

**Supplementary Table S1. Previous reporting of subjects with achromatopsia**

Subject ID	Dubis et al (2014) <sup>1</sup>	Scoles et al (2014) <sup>2</sup>	Abozaid et al (2016) <sup>3</sup>	Langlo et al (2016) <sup>4</sup>	Langlo et al (2017) <sup>5</sup>	Georgiou et al (2019) <sup>6</sup>	Mastey et al (2019) <sup>7</sup>	Mastey et al (2019) <sup>8</sup>	Litts et al (2020) <sup>9</sup>	Georgiou et al (2020) <sup>10</sup>	Linderman et al (2020) <sup>11</sup>	Litts et al (2021) <sup>12</sup>
JC_0047				PCI-007	PCI-007				same ID			same ID
JC_0686											same ID	
JC_10008						same ID						
JC_10024				PCI-001	PCI-001				same ID			same ID
JC_10025				PCI-002	PCI-002							same ID
JC_10028		same ID		PCI-004	PCI-004							same ID
JC_10029				PCI-005	PCI-005							same ID
JC_10069		same ID	same ID			same ID		same ID	same ID	same ID	same ID	same ID
JC_10089		same ID		PCI-008	PCI-008		same ID		same ID			same ID
JC_10142				PCI-011	PCI-011							same ID
JC_10151				PCI-006	PCI-006				same ID		same ID	same ID
JC_10167				BPE-003	BPE-003				same ID		same ID	same ID
JC_10168				CEI-003	CEI-003							same ID
JC_10191				PCI-017	PCI-017				same ID			same ID
JC_10195				UFC-006	UFC-006				same ID			same ID
JC_10196				UFC-002	UFC-002				same ID		same ID	same ID
JC_10197				UFC-004	UFC-004				same ID			same ID
JC_10198				UFC-003	UFC-003				same ID			same ID
JC_10213				CEI-004	CEI-004							same ID
JC_10214				PCI-019								same ID
JC_10215				CEI-005	CEI-005							same ID
JC_10216				PCI-013	PCI-013				same ID			same ID
JC_10217				PCI-012	PCI-012							same ID
JC_10224				PCI-021	PCI-021				same ID		same ID	same ID
JC_10226				UFC-010							same ID	
JC_10232				CEI-001	CEI-001			same ID	same ID			same ID

JC_10247	UFC-001	UFC-001	same ID	same ID	same ID
JC_10248	CEI-008	CEI-008	same ID		same ID
JC_10249	UFC-009	UFC-009		same ID	same ID
JC_10250	UFC-008	UFC-008		same ID	same ID
JC_10256	UFC-007	UFC-007			same ID
JC_10257	UFC-005	UFC-005			same ID
JC_10258	PCI-024	PCI-024			same ID
JC_10260	CEI-006	CEI-006			same ID
JC_10300	BPE-018	BPE-018			same ID
JC_10301	BPE-012	BPE-012			
JC_10310	CEI-002	CEI-002	same ID		same ID
JC_10320	BPE-010	BPE-010			
JC_10334	CEI-011	CEI-011			same ID
JC_10335	PCI-025				same ID
JC_10409	PCI-031	PCI-031			same ID
JC_10416	CEI-009	CEI-009			same ID
JC_10417	BPE-019	BPE-019			same ID
JC_10424	PCI-020	PCI-020			same ID
JC_10490					same ID
JC_10494				same ID	
JC_10551		same ID			same ID
JC_10617					same ID
JC_10853	PCI-032		same ID	same ID	same ID
JC_10854	PCI-033		same ID	same ID	same ID
JC_10953	CEI-016				same ID
JC_10966	CEI-015				
JC_10968	PCI-034			same ID	same ID
JC_10999			same ID		same ID
JC_11000					same ID

JC_11034							same ID	
JC_11036							same ID	
JC_11060							same ID	
JC_11061							same ID	
JC_11062					same ID		same ID	
JC_11066							same ID	
JC_11067							same ID	
JC_11091						same ID		
JC_11155							same ID	
JC_11228							same ID	
JC_11296							same ID	
JC_11297							same ID	
JC_11401							same ID	
JC_11579							same ID	
JC_11623						same ID	same ID	
JC_11871						same ID		
JC_1208	same ID		PCI-009	PCI-009		same ID	same ID	same ID
KS_10088		same ID			same ID		same ID	
KS_10337					same ID		same ID	
KS_11453							same ID	
KS_11531							same ID	

## References

1. Dubis AM, Cooper RF, Aboshiha J, et al. Genotype-dependent variability in residual cone structure in achromatopsia: towards developing metrics for assessing cone health. *Invest Ophthalmol Vis Sci* 2014;55:7303-7311.
2. Scoles D, Sulai YN, Langlo CS, et al. In vivo imaging of human cone photoreceptor inner segments. *Invest Ophthalmol Vis Sci* 2014;55:4244-4251.
3. Abozaid MA, Langlo CS, Dubis AM, Michaelides M, Tarima S, Carroll J. Reliability and repeatability of cone density measurements in patients with congenital achromatopsia. *Adv Exp Med Biol* 2016;854:277-283.

4. Langlo CS, Patterson EJ, Higgins BP, et al. Residual foveal cone structure in *CNGB3*-associated achromatopsia. *Invest Ophthalmol Vis Sci* 2016;57:3984-3995.
5. Langlo CS, Erker LR, Parker M, et al. Repeatability and longitudinal assessment of foveal cone structure in *CNGB3*-associated achromatopsia. *Retina* 2017;37:1956-1966.
6. Georgiou M, Litts KM, Kalitzeos A, et al. Adaptive optics retinal imaging in *CNGA3*-associated achromatopsia: Retinal characterization, interocular symmetry, and intrafamilial variability. *Invest Ophthalmol Vis Sci* 2019;60:383-396.
7. Mastey RR, Gaffney M, Litts KM, et al. Assessing the interocular symmetry of foveal outer nuclear layer thickness in achromatopsia. *Transl Vis Sci Technol* 2019;8:21.
8. Mastey RR, Georgiou M, Langlo CS, et al. Characterization of retinal structure in *ATF6*-associated achromatopsia. *Invest Ophthalmol Vis Sci* 2019;60:2631-2640.
9. Litts KM, Georgiou M, Langlo CS, et al. Interocular symmetry of foveal cone topography in congenital achromatopsia. *Curr Eye Res* 2020;45:1257-1264.
10. Georgiou M, Litts KM, Singh N, et al. Intraobserver repeatability and interobserver reproducibility of foveal cone density measurements in *CNGA3*- and *CNGB3*-achromatopsia. *Transl Vis Sci Technol* 2020;9:37.
11. Linderman RE, Georgiou M, Woertz EN, et al. Preservation of the foveal avascular zone in achromatopsia despite the absence of a fully formed pit. *Invest Ophthalmol Vis Sci* 2020;61:52.
12. Litts KM, Woertz EN, Georgiou M, et al. Optical coherence tomography artifacts are associated with adaptive optics scanning light ophthalmoscopy success in achromatopsia. *Transl Vis Sci Technol* 2021;10:11.