

6. TABLES AND FIGURES

Table1. 1 Summary of all recorded cells in the postnatal retinas of the normal and dark reared rabbits.

Normal reared												
	Cell types					Soma location in the INL				Soma aspect ratio		
	OFF	ON	Undefined BP	B/M	n	N1	N2	N3	n	Mean	S.E.	n
P0-1(7)	5	1	8	38	52	8	31	10	49	2.51	0.11	42
P2-3(8)	7	6	10	38	61	19	30	12	61	2.23	0.07	53
P4-5(5)	9	1	9	2	21	9	10	2	21	2.09	0.09	14
P6-7(7)	11	11	11	8	41	15	21	2	38	2.06	0.06	28
P8-9(8)	7	11	6	0	24	14	10	0	24	1.97	0.11	5
P10~(4)	15	22	2	0	39	22	17	0	39	1.80	0.07	12
Sum					238				232			154
Dark Reared												
	Cell types					Soma location in the INL				Soma aspect ratio		
	OFF	ON	Undefined BP	B/M	n	N1	N2	N3	n	Mean	S.E.	n
P0-1(3)	1	0	1	21	23	4	15	4	23	2.52	0.08	18
P2-3(3)	1	1	5	10	17	3	8	3	14	2.51	0.13	13
P4-5(1)	6	3	6	9	24	7	12	4	23	2.24	0.12	23
P6-7(2)	6	0	5	12	23	10	10	3	23	1.96	0.07	21
P8-9(4)	12	9	3	10	34	18	11	4	33	1.89	0.08	25
P10~(6)	24	31	5	0	60	35	23	0	58	1.80	0.06	38
Sum					181				174			138

Note that the numbers of rabbits was represented in brackets after the stages.

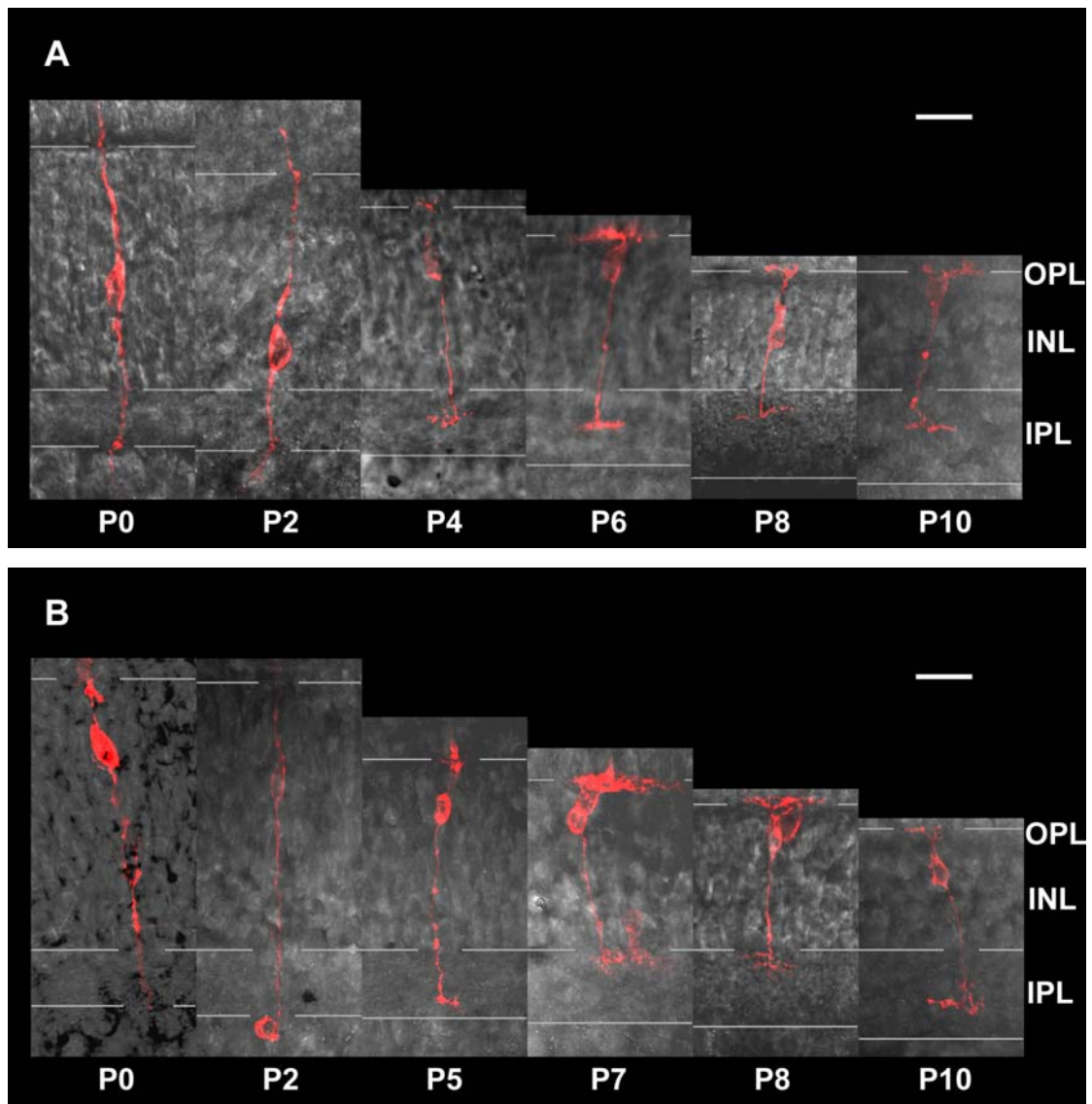
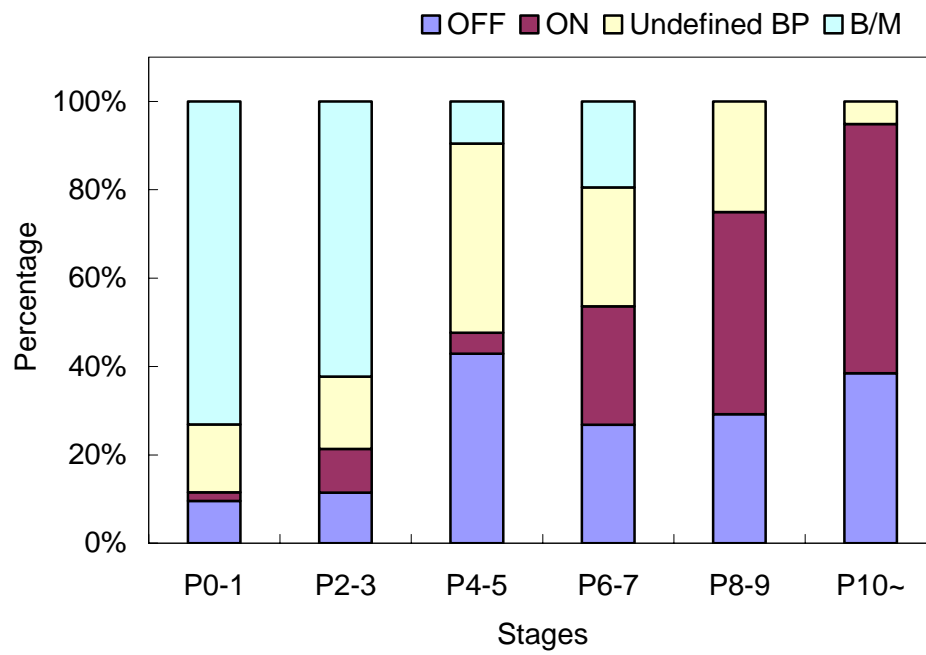


