

Neuropathy Phenotyping, Animal Groups

Animal Group	Tail Flick	Nerve Conduction	MF D	TU N E	Biochemistry
SOD Group 1					
SOD+/- Diabetic					
SOD+/- Control					
SOD+/+ Diabetic	N A	X	X	N A	X
SOD+/+ Control					
SOD Group 2					
SOD+/- Diabetic					
SOD+/- Control					
SOD+/+ Diabetic	X	X	N A	N A	X
SOD+/+ Control					
Group 1					
db/db S D+/-					
db + O DS-	X	X	N A	N A	X
db/db S D+/+					
db + O DS+					
Group 2					
db/db S D+/-					
db + O DS-	X	N A	N A	N A	X
db/db S D+/+					
db + O DS+					
129-Fyn					
Diabetic (STZ)	X	X	Ongoing	Ongoing	Ongoing
Control					
Group 1					
GCLC +/-dbdb					
GCLC +/-db+	X	X	Ongoing	Ongoing	Ongoing
GCLC +/-dbdb					
GCLC +/-db+					
KLS/dbdb					
KLS/db+	X	X	Ongoing	Ongoing	Ongoing

Neuropathy Phenotyping, Beginning 2004

Date Time Point (week)	Animal Group (n)	NCV	Tail Flick	Harvest Y/N
2/2/04 (24)	KLS/db db (14) experimental s	+	+	Y
2/2/04 (12)	129 Fyn(15)		+	N
2/16/04 (24)	KLS/db db (14) controls	+	+	Y
2/24/04 (24)	GCLC/dbdb group 1 (8)	+	+	Y
3/4/04 (24)	GCLC/dbdb group 2 (5)	+	+	Y
3/15/04 (24)	GCLC/dbdb group 3 (5)	+	+	Y
3/22/04 (24)	GCLC/dbdb group 4 (16)	+	+	Y

The following dates indicate scheduled data collection for the specified groups of mice. This table represents a sample of the animals currently under analysis within the University of Michigan AMDCC laboratories.

SOD Group 2, Tail Flick

Date Time Point	SOD+/- D	SOD+/+ D	SOD+/- C	SOD+/+ C
3/30/03 week 8 (n)	3.68+/- .31 (10)	3.17+/- .23 (10)	3.05+/- .18 (10)	3.25+/- .22 (10)
4/30/03 week 2 (n)	3.17+/- .18 (10)	3.01+/- .16 (10)	3.18+/- .18 (10)	3.16+/- .14 (10)
5/30/03 week 6 (n)	3.24+/- .09 (10)	2.84+/- .17 (9)	2.89+/- .12 (10)	3.09+/- .19 (10)
6/30/03 week 0 (n)	3.49+/- .30 (10)	2.96+/- .18 (9)	3.60+/- .36 (10)	3.32+/- .18 (9)
7/30/03 week 4 (n)	3.29+/- .21 (10)	3.02+/- .23 (9)	3.23+/- .19 (10)	3.37+/- .19 (10)

+/- S.E.M

SOD Group 2, Tail Sensory Conduction Velocity

meters/second

Date Time Point	S OD+/- D	S OD+/- +D	S OD+/- C	S OD+/- +C
4/30/03 week 12 (n)	26.00+/- .67 (9)	27.4+/- .68 (10)	27.25+/- .41 (8)	28.1+/- .72 (10)
7/30/03 week 24 (n)	23.44+/- .41 (9)	24.00+/- .89 (7)	25.20+/- .69 (10)	25.60+/- .77 (10)

+/- S.E.M

SOD Group 2, Tail Motor Distal Latency

Seconds

Date	S OD+/- D	S OD+/- +D	S OD+/- C	S OD+/- +C
Time Point				
4/30/03				
week 12	2.37+/- .07	2.26+/- .07	2.55+/- .12	2.23+/- .07
(n)	(10)	(10)	(8)	(10)
7/30/03				
week 24	2.7+/- .04	2.89+/- .12	2.6+/- .13	2.69+/- .08
(n)	(10)	(7)	(10)	(10)

+/- S.E.M

SOD Group 2, Sciatic Motor Nerve Conduction Velocity

meters/second

Date Time Point	SOD +/- D	SOD +/+ D	SOD +/- C	SOD +/+ C
4/30/03 week 12 (n)	37.20 +/- 2.76 (10)	41.10 +/- 3.47 (10)	42.00 +/- 2.72 (8)	38.10 +/- 2.77 (10)
7/30/03 week 24 (n)	41.90 +/- 4.41 (10)	37.14 +/- 3.96 (7)	44.30 +/- 2.32 (10)	39.00 +/- 3.04 (10)

