
Supplementary information

Revival of light signalling in the postmortem mouse and human retina

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Supplementary Table 1:

Human cone and rod τ_D values (with average and $\pm$ S.D.) obtained from macular and peripheral pieces as shown in Fig. 4.

Donor eye	Macula		Periphery	
	Cones τ_D	Rods τ_D	Cones τ_D	Rods τ_D
	(ms)	(ms)	(ms)	(ms)
Donor 11 right eye 1	24	275	24	297
Donor 11 right eye 2	21	-	21	431
Donor 11 right eye 3	-	-	29	517
Donor 11 left eye 1	25	404	40	460
Donor 11 left eye 2	-	-	20	281
Donor 9 right eye 1	20	279	-	-
Donor 9 left eye 1	30	289	19	252
Donor 9 left eye 2	27	317	36	328
Mean ($\pm$ SD)	25 $\pm$ 4	313 $\pm$ 54	27 $\pm$ 8	367 $\pm$ 102

Supplementary Table 2:

Table of human macular and peripheral I $\frac{1}{2}$ values (with average and $\pm$ S.D.) as shown in Fig. 4.

Donor eye	Macula		Periphery	
	Cones I $\frac{1}{2}$ (photons μm^{-2})	Rods I $\frac{1}{2}$ (photons μm^{-2})	Cones I $\frac{1}{2}$ (photons μm^{-2})	Rods I $\frac{1}{2}$ (photons μm^{-2})
Donor 11 right eye 1	4,958	440	10,212	736
Donor 11 right eye 2	4,663	1,757*	8,737	637
Donor 11 right eye 3	-	-	6,125	317
Donor 11 left eye 1	8,633	285	11,695	540
Donor 11 left eye 2	-	-	8,552	385
Donor 9 right eye 1	16,882	319	-	-
Donor 9 left eye 1	8,930	241	11,567	377
Donor 9 left eye 2	7,517	207	120,903*	255
Mean ($\pm$ SD)	8,597 $\pm$ 4,442	298 $\pm$ 90	9,481 $\pm$ 2,120	464 $\pm$ 177

*indicates outliers excluded from average calculations.

Supplementary Table 3:

Human Organ Donor details including demographics, primary cause of death, enucleation delay

Donor	Age (years)	Sex	Primary cause of death	Resuscitation time (min)	Right eye enucleation delay (min)	Left eye enucleation delay (min)
1	53	M	Myocardial infarction		47	47
2	54	M	Hemorrhage		60	60
3	55	F	Drug Overdose	12h on life support	120	120
7	53	M	Hemorrhage		7	20
8	62	M	Cardiac Arrest	28	2	8
9	25	M	Drug Overdose	30	1	5
10	35	M	Scooter Accident/ Skull fracture		1	6
11	60	M	Cardiac Arrest	35	18	22

Supplementary Table 4:

Human Research Donor details including demographics, primary cause of death, enucleation delay

Donor	Age (years)	Sex	Primary cause of death:	Ocular history	Time on ventilator (days)	Death to enucleation time (h:mm)	Other notes:
1	65	F	ICB/ICH	None	None	3:50	DM2 noted in medical history
2	65	M	ACE	None	None	5:38	
3	68	M	Sepsis	None	>1	3:05	
4	56	M	Sepsis	None	None	3:23	
5	79	F	Sepsis	None	None	4:41	
6	56	F	Sepsis	None	yes, time not disclosed	5:01	
7	75	M	ACE	IOL	1 day	2:26	
8	86	F	CVA	IOL	None	2:39	
9	57	M	Cancer	None	None	2:49	
10	76	M	Pneumonia	None	None	2:51	
11	53	M	Liver Failure	Diplopia	10	4:35	
12	67	M	ACE	None	2	3:17	
13	78	F	Cancer	None	None	3:08	
14	66	F	Sepsis	IOL	None	3:43	
15	65	M	PE	None	None	3:15	
16	62	F	Sepsis	None	None	2:11	
17	58	M	Sepsis	None	14	2:49	

ACE – acute cardiac event, CVA – cerebrovascular accident, stroke, PE – pulmonary embolism, ICB/ ICH – intracerebral bleeding/intracerebral hemorrhage, DM2 – diabetes mellitus type 2, IOL – intraocular lens

Supplementary Table 5:

Antibodies and dilutions used for IHC analysis in Fig. 2:

Antibody	Catalogue #	RRID	Source	Dilution
Anti-activated caspase 3	559565	AB_397274	BD Pharmingen	1:500
Goat anti-rabbit Alexa 594	A-11012	AB_2534079	Invitrogen	1:000

Supplementary Table 6:

Antibodies and dilutions used for CMP analysis in Extended Data Fig. 1:

Reagent	SKU	Rid	Source	Dilution
Anti-L-glutamate IgG	E100R	AB_2532055	Signature immunologics	1:100
Anti-aurine IgG	TT100R	AB_2532060	Signature immunologics	1:100
Anti-L-glutamine IgG	Q100R	AB_2532059	Signature immunologics	1:100
Anti-GABA IgG	YY100R	AB_2532061	Signature immunologics	1:100
Anti-glycine IgG	G100R	AB_2532057	Signature immunologics	1:100
Anti-CRALBP IgG	NA	AB_2314227	Gift of Dr. Jack Saar to B.W.J.	1:400
Anti-rod opsin 1d4 IgG	NA	AB_2315015	Gift of Dr. Robert Molday to B.W.J.	1:4000
Anti-GFAP IgG	Z0334	AB_10013382	Dako	1:400
Anti-L-aspartate IgG	D100R	AB_2341093	Signature immunologics	1:100
Anti-cone red/green opsin IgG	AB5405	AB_177456	EMD Millipore	1:1000
Anti-L-arginine IgG	R100R	AB_2893128	Signature immunologics	1:100
Anti-glutathione IgG	J100R	AB_2532058	Signature immunologics	1:100