Figure 1. Morphological differentiation of bipolar cells throughout the developmental stages in both (A) normal and (B) dark reared rabbits. All cells were labeled by tungsten particles coated with DiI using the gene gun system. Images were collapsed confocal z-stacks and superimposed with the phase contrast image to show the retinal lamination. OPL = outer plexiform layer, IPL = inner plexiform layer. Scale bar = 20 μm .

A



B

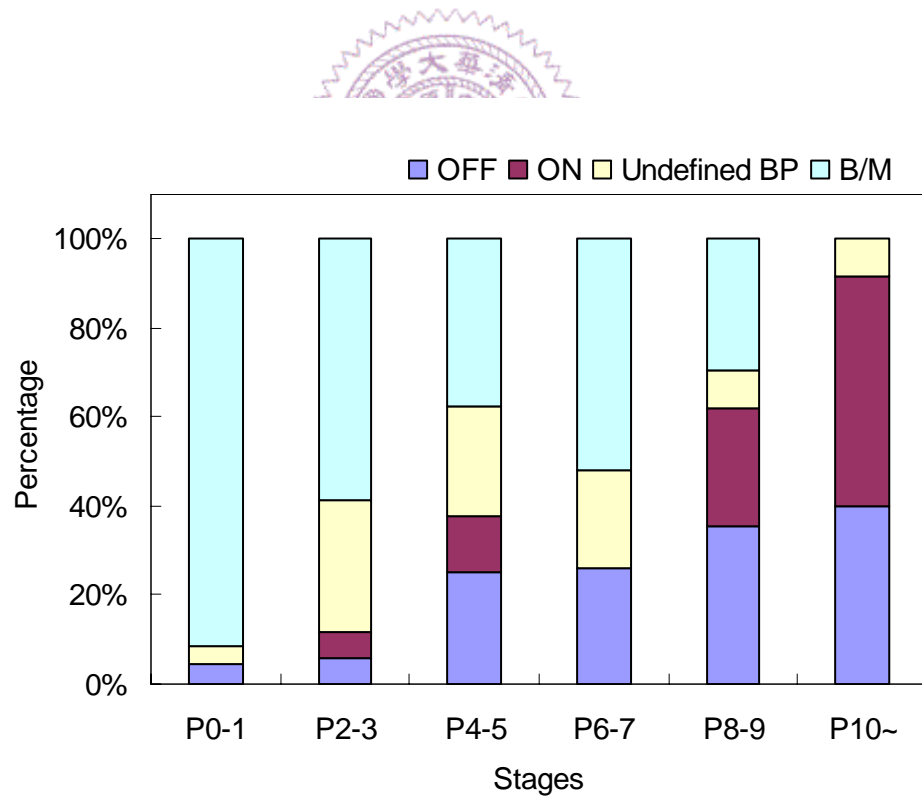


Figure 2. Proportion of cell types changes following the developmental stages of both (A) normal and (B) dark reared rabbits.

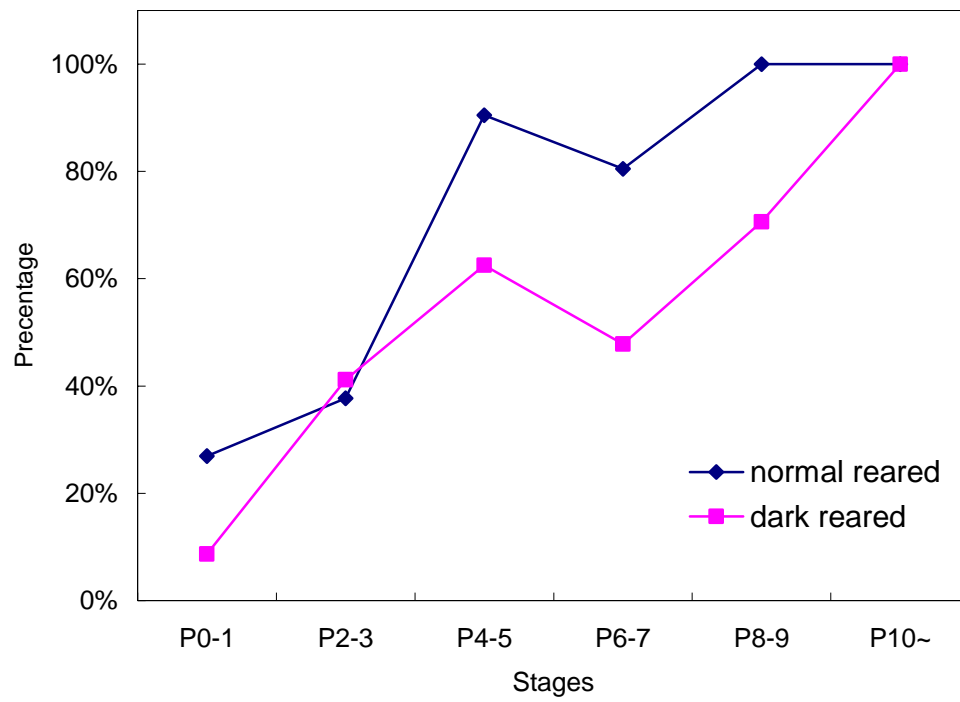


Figure 3. The percentages of recognizable bipolar cells in all labeled cells increase throughout developmental stages in both normal and dark reared rabbits.

