Supplementary Information

Histological Evaluation of Diabetic Neurodegeneration in the Retina of Zucker Diabetic Fatty (ZDF) Rats

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Table S1. Supplementary data to the statistical analysis of blood glucose levels

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
7th week	5,7	0,6324555	8,357142	1,263404	Yes	*	0,0203
12th week	5,925	0,9300538	21,74286	3,313536	Yes	****	< 0,0001
18th week	5,3375	0,266927	27,37143	1,803436	Yes	****	< 0,0001
23rd week	5,375	0,5750775	27,42857	2,138313	Yes	****	< 0,0001
28th week	5,2875	0,8374067	20,94286	1,729024	Yes	****	< 0,0001
32nd week	10,15	1,73617	27,87143	2,796852	Yes	****	< 0,0001

Comparism between different postnatal ages

Lean

	Significant?	Summary	Adjusted P Value
7th week vs. 12th week	No	ns	> 0,9999
7th week vs. 18th week	No	ns	> 0,9999
7th week vs. 23rd week	No	ns	> 0,9999
7th week vs. 28th week	No	ns	> 0,9999
7th week vs. 32nd week	Yes	****	< 0,0001
12th week vs. 18th week	No	ns	> 0,9999
12th week vs. 23rd week	No	ns	> 0,9999
12th week vs. 28th week	No	ns	> 0,9999
12th week vs. 32nd week	Yes	****	< 0,0001
18th week vs. 23rd week	No	ns	> 0,9999
18th week vs. 28th week	No	ns	> 0,9999
18th week vs. 32nd week	Yes	****	< 0,0001
23rd week vs. 28th week	No	ns	> 0,9999
23rd week vs. 32nd week	Yes	****	< 0,0001
28th week vs. 32nd week	Yes	****	< 0,0001

diabetic

	Significant?	Summary	Adjusted P Value
7th week vs. 12th week	Yes	****	< 0,0001
7th week vs. 18th week	Yes	****	< 0,0001
7th week vs. 23rd week	Yes	****	< 0,0001
7th week vs. 28th week	Yes	****	< 0,0001
7th week vs. 32nd week	Yes	****	< 0,0001
12th week vs. 18th week	Yes	****	< 0,0001
12th week vs. 23rd week	Yes	****	< 0,0001
12th week vs. 28th week	No	ns	> 0,9999
12th week vs. 32nd week	Yes	****	< 0,0001
18th week vs. 23rd week	No	ns	> 0,9999
18th week vs. 28th week	Yes	****	< 0,0001
18th week vs. 32nd week	No	ns	> 0,9999
23rd week vs. 28th week	Yes	****	< 0,0001
23rd week vs. 32nd week	No	ns	> 0,9999
28th week vs. 32nd week	Yes	****	< 0,0001

Table S2. Supplementary data to the statistical analysis of retinal thickness

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Superior 4000 µm	100,8111	7,389884	113,7411	5,394616	Yes	*	0,0229
Superior 500 µm	158,3611	6,124254	180,3833	20,92404	Yes	****	< 0,0001
Superior 250 µm	169,9778	3,897598	181,7289	15,01863	Yes	*	0,0498
Inferior 250 µm	166,65	8,402864	186,8278	3,806479	Yes	****	< 0,0001
Inferior 500 µm	155,1556	7,230998	174,9411	4,851515	Yes	****	< 0,0001
Inferior 4000 µm	88,82111	3,425016	107,5078	7,355428	Yes	***	0,0003

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. 4000 µm vs. Sup. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Sup. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 4000 µm	No	ns	0,1068
Sup. 500 µm vs. Sup. 250 µm	No	ns	0,1357
Sup. 500 µm vs. Inf. 250 µm	No	ns	0,9043
Sup. 500 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Sup. 250 µm vs. Inf. 250 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 500 µm	Yes	*	0,0148
Sup. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 250 µm vs. Inf. 500 µm	No	ns	0,1466
Inf. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001

diabetic

	Significant?	Summary	Adjusted P Value
Sup. 4000 µm vs. Sup. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Sup. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 4000 µm	No	ns	> 0,9999
Sup. 500 µm vs. Sup. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Sup. 250 µm vs. Inf. 250 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 250 µm vs. Inf. 500 µm	No	ns	0,1142
Inf. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001

