i>Srebp1c</i>	mouse	GTTACTCGAGCCTGCCTTCAGG	CAAGCTTGACCTGGGTGTG	used
<i>Acc1</i>	mouse	GGACAGACTGATCGCAGAGAA	TGGAGAGCCCCACACACA	in
		AG		this
<i>Fas</i>	mouse	GCTCGGAAACTTCAGGAAAT	AGAGACGTGTCACTCCTGGAC	stud
			TT	y
<i>Lcad</i>	mouse	GCATCAACATCGCAGAGAAA	TCGCAATATAAGGCATGACA	
<i>Etfdh</i>	mouse	GTCTTGATCCAGCTGCCTTC	ACCTGGAAGAATTGGCACAG	

<i>Chreb1</i>	mouse	CCTCACTTCACTGTGCCTCA	ACAGGGGTTGTTGTCTCTGG
<i>Mcp-1</i>	mouse	GTCCTGTCATGCTTCTGG	GCGTTAACTGCATCTGGCT
<i>Il-6</i>	mouse	CTGGGGATGTCTGTAGCTCA	CTGTGAAGTCTCCTCTCCGG
<i>Tnf-<math>\alpha</math></i>	mouse	AGCCCCCAGTCTGTATCCTT	CTCCCTTGAGAACTCAGG
$\beta$ -actin	mouse	TTCCAGCCTCCTTCTTG	GGAGCCAGAGCAGTAATC
<i>Nmdar1</i>	mouse	ACTCCCACGACCACCTCAC	GTAGACGCGCATCATCTCAA
<i>Nmdar2a</i>	mouse	AGACCTTAGCAGGCCCTCTC	CTCTGCTGTCCTCCAGACC
<i>Nmdar2b</i>	mouse	CCGCAGCACTATTGAGAACAA	ATCCATGTGTAGCCGTAGCC
<i>Nmdar2c</i>	mouse	ATCGGGGTCAACAATACCAA	CACAGCAGAACCTCCACTGA
<i>Nmdar2d</i>	mouse	TAGTGTCACTGCAGATCC	TCCTGGCAGAAGAAGTGGTT
<i>Lcad</i>	human	AAGCGAAACGTTGGACTCC	CCCACATGTATCCCCAACCT
<i>Etfdh</i>	human	GCTCTTGGTCTTGTGGTTGG	AGCCACCTTCATTGAGAGCT
<i>Acox1</i>	human	GGGACCCATAAGCCTTGCC	CTTGTACTACGCGGTTTCACG
<i>Cpt1a</i>	human	ATCAATCGGACTCTGGAAACGG	ATCTTGGTGGCACGACTCATCT
<i>Hmgcs2</i>	human	TCTGTCCCCTTGCAATTCCA	TAGAACAGGAAAGTGGGCTG
<i>Cox7a1</i>	human	GTACCGAGTGACAATGACGC	GGCCAGCGTTATTGACACT
<i>Pgc1<math>\alpha</math></i>	human	CACCAGCCAACACTCAGCTAA	AGGGTCATCGTTGTGGTCAG
		G	
<i>Mcad</i>	human	TGTGGAAGCAGATACCCAG	ACCAGCTCCGTCACCAATTAA
<i>Gapdh</i>	human	CCAAGGAGTAAGACCCCTGG	AGGGGAGATTCACTGTGGTG