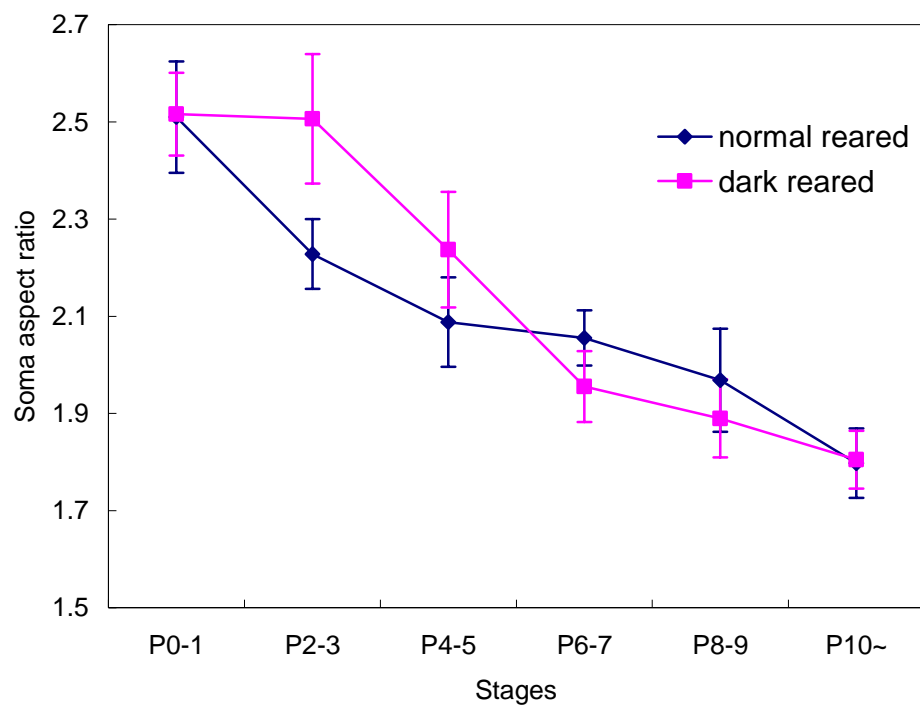
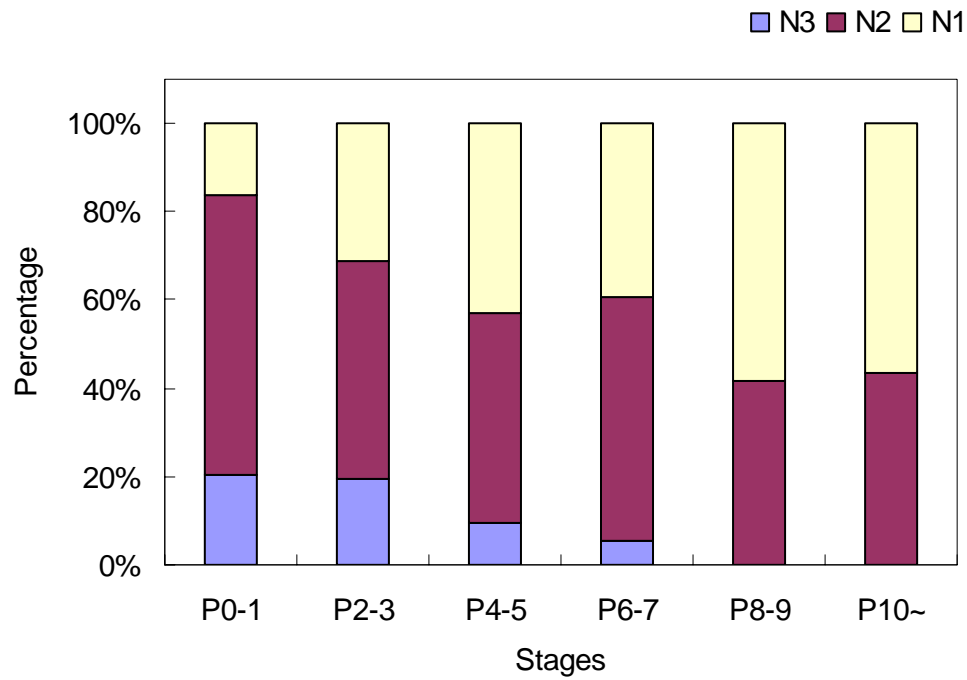


Figure 4. The soma aspect ratio of all labeled cells throughout developmental stages in both normal and dark reared rabbits.

