

Figure	Test	Comparison	N	Statistic	p-value
1A (ii)	One-way ANOVA with Dunnett's multiple comparisons	P20 V P25/P30/P40/P50/P60 Cone Arrestin	N = 4-5	F = 5.646 SS = 1.410 DF = 5 MS = 0.2819	** 0.0015
	One-way ANOVA with Dunnett's multiple comparisons	P20 V P25/P30/P40/P50/P60 Synaptophysin	N = 4-5	F = 3.943 SS = 0.9083 DF = 5 MS = 0.1817	** 0.01
2B (ii)	One-way ANOVA with Tukey's multiple comparisons	Wild-type V rd10 V rd10 Norgestrel Cone Arrestin	N = 3-5	F = 15.37 SS = 7.798 DF = 2 MS = 3.899	** 0.0013
	One-way ANOVA with Tukey's multiple comparisons	Wild-type V rd10 V rd10 Norgestrel Synaptophysin	N = 4	F = 27.96 SS = 4.256 DF = 2 MS = 2.128	*** 0.0001
	One-way ANOVA with Tukey's multiple comparisons	Wild-type V rd10 V rd10 Norgestrel # Nuclei in ONL	N = 3-5	F = 194.4 SS = 230920 DF = 2 MS = 115460	**** <0.0001
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel # Nuclei in ONL	N = 3-5	t = 6.368 df = 7	*** 0.0004
2D	Two-tailed unpaired t-test	P30 rd10 V P50 rd10 Norgestrel	N = 3 & 5	t = 0.3584 df = 6	0.7323
	Two-tailed unpaired t-test	P50 Wild-type V P50 rd10 Norgestrel	N = 3 & 5	t = 0.3369 df = 6	0.7476
	Two-tailed unpaired t-test	P50 rd10 V P50 rd10 Norgestrel	N = 6 & 5	t = 5.199 df = 9	*** 0.0006
	Two-tailed unpaired t-test	P60 rd10 V P60 rd10 Norgestrel	N = 6	t = 4.770 df = 10	*** 0.0008
	Two-tailed unpaired t-test	P80 rd10 V P80 rd10 Norgestrel	N = 4	t = 3.941 df = 6	** 0.0076
3A	Two-way ANOVA	P50 a-wave rd10 V rd10 Norgestrel	N = 8 & 11 n = 15 & 22	F=351.784	*** 0.000
	Bonferroni's pairwise comparisons	P50 a-wave rd10 V rd10 Norgestrel -1 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=7.479	** 0.007
	Bonferroni's pairwise comparisons	P50 a-wave rd10 V rd10 Norgestrel -0.6 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=46.028	*** 0.000
	Bonferroni's pairwise comparisons	P50 a-wave rd10 V rd10 Norgestrel 0.0 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=154.053	*** 0.000
	Bonferroni's pairwise comparisons	P50 a-wave rd10 V rd10 Norgestrel 0.4 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=336.511	*** 0.000
	Bonferroni's pairwise comparisons	P50 a-wave rd10 V rd10 Norgestrel 1 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=449.217	*** 0.000
	Two-way ANOVA	P50 b-wave rd10 V rd10 Norgestrel	N = 8 & 11 n = 15 & 22	F=625.303	*** 0.000
	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel -2.7 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=9.511	** 0.002