Table S3. Supplementary data to the statistical analysis of ONL thickness

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Superior 4000 µm	37,62778	3,626141	40,77333	3,641994	No	ns	0,3408
Superior 500 µm	55,90556	4,119337	56,81556	4,300474	No	ns	> 0,9999
Superior 250 µm	58,03222	2,728194	57,97889	3,86317	No	ns	> 0,9999
Inferior 250 µm	55,79556	2,94848	62,09444	4,231658	Yes	**	0,0012
Inferior 500 µm	52,05555	2,86343	60,20111	2,840147	Yes	****	< 0,0001
Inferior 4000 µm	33,73111	3,24474	41,55667	2,46569	Yes	****	< 0,0001

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. 4000 µm vs. Sup. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Sup. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 4000 µm	No	ns	0,2831
Sup. 500 µm vs. Sup. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 500 µm	No	ns	0,3045
Sup. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Sup. 250 µm vs. Inf. 250 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 500 µm	Yes	**	0,0061
Sup. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 250 µm vs. Inf. 500 µm	No	ns	0,3609
Inf. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001

diabetic

	Significant?	Summary	Adjusted P Value
Sup. 4000 µm vs. Sup. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Sup. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 4000 µm	No	ns	> 0,9999
Sup. 500 µm vs. Sup. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 250 µm	Yes	*	0,025
Sup. 500 µm vs. Inf. 500 µm	No	ns	0,6096
Sup. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Sup. 250 µm vs. Inf. 250 µm	No	ns	0,1993
Sup. 250 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 250 µm vs. Inf. 500 µm	No	ns	> 0,9999
Inf. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001

Table S4. Supplementary data to the statistical analysis of the number of nuclei in the ONL columns

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Superior 4000 µm	8,444445	0,5270463	8,333333	0,8660254	No	ns	> 0,9999
Superior 500 µm	12	0,8660254	11,66667	1,322876	No	ns	> 0,9999
Superior 250 µm	12,11111	0,3333333	11,88889	0,781736	No	ns	> 0,9999
Inferior 250 µm	12	0,5	12,88889	0,781736	No	ns	0,0606
Inferior 500 µm	11,55556	0,5270463	12,22222	0,6666667	No	ns	0,3115
Inferior 4000 µm	8	0,5	8,888889	0,3333333	No	ns	0,0606

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. 4000 µm vs. Sup. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Sup. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 4000 µm	No	ns	> 0,9999
Sup. 500 µm vs. Sup. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Sup. 250 µm vs. Inf. 250 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 250 µm vs. Inf. 500 µm	No	ns	> 0,9999
Inf. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001

diabetic

	Significant?	Summary	Adjusted P Value
Sup. 4000 µm vs. Sup. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Sup. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 250 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 500 µm	Yes	****	< 0,0001
Sup. 4000 µm vs. Inf. 4000 µm	No	ns	> 0,9999
Sup. 500 µm vs. Sup. 250 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 250 µm	Yes	**	0,0074
Sup. 500 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Sup. 250 µm vs. Inf. 250 µm	No	ns	0,0594
Sup. 250 µm vs. Inf. 500 µm	No	ns	> 0,9999
Sup. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 250 µm vs. Inf. 500 µm	No	ns	0,7787
Inf. 250 µm vs. Inf. 4000 µm	Yes	****	< 0,0001
Inf. 500 µm vs. Inf. 4000 µm	Yes	****	< 0,0001