A



B

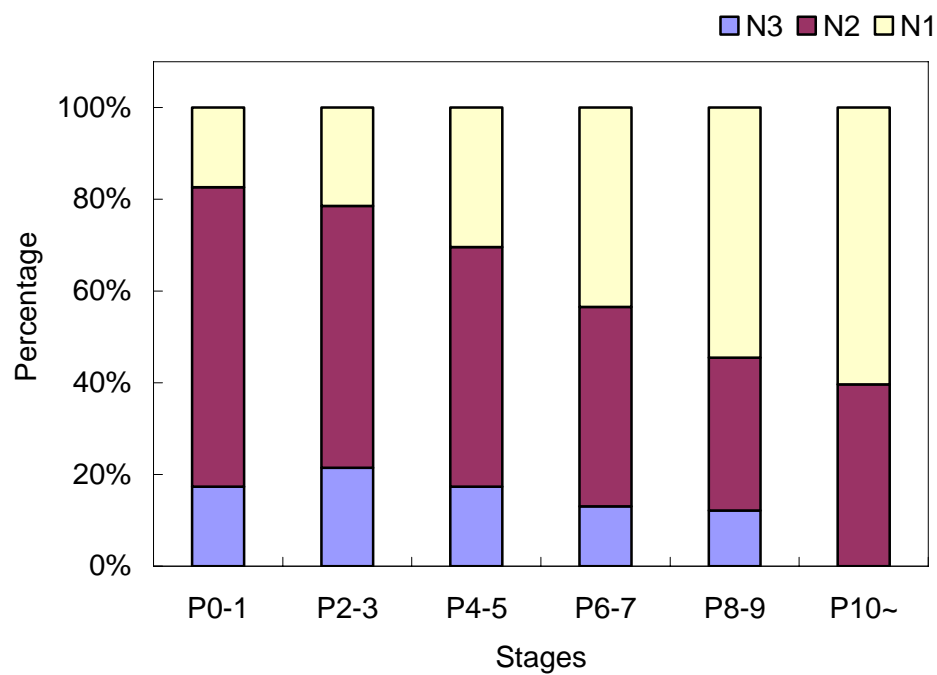
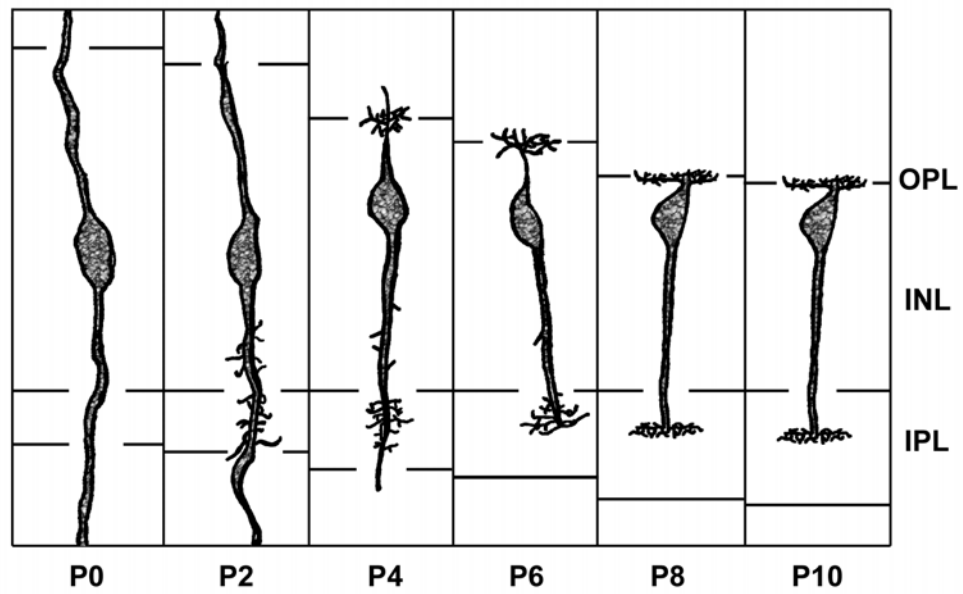


Figure 5. Proportion of cell soma locations in the INL changes following the developmental stages of both (A) normal and (B) dark reared rabbits.

A



B

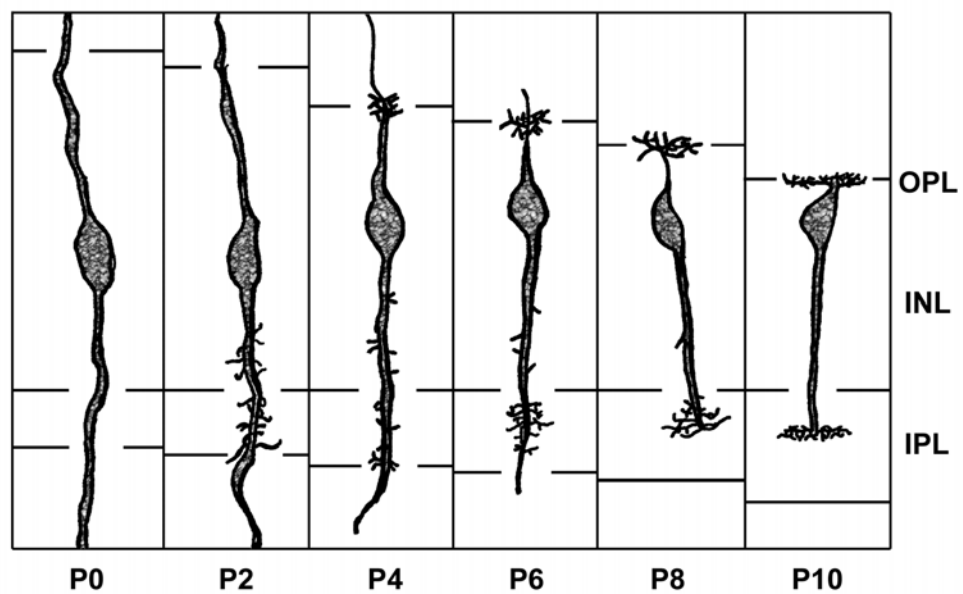
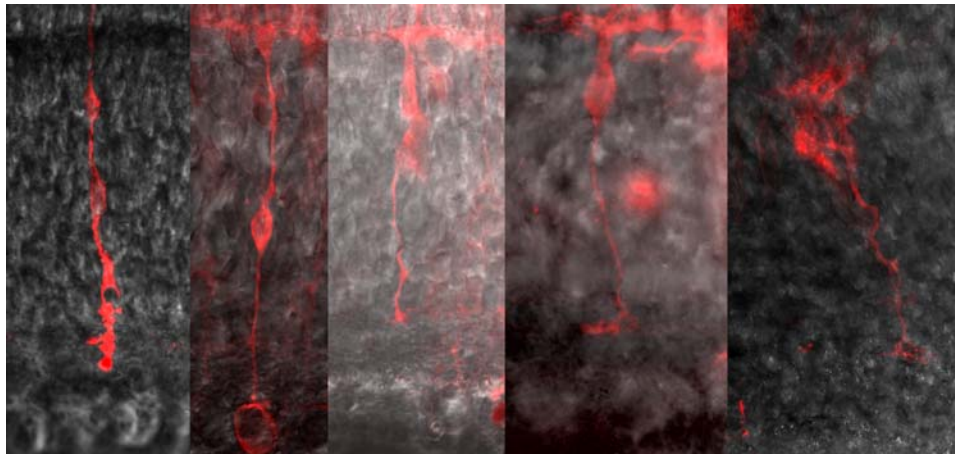


