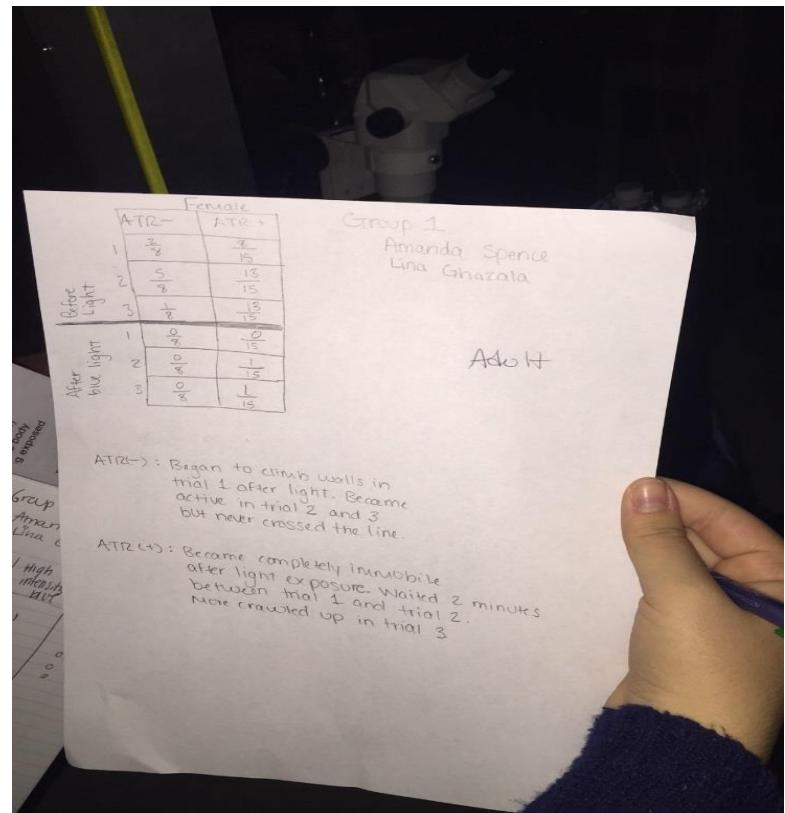
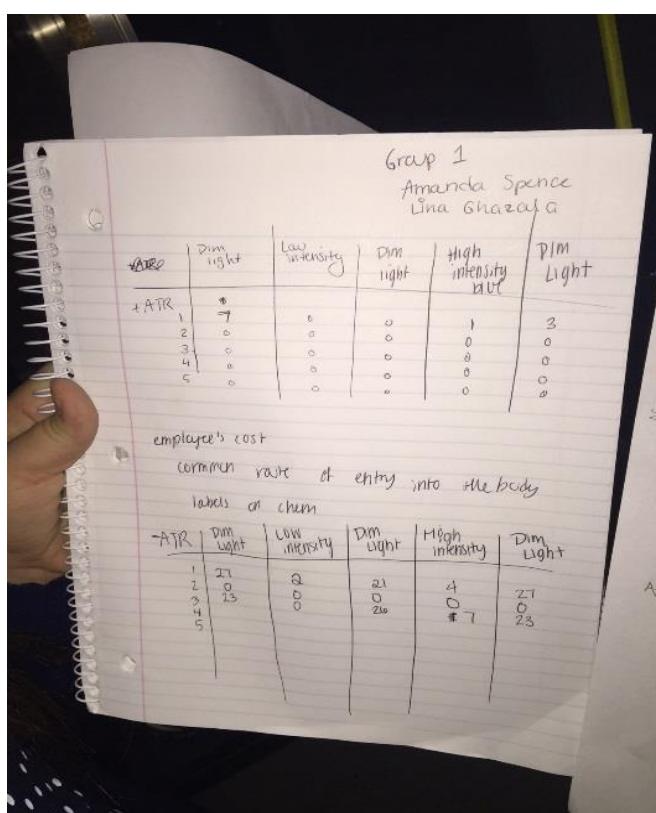