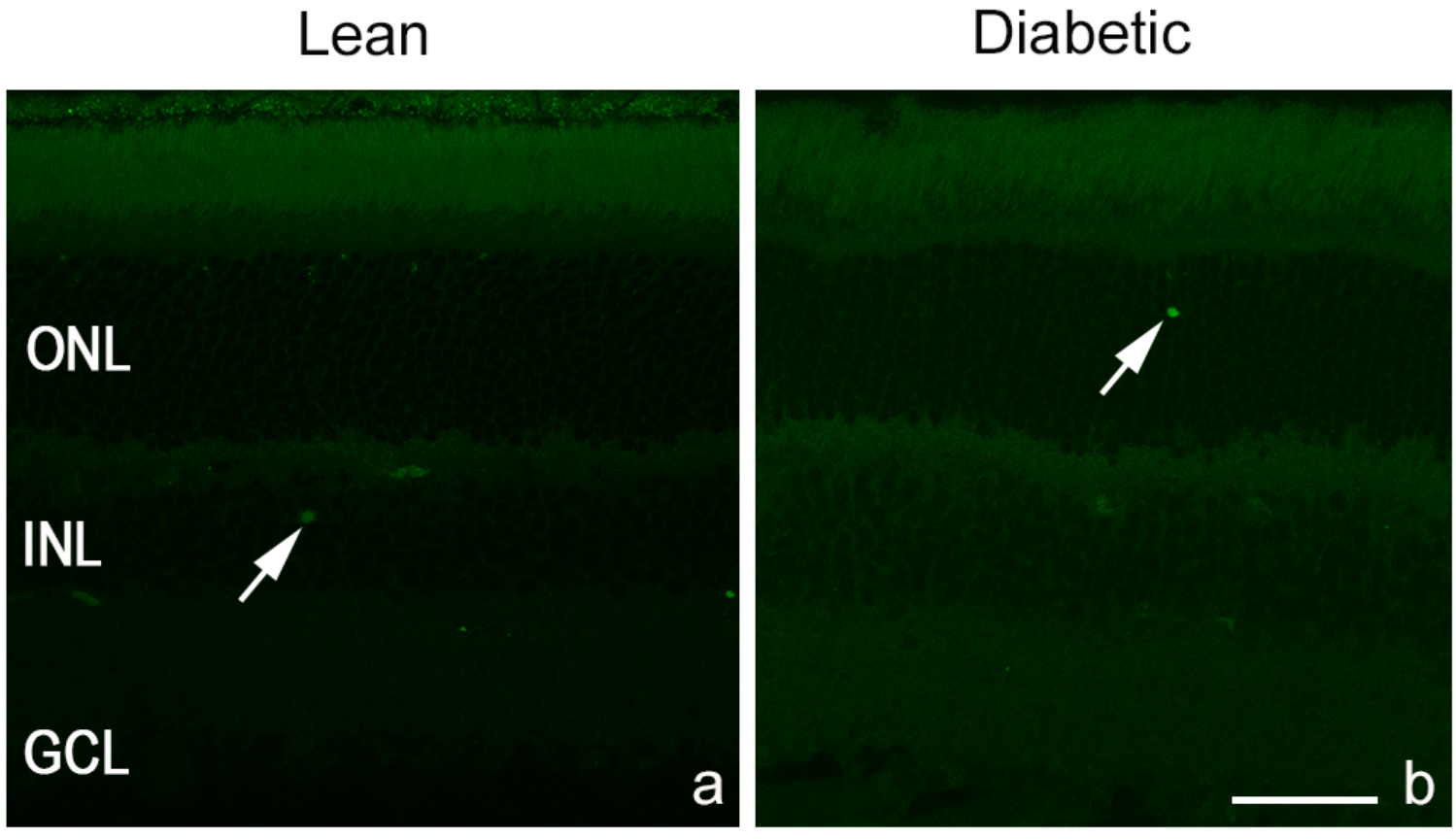

Figure S5. Representative pictures of TUNEL labelled control and diabetic retinas. Tunel-positive elements are marked by arrows. ONL: outer nuclear layer, INL: inner nuclear layer, GCL: ganglion cell layer. *Bar*: 20 µm.

