

Metabolic Brain Disease

**Mitochondrial genome variation in male LHON patients with the m.11778G>A mutation**

Agnieszka Piotrowska-Nowak <sup>1,\*</sup>, Maciej R. Krawczyński <sup>2,3</sup>, Ewa Kosior-Jarecka <sup>4</sup>, Anna M. Ambroziak <sup>5</sup>, Magdalena Korwin <sup>6</sup>, Monika Ołdak <sup>7,8</sup>, Katarzyna Tońska <sup>1</sup>, Ewa Bartnik <sup>1,9</sup>

<sup>1</sup> Institute of Genetics and Biotechnology, Faculty of Biology, University of Warsaw, 5a Pawińskiego Street, Warsaw, 02-106, Poland

<sup>2</sup> Department of Medical Genetics, Poznań University of Medical Sciences, 8 Rokietnicka Street, Poznań, 60-806, Poland

<sup>3</sup> Centers for Medical Genetics GENESIS, 4 Grudzieniec Street, Poznań, 60-601, Poland

<sup>4</sup> Department of Diagnostics and Microsurgery of Glaucoma, Medical University of Lublin, 1 Chmielna Street, Lublin, 20-079, Poland

<sup>5</sup> Faculty of Physics, University of Warsaw, 5 Pasteur Street, Warsaw, 02-093, Poland

<sup>6</sup> Department of Ophthalmology, Medical University of Warsaw, 13 Sierakowskiego Street, Warsaw, 03-709, Poland

<sup>7</sup> Department of Genetics, Institute of Physiology and Pathology of Hearing, 10 Mochnackiego Street, Warsaw, 02-042, Poland

<sup>8</sup> Department of Histology and Embryology, Center of Biostructure Research, Medical University of Warsaw, 5 Chałubińskiego Street, Warsaw, 02-004, Poland

<sup>9</sup> Institute of Biochemistry and Biophysics Polish Academy of Sciences, 5a Pawińskiego Street, Warsaw, 02-106, Poland

\*Correspondence:

Agnieszka Piotrowska-Nowak

Email: [apiotrowska@biol.uw.edu.pl](mailto:apiotrowska@biol.uw.edu.pl)

**Supplementary Table S1** mtDNA haplogroup details, total variant loads and variant loads using only non-synonymous variants with MutPred score above 0.5 threshold calculations for all participants in the study

<b>LHON male subject ID</b>	<b>Age in years</b>	<b>mtDNA haplogroup</b>	<b>Total variant load</b>	<b>Number of variants</b>	<b>Variant load using variants with MutPred score &gt;0.5</b>	<b>Number of variants with MutPred score &gt;0.5</b>
3595	42	H10b	1.712	4	0.638	1
4106	33	H5a1a	0.821	2	0.000	0
4806	35	X2b+226	2.349	6	0.569	1
5529	42	U4a2a2	1.466	5	0.000	0
6586	33	U4c1	1.850	6	0.000	0
9594	35	N1b1a2	3.005	7	1.210	2
9922	42	J2a1a1a	3.506	9	1.396	2
10911	33	U5b1e1	1.533	5	0.000	0
11266	35	K1c1h	2.257	6	0.609	1
11922	42	U5a1a1	2.625	7	0.561	1
13933	33	H7a1	0.821	2	0.000	0
14164	35	U5a1a1	2.625	7	0.561	1
15046	42	K1c1	2.257	6	0.609	1
15415	33	H1b1a	1.361	3	0.540	1
15591	35	J1c2e1	2.883	8	1.220	2
15745	42	W5a2	2.719	7	0.505	1
16159	33	W6a	3.915	9	1.701	3
16799	35	H1	0.821	2	0.000	0
17367	42	J1c2e1	2.883	8	1.220	2
17545	33	I2e	2.261	6	0.606	1
17791	35	H1a	0.821	2	0.000	0
194-L	42	J1c2c2a	3.506	10	1.220	2
456-L	33	H1e	1.326	3	0.505	1
L12-2007	37	K2a5	2.548	6	0.609	1
L12-2008	23	T1a1b	2.793	7	1.239	2
L12-2012	n/a	H5a1	1.357	3	0.536	1
L13-2006	28	T1a1b	2.793	7	1.239	2
L16-2008	14	V13	0.821	2	0.000	0
L19-2018	20	H4b1	1.485	3	0.664	1
L21-2015	20	J1c2e1	2.883	8	1.220	2
L21-2017	34	N1a1a1a1	2.197	6	0.606	1
L2-2018	28	U4c1	1.850	6	0.000	0
L23-2008	31	I2e	2.261	6	0.606	1
L24-2006	n/a	T1a1b	2.793	7	1.239	2
L24-2018	47	H1	0.821	2	0.000	0
L26-2002	19	H2a1c	0.821	2	0.000	0
L28-2016	16	U5b1b1a	1.235	4	0.000	0
L29-2005	n/a	H3g4	0.821	2	0.000	0
L32-2006	30	HV6a	1.004	3	0.000	0
L32-2016	15	K1c1h	2.257	6	0.609	1
L39-2008	40	U8b1a2b	2.557	6	0.688	1
L41-2005	38	U5a1d1	3.060	9	0.000	0
L4-2015	23	K1a1b1a	2.257	6	0.609	1