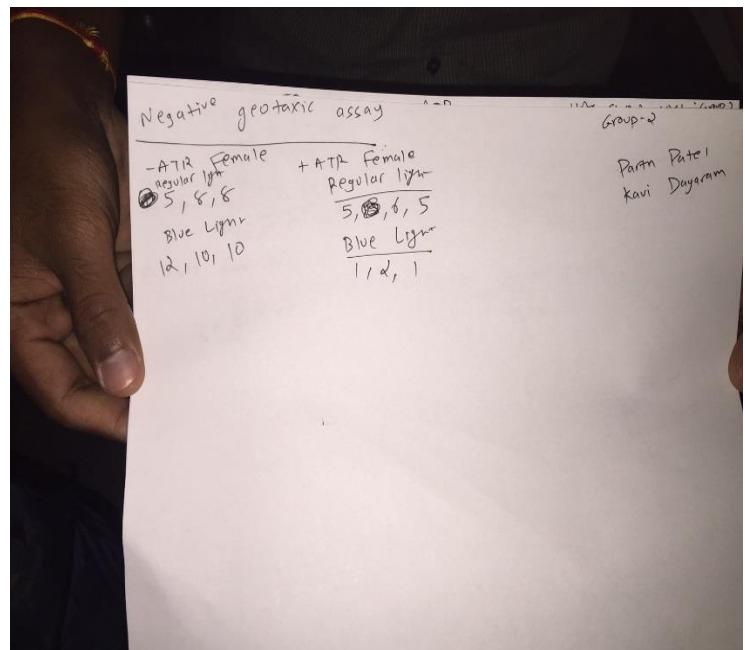
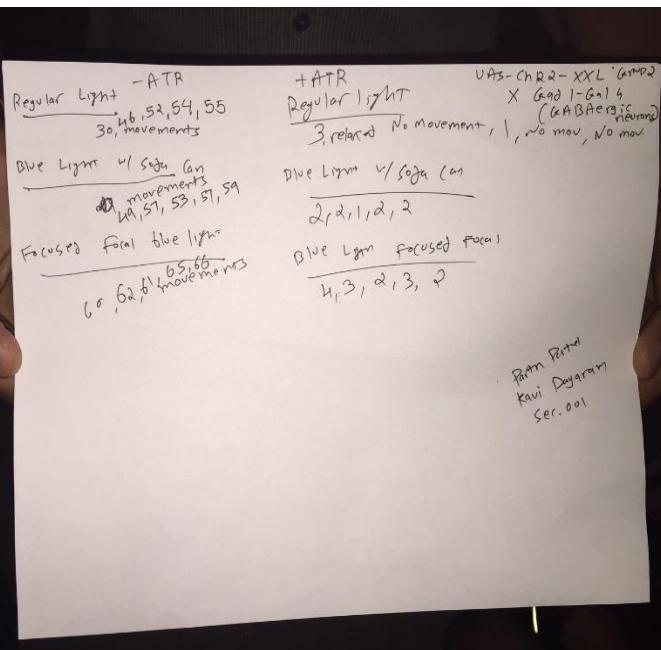