+/- S.E.M

SOD Group 2, Glycosylated Hemeglobin

Date				
Time Point	S OD+/- D	S OD+/- +D	S OD+/- C	S OD+/- +C
7/30/03				
week 24	9.63+/- .70	11.21+/- .29	4.7+/- .14	4.86+/- .33
(n)	(10)	(8)	(10)	(8)

+/- S.E.M

db SOD Group 1, Tail Flick

Date Time Point	dbdb SOD+/-	dbdb SOD+/+	db+ SOD+/-	db+ SOD+/+
3/01/03 week 8 (n)	13.53+/-1.47 (6)	11.91+/-1.78 (7)	5.65+/-1.27 (9)	4.19+/-0.95 (10)
4/01/03 week 12 (n)	12.93+/-1.27 (5)	11.56+/-2.29 (5)	3.49+/-0.37 (8)	2.96+/-0.19 (9)
5/01/03 week 12 (n)	10.00+/-0 (2)	8.38+/-1.62 (4)	3.66+/-0.34 (9)	3.19+/-0.23 (10)
6/01/03 week 20 (n)	6.64+/-3.36 (2)	7.5+/-2.41 (3)	3.29+/-0.27 (7)	3.39+/-0.28 (9)
7/01/03 week 24 (n)	3.79+/-0.52 (2)	7.00+/-1.6 (3)	3.44+/-0.035 (9)	2.7+/-0.21 (10)

+/- S.E.M

db SOD Group 1, Tail Sensory Conduction Velocity

meters/second

Date Time Point	dbdb SOD+/-	dbdb SOD+ / +	db+ SOD+/-	db+ SOD+ / +
4/01/03 week 12 (n)	24.00 (1)	22.60+/-1.21 (5)	23.89+/-0.51 (9)	26.60+/-0.60 (10)
7/01/03 week 24 (n)	25.00 (1)	24.33+/-1.76 (3)	28.44+/-0.72 (9)	29.20+/-1.14 (10)

+/- S.E.M

db SOD Group 1, Tail Motor Distal Latency

seconds

Date	dbdb SOD+/-	dbdb SOD+/+	db+ SOD+/-	db+ SOD+/+
Time Point				
4/01/03				
week 12	2.8	2.62+/- .44	2.67+/- .07	2.48+/- .11
(n)	(1)	(5)	(9)	(10)
7/01/03				
week 24	2.00+/- .80	2.4+/- .13	2.233+/- .09	2.13+/- .08
(n)	(2)	(5)	(9)	(10)

+/- S.E.M

db SOD Group 1, Sciatic Motor Nerve Conduction Velocity

meters/second

dbdb SOD+/- dbdb SOD+/+ db+ SOD+/- db+ SOD+/+

Date

Time Point

4/01/03

week 12	25.5+/-3.02	25.60+/-1.28	30.71+/-2.26	27.00+/-2.34
(n)	(4)	(5)	(7)	(7)

+/- S.E.M

db SOD Group 1, Glycosylated Hemoglobin

Date Time Point	dbdb SOD+/-	dbdb SOD+/+	db+ SOD+/-	db+ SOD+/+
7/01/03 week 24 (n)	8.20+/- .53 (4)	7.58+/- .78 (5)	4.40+/- .07 (6)	4.58+/- .13 (5)

+/- S.E.M

db SOD Group 2, Tail Flick

seconds

Date Time Point	dbdb SOD+/-	dbdb SOD+/+	db+ SOD+/-	db+ SOD+/+
week 8	NA	NA	NA	NA
	NA	NA	NA	NA
week 12 8/26/03				
week 16 (n)	10+/-0 (3)	10+/-0 (5)	4.43+/-0.37 (6)	3.53+/-0.62 (4)
9/26/03				
week 20 (n)	6.67+/-1.76 (3)	8.58+/-1.42 (4)	5.20+/-1.02 (6)	3.74+/-0.30 (4)
10/26/03				
week 24 (n)	9.52+/-0.47 (4)	6.96+/-1.3 (5)	4.05+/-0.49 (5)	3.01+/-0.27 (5)

+/- S.E.M

NA = data not available

db SOD Group2, Glycosylated Hemoglobin

Date Time Point	dbdb SOD+/-	dbdb SOD+/+	db+ SOD+/-	db+ SOD+/+
10/26/03 week 24 (n)	8.2+/- .53 (4)	7.58+/- .78 (5)	4.4+/- .07 (6)	4.58+/- .13 (5)

+/- S.E.M

db GCLC Group 1, Tail Flick

seconds

Date Time Point	GCLC+/- dbdb	GCLC+/- db+	GCLC+/+ dbdb	GCLC+/+ db+
11/15/03 week 8 (n)	5.99+/-1.38 (5)	4.01+/-0.61 (6)	7.89+/-1.34 (6)	7.74+/-1.10 (7)
week 12	T B A	T B A	T B A	T B A
week 16	T B A	T B A	T B A	T B A

