



**STANFORD**  
SCHOOL OF MEDICINE

<b>Title:</b>	<b>Phenotyping of Huntington's Disease Model of Mice (R6/2 mice)</b>
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<b>Procedure</b>	<b>Rota-Rod</b>
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Rota-Rod

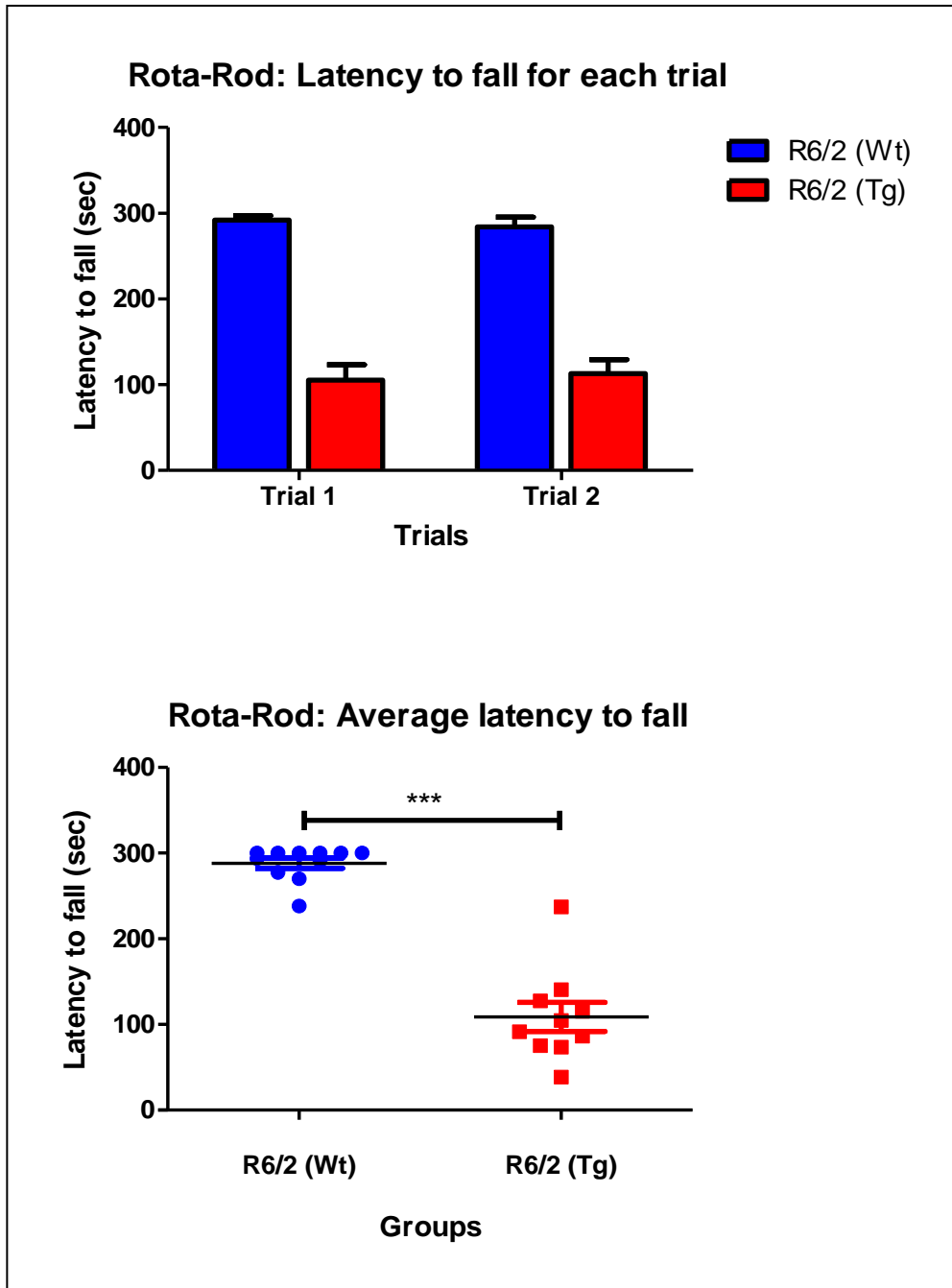
The Rota-rod test is designed to evaluate the motor coordination and balance of rodents by forcing the subjects to run. Subjects are placed on a rotating rod with a steady acceleration and the latency to fall is recorded. The subjects fall safely 16.5cm below the rotating rod. The maximum trial length is 5 minutes. Mean latency to fall off the rotarod is used to assess motor learning abilities. As this is a general description of standard materials, test settings, and procedures, variations may be made to fit specific needs.

Project Title	Phenotyping of Huntington's Disease Model of Mice (R6/2 mice)
Species	Mouse
Strain	R6/2
Sex	Males
Age	9 weeks old

Subjects		
Group	# of mice	Treatment
R6/2 (Wt)	11	N/A
R6/2 (Tg)	10	N/A

**Rota-rod**

R6/2 (Wt)				R6/2 (Tg)			
Animal ID	Trial 1 (sec)	Trial 2 (sec)	Average of two trials (sec)	Animal ID	Trial 1 (sec)	Trial 2 (sec)	Average of two trials (sec)
1	300	300	300	12	80	103	91.5
2	300	300	300	13	88	59	73.5
3	300	255	277.5	14	125	130	127.5
4	300	300	300	15	87	85	86
5	287	300	293.5	16	113	118	115.5
6	300	176	238	17	25	52	38.5
7	300	300	300	18	139	142	140.5
8	300	300	300	19	58	92	75
9	300	300	300	20	239	235	237
10	282	300	291	21	97	112	104.5
11	246	294	270				



WT mice had a significantly higher average latency to fall when compared to Tg mice. Analysis was done using an unpaired t-test ( $p < 0.001$ ).

Conclusion:

R6/2 transgenic mice demonstrate worse motor coordination and balance when compared to wild type mice. The mice were given two trials and the results from the two trials were averaged together. R6/2 transgenic mice fell off the rotating rod significantly sooner when compared to wild type mice with an unpaired t-test.