LAB 1, Section 001

GROUP 1: D42-Gal4 X UAS-Chr2-XXL; 1. Larval locomotion (BWC) 2. Adults negative geotaxis +ATR and -ATR



GROUP 2: Gad1-Gal4 X UAS-ChR2-XXL; 1. Larval locomotion (BWC) 2. Adult negative geotaxis +ATR and -ATR



GROUP 3: ppk-Gal4 XUAS-Chr2-XXL; 1. rolling behavior in larvae 2. Negative geotaxis + ATR and - ATR

Rolling Behavior

-ATR	+ATR
1: 0, 0	1. 8, 5
2 0, 0	2. 1, 0
3 1, 0	3. 2, 3
4 0, 0	4. 0, 4
5 0, 0	5. 0, 0

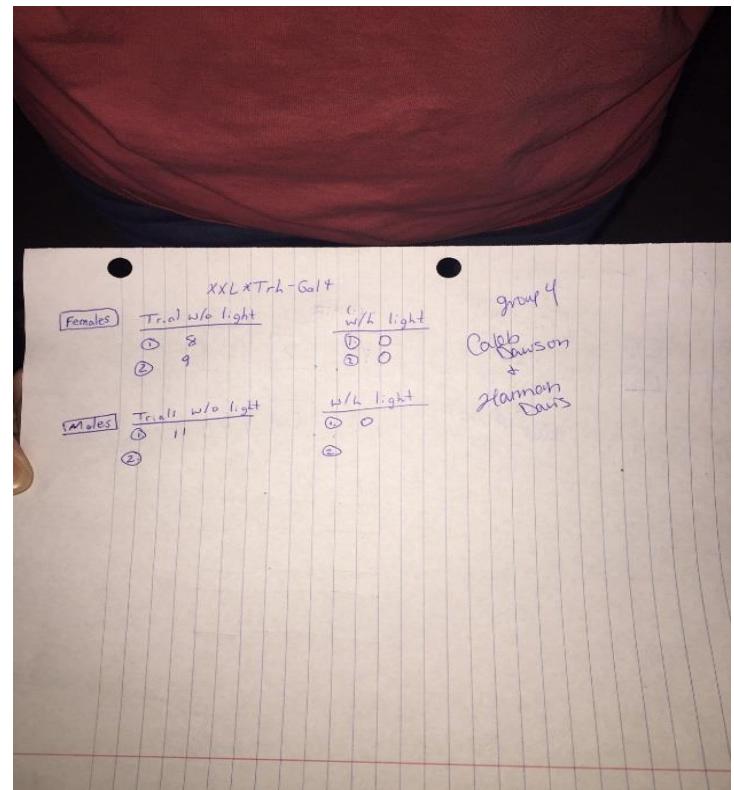
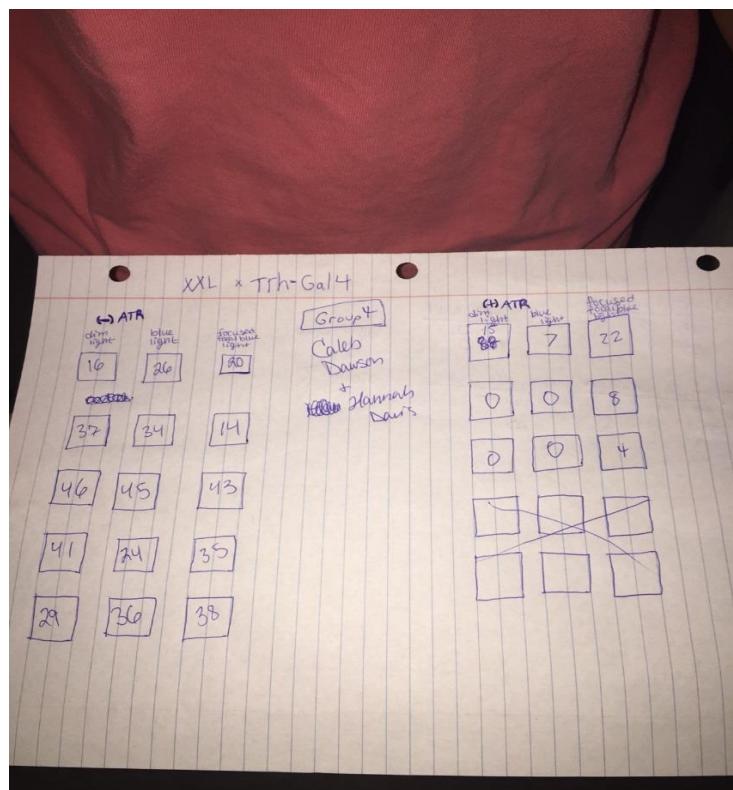
Group 3
X - ppk - Gal4

Tyler Bayes
Lee Sanders

Negative Geotaxis Data (Males)