<b>L5-2014</b>	56	H3v	0.452	1	0.000	0
<b>L7-2018</b>	42	B4c1b2	2.541	6	1.142	2
<b>L8-2019</b>	33	H1c	0.821	2	0.000	0
<b>L9-2010</b>	35	H7c1	0.821	2	0.000	0
<b>Control male subject ID</b>	<b>Age in years</b>	<b>mtDNA haplogroup</b>	<b>Total variant load</b>	<b>Number of variants</b>	<b>Variant load using variants with MutPred score &gt;0.5</b>	<b>Number of variants with MutPred score &gt;0.5</b>
<b>KJ2</b>	84	H92	0.821	2	0.000	0
<b>KJ6</b>	71	H1c+152	0.821	2	0.000	0
<b>KJ7</b>	70	H1c+152	0.821	2	0.000	0
<b>KJ8</b>	64	H18	1.230	3	0.000	0
<b>KJ12</b>	60	U5a1d2a1	2.665	7	0.601	1
<b>KJ13</b>	52	H	0.821	2	0.000	0
<b>KJ14</b>	72	H3+152	0.821	2	0.000	0
<b>KJ15</b>	71	J1c2c1	3.253	9	1.220	2
<b>KJ21</b>	76	T2a1	2.588	7	1.239	2
<b>KJ22</b>	82	H2a1c	0.821	2	0.000	0
<b>KJ23</b>	69	U5a2a1	2.019	6	0.000	0
<b>KJ26</b>	63	H+16311	0.821	2	0.000	0
<b>KJ31</b>	77	X2b4	2.349	6	0.569	1
<b>KJ38</b>	64	W1	2.719	7	0.505	1
<b>KJ40</b>	81	J1c9	2.883	8	1.220	2
<b>KJ45</b>	83	H16d	0.821	2	0.000	0
<b>KJ47</b>	85	H5r	0.821	2	0.000	0
<b>KJ49</b>	77	J1c5	2.883	8	1.220	2
<b>KJ52</b>	60	H3	0.821	2	0.000	0
<b>KJ55</b>	77	H11a1	1.072	3	0.000	0
<b>KJ56</b>	61	V1a1	2.629	6	0.594	1
<b>KJ61</b>	78	V7a	0.821	2	0.000	0
<b>KJ63</b>	87	X2e2b	1.716	5	0.000	0
<b>KJ66</b>	83	J1c2	3.509	9	1.846	3
<b>KJ67</b>	62	H5e1a1	0.821	2	0.000	0
<b>KJ68</b>	68	V1a	1.885	4	0.594	1
<b>KJ70</b>	84	HV9	0.821	2	0.000	0
<b>KJ75</b>	69	U5a2a1	2.019	6	0.000	0
<b>KJ76</b>	72	I1a1a	2.714	7	1.188	2
<b>KJ79</b>	n/a	U4a2b	1.215	4	0.000	0
<b>KJ104</b>	60	H16	0.821	2	0.000	0
<b>KJ106</b>	56	N1b1a1	3.070	7	1.275	2
<b>KJ112</b>	65	J1c2	3.509	9	1.846	3
<b>KJ116</b>	83	H1c1	0.821	2	0.000	0
<b>KJ117</b>	76	H11b1	1.581	4	0.509	1
<b>KJ118</b>	69	V7a	0.821	2	0.000	0
<b>KJ120</b>	79	H7c3	0.821	2	0.000	0
<b>KJ121</b>	61	J1c5	2.883	8	1.220	2
<b>KJ123</b>	57	H28a	1.320	3	0.000	0
<b>KJ129</b>	65	V1a1	2.629	6	0.594	1
<b>KJ131</b>	66	J2a1a1a2	3.059	8	1.396	2
<b>KJ153</b>	n/a	U8a1a1b	2.630	6	1.331	2