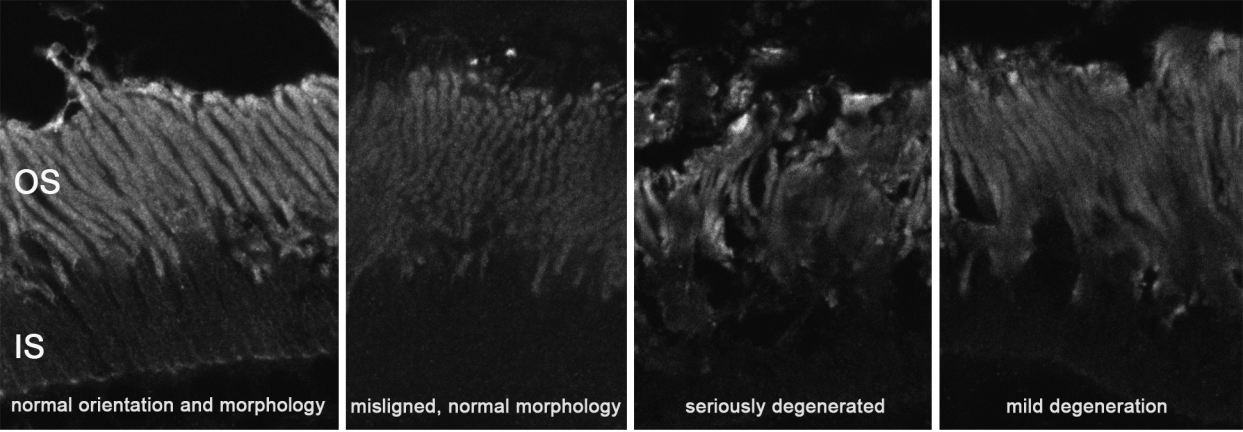

Figure S6. Representative images from healthy and degenerated rod outer segments on single confocal planes. OS: outer segments, IS: inner segments

Table S7. Supplementary data to the statistical analysis of recoverin positive cone bipolar cells

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Sup. periphery	23,33333	6,914443	23,71428	4,858436	No	ns	> 0,9999
Sup. middle	25,35714	6,789213	25,35714	2,373156	No	ns	> 0,9999
Sup. center	25,8	5,942583	25,14286	5,111934	No	ns	> 0,9999
Inf. center	25,92857	5,915615	25,14286	3,676477	No	ns	> 0,9999
Inf. middle	26	6,380774	24,64286	3,953716	No	ns	> 0,9999
Inf. periphery	22,53333	8,114068	22,07692	3,277742	No	ns	> 0,9999

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	> 0,9999
Sup. periphery vs. Sup. center	No	ns	> 0,9999
Sup. periphery vs. Inf. center	No	ns	> 0,9999
Sup. periphery vs. Inf. middle	No	ns	> 0,9999
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	No	ns	> 0,9999
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	No	ns	> 0,9999
Inf. middle vs. Inf. periphery	No	ns	> 0,9999

diabetic

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	> 0,9999
Sup. periphery vs. Sup. center	No	ns	> 0,9999
Sup. periphery vs. Inf. center	No	ns	> 0,9999
Sup. periphery vs. Inf. middle	No	ns	> 0,9999
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	No	ns	> 0,9999
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	No	ns	> 0,9999
Inf. middle vs. Inf. periphery	No	ns	> 0,9999

Table S8. Supplementary data to the statistical analysis of PKC-α positive amacrine cells in the INL

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Sup. periphery	1,090909	0,9438798	1,6	1,121224	No	ns	> 0,9999
Sup. middle	3,545455	2,733629	3,785714	1,625687	No	ns	> 0,9999
Sup. center	7,4	2,633122	4,7	1,337494	Yes	**	0,0092
Inf. center	7,454545	1,507557	6,25	1,815339	No	ns	0,747
Inf. middle	6	1,843909	4,333333	1,58865	No	ns	0,1568
Inf. periphery	3,636364	3,042129	2	1,511858	No	ns	0,1736