-ATR (males)	-ATR (females)	+ATR (males)	+ATR (females)
1. 14/15	1. 15/15	1. 9/15	1. 10/15
2. 13/15	2. 14/15	2. 14/15	2. 12/15
3. 8/15	3. 9/15	3. 11/15	3. 9/15
4. 13/15	5. 12/15	5. 12/15	6. 14/15
5. 10/15	6. 10/15	6. 10/15	7. 5/15
6. 10/15	7. 11/15	7. 3/15	8. 1/15
7. 7/15	8. 4	8. 4	9. 4
8. 7/15	9. 5	9. 5	10. 5
9. 8/15	10. 6	10. 6	11. 6

GROUP 4: Trh-Gal4 X UAS-ChR2-XXL; 1. Larval locomotion +ATR -ATR 2. Adult negative geotaxis +/-ATR

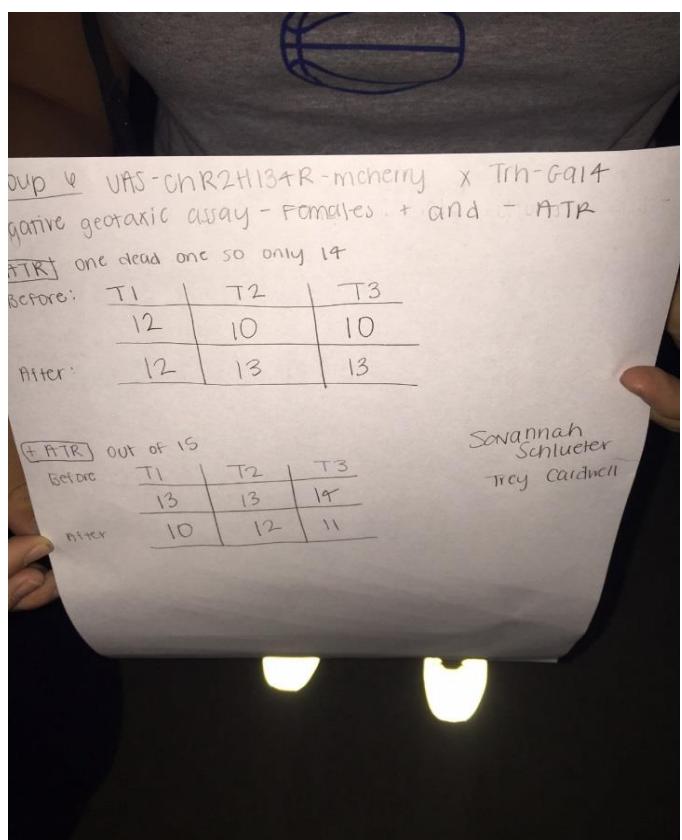
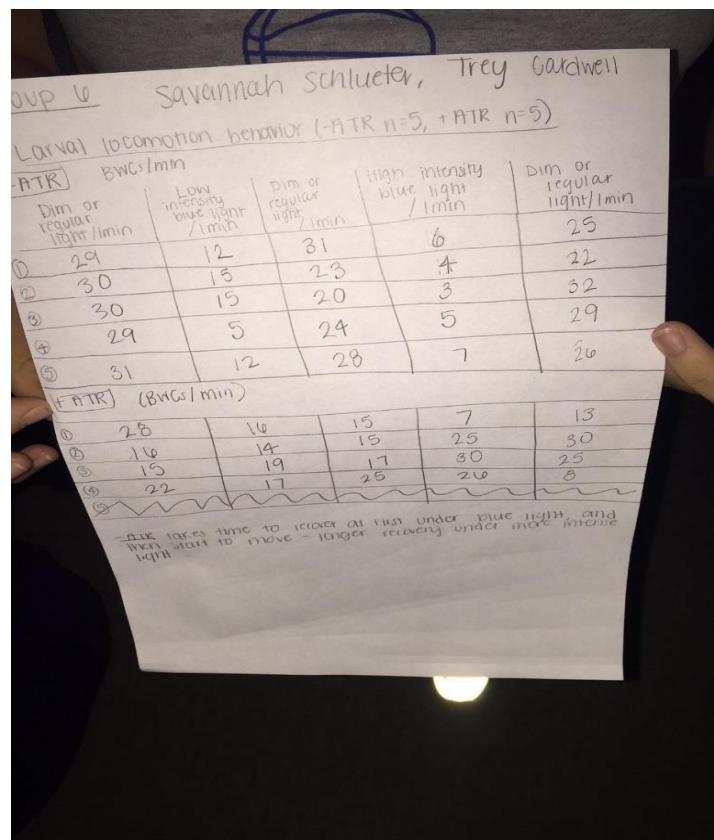