Figure 6. The schematic pattern of bipolar cell development following different postnatal stages in both (A) normal and (B) dark reared rabbits.

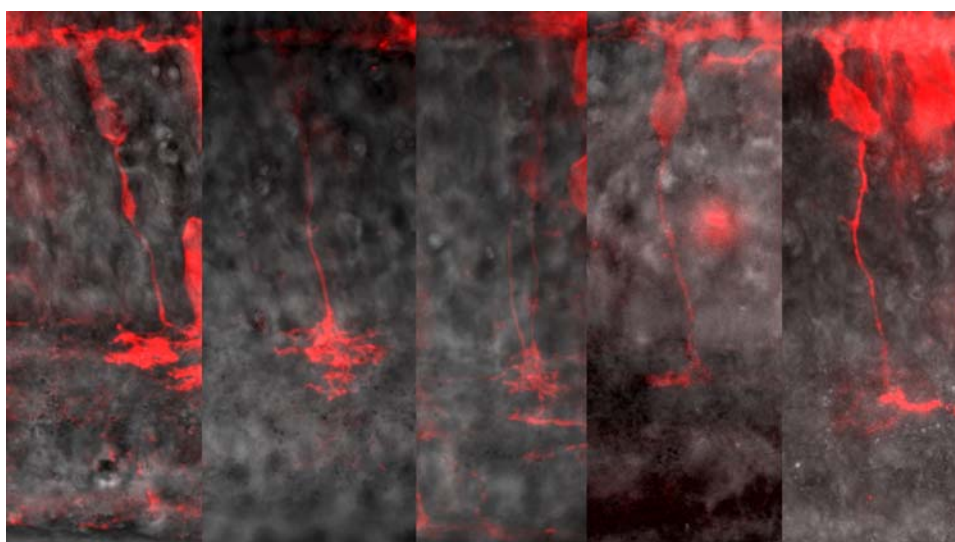
Appendix 1. More examples of DiI labeled cells in (A) normal reared rabbits and (B) dark reared rabbits.