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	Yes	*	0,0372
Sup. periphery vs. Sup. center	Yes	****	< 0,0001
Sup. periphery vs. Inf. center	Yes	****	< 0,0001
Sup. periphery vs. Inf. middle	Yes	****	< 0,0001
Sup. periphery vs. Inf. periphery	Yes	*	0,0259
Sup. middle vs. Sup. center	Yes	****	< 0,0001
Sup. middle vs. Inf. center	Yes	****	< 0,0001
Sup. middle vs. Inf. middle	Yes	*	0,0372
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	Yes	***	0,0001
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	Yes	****	< 0,0001
Inf. middle vs. Inf. periphery	No	ns	0,053

diabetic

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	Yes	*	0,0301
Sup. periphery vs. Sup. center	Yes	**	0,0012
Sup. periphery vs. Inf. center	Yes	****	< 0,0001
Sup. periphery vs. Inf. middle	Yes	**	0,0015
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	Yes	*	0,0155
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	0,167
Sup. center vs. Inf. center	No	ns	0,8186
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	Yes	**	0,0082
Inf. center vs. Inf. middle	No	ns	0,1349
Inf. center vs. Inf. periphery	Yes	****	< 0,0001
Inf. middle vs. Inf. periphery	Yes	*	0,0123

Table S9. Supplementary data to the statistical analysis of PKC-α positive amacrine cells in the GCL

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Sup. periphery	3,545455	3,173756	4	2,374103	No	ns	> 0,9999
Sup. middle	4	2,296242	9	3,247377	Yes	***	0,0001
Sup. center	3,363636	2,01359	9,6	3,777124	Yes	****	< 0,0001
Inf. center	4,272727	2,327699	7,5	3,205897	No	ns	0,0549
Inf. middle	4,181818	2,227922	7,363636	2,766685	No	ns	0,0509
Inf. periphery	2,777778	2,333333	4,454545	3,20511	No	ns	> 0,9999

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	> 0,9999
Sup. periphery vs. Sup. center	No	ns	> 0,9999
Sup. periphery vs. Inf. center	No	ns	> 0,9999
Sup. periphery vs. Inf. middle	No	ns	> 0,9999
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	No	ns	> 0,9999
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	No	ns	> 0,9999
Inf. middle vs. Inf. periphery	No	ns	> 0,9999

diabetic

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	Yes	***	0,0004
Sup. periphery vs. Sup. center	Yes	***	0,0001
Sup. periphery vs. Inf. center	No	ns	0,0606
Sup. periphery vs. Inf. middle	No	ns	0,0686
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	Yes	**	0,0023
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	Yes	***	0,0007
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	No	ns	0,2066
Inf. middle vs. Inf. periphery	No	ns	0,2378

Table S10. Supplementary data to the statistical analysis of parvalbumin positive All amacrine cells

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Sup. periphery	19,375	1,59799	15,875	2,217356	Yes	**	0,0033
Sup. middle	22	1,85164	22,4375	2,82769	No	ns	> 0,9999
Sup. center	23,625	1,92261	22,46667	1,807392	No	ns	> 0,9999
Inf. center	23,625	2,445842	23,46667	1,505545	No	ns	> 0,9999
Inf. middle	24,125	2,799872	20,9375	2,322893	Yes	**	0,0094
Inf. periphery	19,42857	2,992053	18	2,581989	No	ns	> 0,9999

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	0,3431
Sup. periphery vs. Sup. center	Yes	**	0,0043
Sup. periphery vs. Inf. center	Yes	**	0,0043
Sup. periphery vs. Inf. middle	Yes	***	0,0008
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	0,968
Sup. middle vs. Inf. periphery	No	ns	0,4665
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	Yes	**	0,0079
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	Yes	**	0,0079
Inf. middle vs. Inf. periphery	Yes	**	0,0017

diabetic

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	Yes	****	< 0,0001
Sup. periphery vs. Sup. center	Yes	****	< 0,0001
Sup. periphery vs. Inf. center	Yes	****	< 0,0001
Sup. periphery vs. Inf. middle	Yes	****	< 0,0001
Sup. periphery vs. Inf. periphery	No	ns	0,141
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	0,9749
Sup. middle vs. Inf. periphery	Yes	****	< 0,0001
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	0,9635
Sup. center vs. Inf. periphery	Yes	****	< 0,0001
Inf. center vs. Inf. middle	Yes	*	0,0371
Inf. center vs. Inf. periphery	Yes	****	< 0,0001
Inf. middle vs. Inf. periphery	Yes	**	0,0058