+/- S.E.M

TBA = to be acquired

db KLS , Tail Flick

seconds

KLS \emptyset db

KLS \emptyset +

Date
Time Point

11/5/03

week 8

(n)

9.56 \pm .43

(14)

4.25 \pm .53

(14)

\pm S.E.M

Cre-Lox Mice

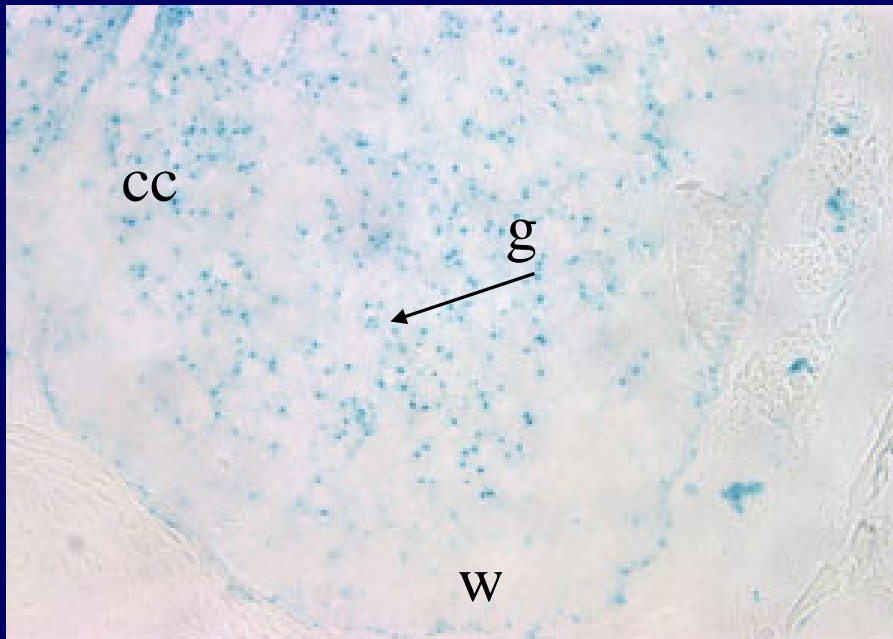
	Animals Harvested	β gal histochemistry
Nestin		
P 0	X	X
P 7	X	X
P 1	X	X
P 2	X	X
dAlt	X	
Synapsin		
P 0	X	X
P 7	X	X
P 1		
P 2	X	X
dAlt		

β -gal histochemistry will be confirmed by β -gal, synapsin and nestin immunohistochemistry.

β -gal/Nestin Histochemistry

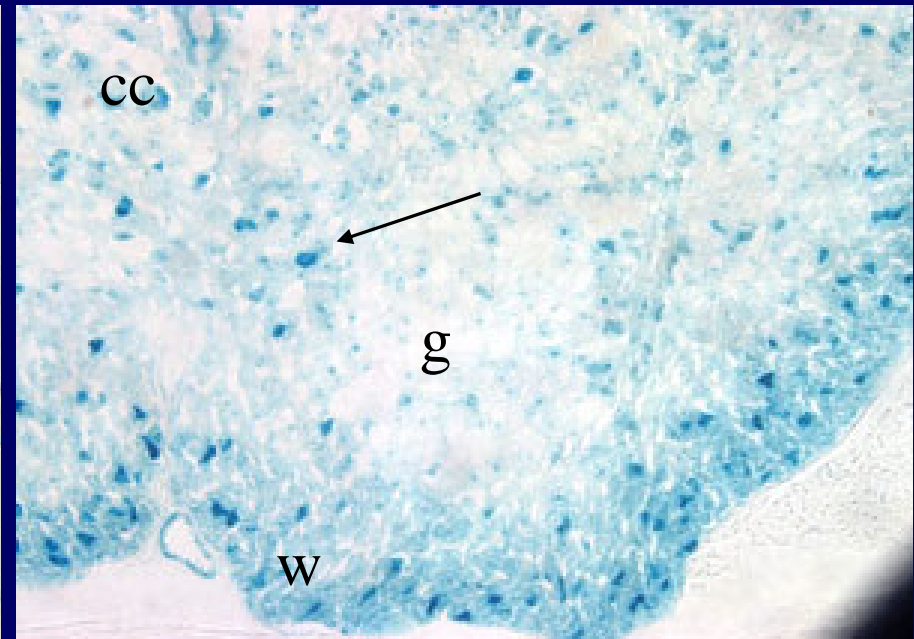
β -galactosidase is used as a reporter gene to confirm the insertion of the Cre/Lox system. β -galactosidase histochemistry will be followed by immunohistochemistry for nestin for confirmation.

Postnatal day 0 spinal cord



Ventral 10X

Postnatal day 14 spinal cord



Ventral 10X

cc = central canal, w = white matter, g = gray matter
arrows indicate developing motor neurons.