GROUP 5: OK371-Gal4 X UAS-ChR2H134R mcherry 1. Larval locomotion +/- ATR 2. Negative geotaxis

Trial		Group 5	
1) -ATR	Dim light	19 movements/min	+ATR
2) -ATR	Dim light	11 movements/min	Normal Dim light Blue Blue Blue Inten
3) -ATR	Dim light	25 movements/min	27 movements/min 27 movements/min 0 movements/min
Blue light 30cm Cam			
1) -ATR	Dim	14 movements/min	2) + ATR Normal Dim Blue Dim Blue Inten
-ATR	Blue Inten Light	10 movements/min	19 movements/min 13 movements/min 0 movements/min
2) -ATR	Blue Dim light	17 movements/min	
	Blue Inten light	29 movements/min	
3) -ATR	Blue Dim light	17 movements/min	
	Blue Inten Light	16 movements/min	
4) -ATR	Blue Dim light		
	Blue Inten light		

Phototaxis Assay				Group 5
Trial 1)	8 above line	15 sec	Normal light	Will
+ATR	14 above line	15 sec	Normal light	Sam
Males				Jennifer
	6 above line	15 sec	Blue dim light	Z
	3 above line	15 sec	Blue dim light	

GROUP 6: Trh-Gal4 X UAS-ChR2H134R-mcherry 1. Larval locomotion +/- ATR 2. Adult negative geotaxis +/- ATR



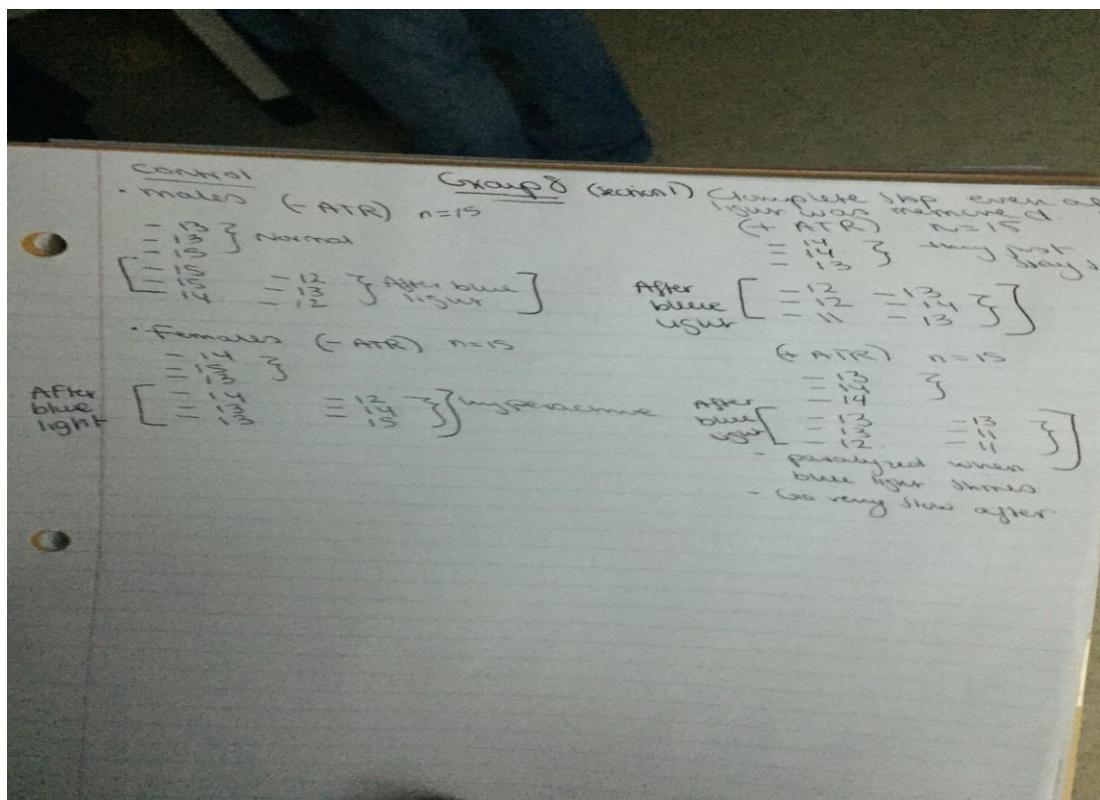
GROUP 7: ple-Gal4 X UAS-ChR2-XXL 1. Larval locomotion (BWC) +/- ATR 2. Adult negative geotaxis