A

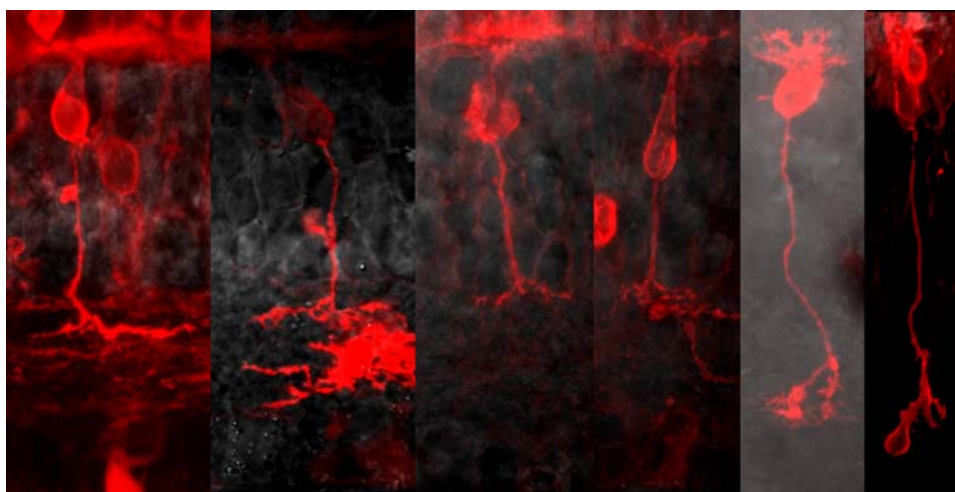
P0-1



P4-5

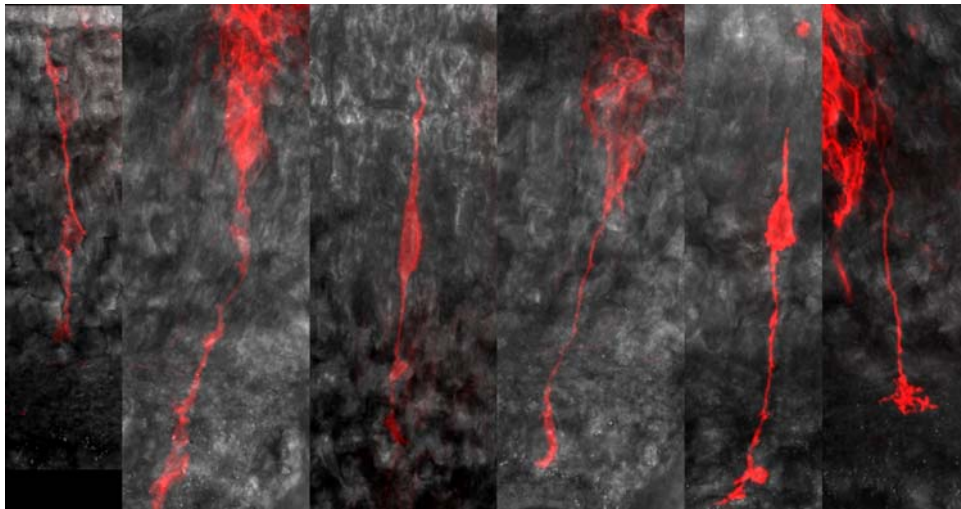


P8-10

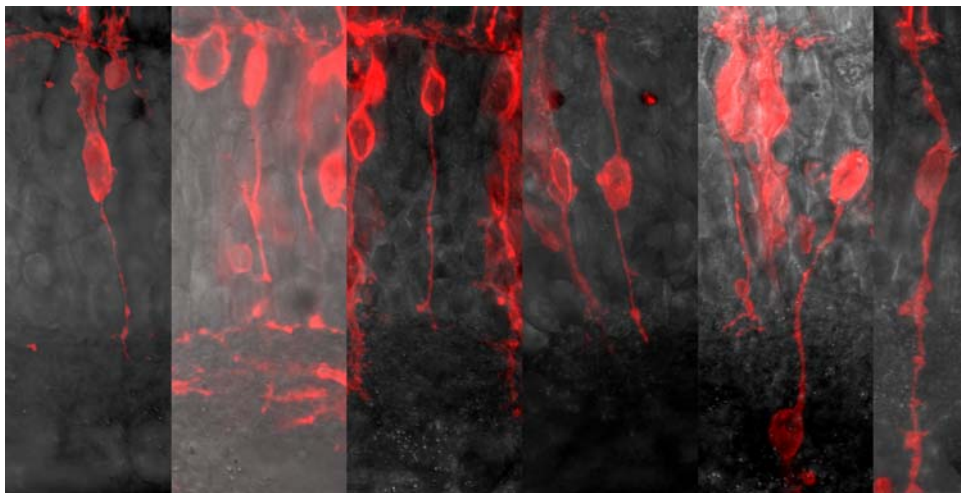


B

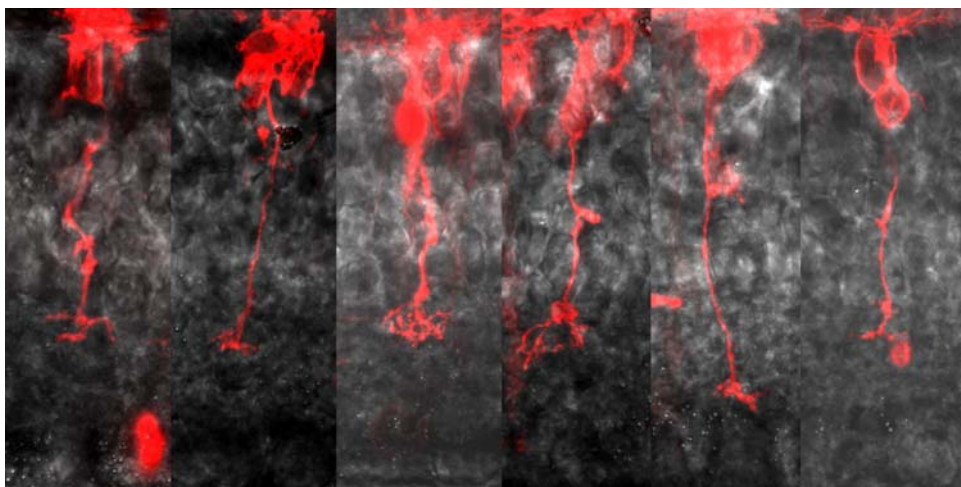
P0-1



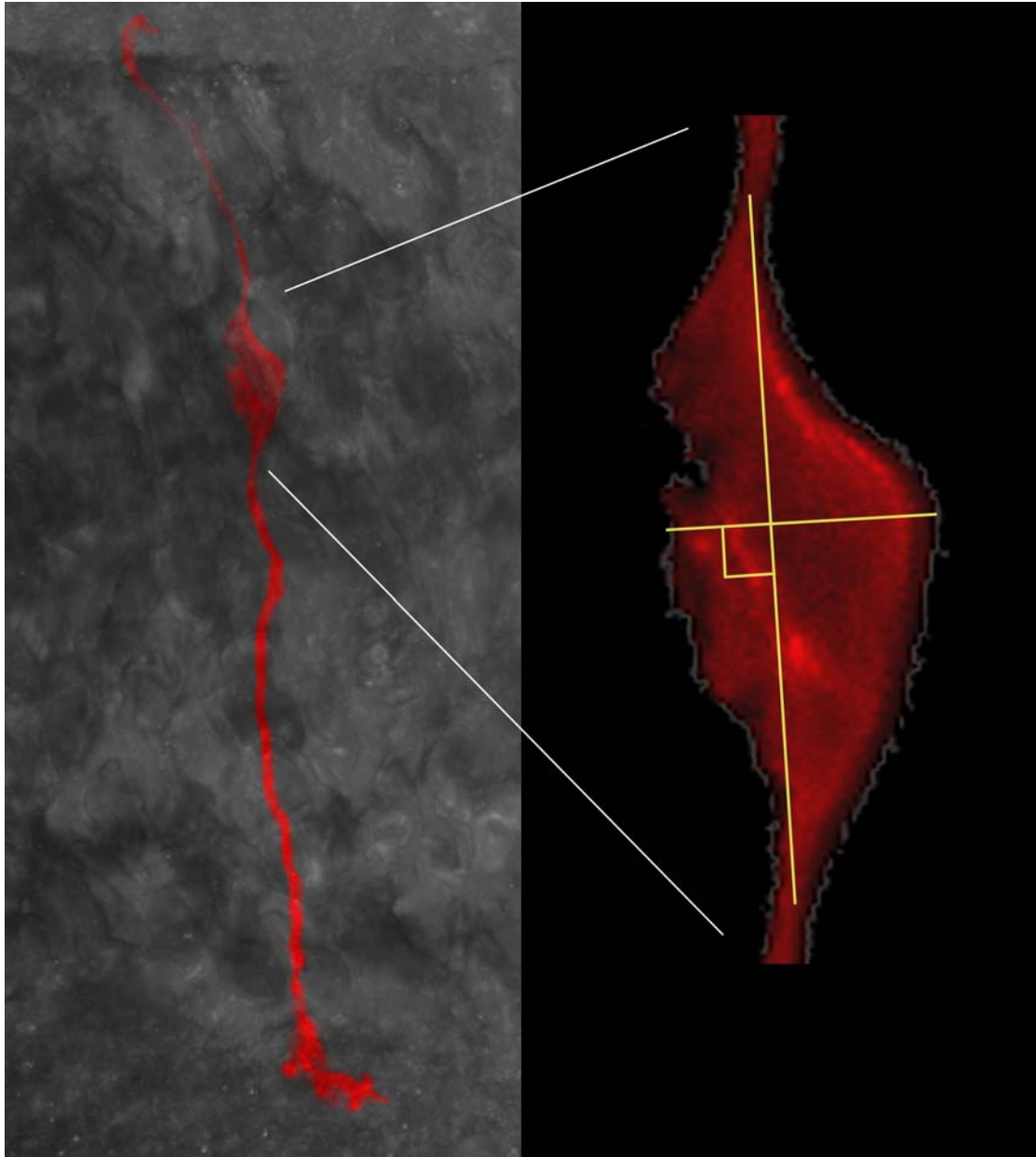
P4-5



P8-10



Appendix 2. The long axis of soma was calculated from the narrow top to the narrow bottom, and the longest vertical line across the long axis was taken as the short axis. If the shape of soma was too difficult to estimate, this cell was excluded.



Appendix 3. The INL was divided into 3 equal layers (n1, n2, and n3), and the soma location was determined accordingly. If the soma locates at boundary, the location of the location of cell center was used. Here is a cell locating at n2.