Table S11. Supplementary data to the statistical analysis of calretinin positive cells in the INL

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Sup. periphery	36,6875	6,935116	39,1875	7,41367	No	ns	> 0,9999
Sup. middle	41,5625	5,427937	42,3125	8,187134	No	ns	> 0,9999
Sup. center	44,5	7,247988	44,5	8,445907	No	ns	> 0,9999
Inf. center	40,25	5,927338	43,6875	6,161372	No	ns	> 0,9999
Inf. middle	42,3125	7,734931	40,75	6,952218	No	ns	> 0,9999
Inf. periphery	38,93333	8,680575	42,0625	6,627908	No	ns	> 0,9999

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	0,8571
Sup. periphery vs. Sup. center	Yes	*	0,0373
Sup. periphery vs. Inf. center	No	ns	> 0,9999
Sup. periphery vs. Inf. middle	No	ns	0,4265
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	No	ns	0,4926
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	No	ns	> 0,9999
Inf. middle vs. Inf. periphery	No	ns	> 0,9999

diabetic

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	> 0,9999
Sup. periphery vs. Sup. center	No	ns	0,5754
Sup. periphery vs. Inf. center	No	ns	> 0,9999
Sup. periphery vs. Inf. middle	No	ns	> 0,9999
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	No	ns	> 0,9999
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	No	ns	> 0,9999
Inf. middle vs. Inf. periphery	No	ns	> 0,9999

Table S12. Supplementary data to the statistical analysis of calretinin positive cells in the GCL

	Lean		Diabetic		Lean - Diabetic		
	Mean	SD	Mean	SD	Significant?	Summary	Adjusted P Value
Sup. periphery	15,875	4,395073	15,5	6,044281	No	ns	> 0,9999
Sup. middle	17,625	5,560276	20,125	6,108737	No	ns	> 0,9999
Sup. center	20,25	6,668333	21,3125	4,686417	No	ns	> 0,9999
Inf. center	19,4375	4,049177	24,0625	4,296801	No	ns	0,0695
Inf. middle	20,5	4,516636	20,8125	4,415409	No	ns	> 0,9999
Inf. periphery	17,46667	5,31664	18,0625	4,711246	No	ns	> 0,9999

Comparism between different retinal positions

Lean

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	> 0,9999
Sup. periphery vs. Sup. center	No	ns	0,2525
Sup. periphery vs. Inf. center	No	ns	0,7647
Sup. periphery vs. Inf. middle	No	ns	0,1738
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	> 0,9999
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	No	ns	> 0,9999
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	No	ns	> 0,9999
Inf. middle vs. Inf. periphery	No	ns	> 0,9999

diabetic

	Significant?	Summary	Adjusted P Value
Sup. periphery vs. Sup. middle	No	ns	0,1738
Sup. periphery vs. Sup. center	Yes	*	0,0239
Sup. periphery vs. Inf. center	Yes	****	< 0,0001
Sup. periphery vs. Inf. middle	No	ns	0,0575
Sup. periphery vs. Inf. periphery	No	ns	> 0,9999
Sup. middle vs. Sup. center	No	ns	> 0,9999
Sup. middle vs. Inf. center	No	ns	0,468
Sup. middle vs. Inf. middle	No	ns	> 0,9999
Sup. middle vs. Inf. periphery	No	ns	> 0,9999
Sup. center vs. Inf. center	No	ns	> 0,9999
Sup. center vs. Inf. middle	No	ns	> 0,9999
Sup. center vs. Inf. periphery	No	ns	> 0,9999
Inf. center vs. Inf. middle	No	ns	> 0,9999
Inf. center vs. Inf. periphery	Yes	*	0,017
Inf. middle vs. Inf. periphery	No	ns	> 0,9999