UAS - ChR2 - XXL		X ple - Gal4 + ATR				
Bio 350 Lab 1 (Group 7)						
BWC >/min	→ blue can	→ blue focus				
Trial	deg	Can	Reg	Focus	Reg	
1	9	25	17	28	19	
2	11	19	13	25	10	
3	13	22	15	24	13	
4	12	25	14	24	13	
5	11	23	14	26	13	

Matt Roman
Alex Lange

Touch [+trial]		head	body	tail
normal	1	left turn	C	no response
blue	2	C	stop	no response
normal	3	left turn	C	Tail flip
blue	4	stop	stop	no response
Normal	5	right turn	C	stop
blue		stop	no response	Tail flip
normal		left turn	C	no response
blue		right turn	stop	Tail flip

GROUP 8: ple-Gal4 X UAS-ChR2-XXL plus ATR; 1. Adult negative geotaxis +/- ATR



GROUP 9: Trh-Gal4 X UAS-ChR2-XXL 1. Larval locomotion (BWC) 2. Touch Assay

Body Wall Contractions

genotype	Minute 1	Minute 2	Minute 3	Minute 4	Minute 5
dif ⁺ + ATR	4	22	27	28	30
Abs ⁺ + ATR	0	20	36	29	41
dif ⁻ - ATR	8	22	23	20	29
Abs ⁻ - ATR	7	16	23	23	25

Touch Assay

	Head	Abdomen	Tail
+ATR	C-curl	pause	crawled away
+ATR	C-curl	pause	crawl faster
-ATR	C-curl	pause/crawl	crawl faster
-ATR	C-curl	pause	crawled away

GROUP 10: D42-Gal4 X UAS-ChR2-XXL and UAS-ChR2-XXL (control) +/- ATR

1. Adult phototaxis

Group 10 ♀ & control Erich Sinclair
Rikin Jamanishi

Trial #	Trial Type	Time	Behavior
1	LED	10cm - 5s 20cm - 9s	Fast
	Blue	10cm - 6s 20cm - 9s 13s	Slower
2	LED	10cm - 5s 20cm - 9s	Fast
	Blue	10cm - 14s 20cm - 21s	Confused (back & forth)
3	LED	10cm - 5s 20cm - 9s	Fast
	Blue	10cm - 7s 20cm - 14s	Slower, straight for most part
4	LED	10cm - 8.25s 20cm - 9s	Slow
	Blue	10cm - 14s 20cm - 22s	Started very slowly
5	LED	10cm - 5s 20cm - 8.75s	
	Blue	10cm - 5s 20cm - 13s	Started strong, ended weak
6	LED	10cm - 3s 20cm - 7s	So fast
	Blue	10cm - 4.5s 20cm - 11s	Not bad
7	LED	10cm - 5s 20cm - 11.5s	
	Blue	10cm - 8s 20cm - 14.5s	
8	LED	10cm - 8s 20cm - 17s	Slow reaction time
	Blue	10cm - 7s 20cm - 15s	

Erich Sinclair
Group 10

9	LED	10cm - 5s Average 20cm - 9s
	Blue	10cm - 6s 20cm - 14s
10	LED	10 cm - 4s Good start, 20cm - 12s back end
	Blue	10 cm - 5s 20cm - 10s