	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel -2.2 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=21.872	*** 0.000
	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel -1.5 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=40.833	*** 0.000
	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel -1.0 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=77.107	*** 0.000
	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel -0.6 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=95.650	*** 0.000
	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel 0.0 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=147.712	*** 0.000
	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel 0.4 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=197.442	*** 0.000
	Bonferroni's pairwise comparisons	P50 b-wave rd10 V rd10 Norgestrel 1 log cd s/m <sup>2</sup>	N = 8 & 11 n = 15 & 22	F=474.759	*** 0.000
	Two-way ANOVA	P60 a-wave rd10 V rd10 Norgestrel	N = 4 & 6 n = 7 & 12	F=130.666	*** 0.000
	Bonferroni's pairwise comparisons	P60 a-wave rd10 V rd10 Norgestrel -0.6 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=28.152	*** 0.000
	Bonferroni's pairwise comparisons	P60 a-wave rd10 V rd10 Norgestrel 0.0 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=82.500	*** 0.000
	Bonferroni's pairwise comparisons	P60 a-wave rd10 V rd10 Norgestrel 0.4 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=120.656	*** 0.000
	Bonferroni's pairwise comparisons	P60 a-wave rd10 V rd10 Norgestrel 1 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=119.249	*** 0.000
	Two-way ANOVA	P60 b-wave rd10 V rd10 Norgestrel	N = 4 & 6 n = 7 & 12	F=322.871	*** 0.000
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel -2.7 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=6.848	** 0.01
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel -2.2 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=16.612	*** 0.000
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel -1.5 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=22.726	*** 0.000
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel -1 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=21.976	*** 0.000
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel -0.6 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=61.683	*** 0.000
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel 0.0 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=80.141	*** 0.000
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel 0.4 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=97.193	*** 0.000
	Bonferroni's pairwise comparisons	P60 b-wave rd10 V rd10 Norgestrel 1 log cd s/m <sup>2</sup>	N = 4 & 6 n = 7 & 12	F=239.816	*** 0.000
	Two-way ANOVA	P80 a-wave rd10 V rd10 Norgestrel	N = 4 & 5 n = 7 & 10	F=109.833	*** 0.000
	Bonferroni's pairwise comparisons	P80 a-wave rd10 V rd10 Norgestrel 0.0 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=61.797	*** 0.000
	Bonferroni's pairwise comparisons	P80 a-wave rd10 V rd10 Norgestrel 0.4 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=195.904	*** 0.000

	Bonferroni's pairwise comparisons	P80 a-wave rd10 V rd10 Norgestrel 1 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=166.434	*** 0.000
	Two-way ANOVA	P80 b-wave rd10 V rd10 Norgestrel	N = 4 & 5 n = 7 & 10	F=180.671	*** 0.000
	Bonferroni's pairwise comparisons	P80 b-wave rd10 V rd10 Norgestrel -1.5 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=9.602	*** 0.000
	Bonferroni's pairwise comparisons	P80 b-wave rd10 V rd10 Norgestrel -1 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=23.174	*** 0.000
	Bonferroni's pairwise comparisons	P80 b-wave rd10 V rd10 Norgestrel -0.6 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=41.912	*** 0.000
	Bonferroni's pairwise comparisons	P80 b-wave rd10 V rd10 Norgestrel 0.0 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=46.154	*** 0.000
	Bonferroni's pairwise comparisons	P80 b-wave rd10 V rd10 Norgestrel 0.4 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=78.817	*** 0.000
	Bonferroni's pairwise comparisons	P80 b-wave rd10 V rd10 Norgestrel 1 log cd s/m <sup>2</sup>	N = 4 & 5 n = 7 & 10	F=163.850	*** 0.000
3B	Two-tailed unpaired t-test	P50 rd10 V rd10 Norgestrel	N = 4 & 5 n = 7 & 10	t=-8.001	*** 0.000
	Two-tailed unpaired t-test	P60 rd10 V rd10 Norgestrel	N = 4 & 5 n = 7 & 10	t=-5.100	*** 0.001
	Two-tailed unpaired t-test	P80 rd10 V rd10 Norgestrel	N = 4 & 5 n = 7 & 10	t=-5.091	*** 0.001
5B (ii)	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel #Iba1+ cells	N = 3	t = 0.09645 df = 4	0.9278
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel #CD68+ microglia/macrophages	N = 3	t = 0.9045 df = 4	0.4169
6B (ii)	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel GFAP	N = 3/5	t = 0.2279 df = 6	0.8273
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel GS	N = 3/5	t = 0.5509 df = 6	0.6016
7A (ii)	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel	N = 3	t = 0.6164 df = 4	0.5710
7B (ii)	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel SOD1	N = 4/3	t = 3.963 df = 5	* 0.0107
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel SOD2	N = 4/3	t = 3.384 df = 5	* 0.0196
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Catalase	N = 4	t = 0.4628 df = 6	0.6598
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Glut. Red.	N = 4/3	t = 0.6739 df = 5	0.5303
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Glut. Per.	N = 8/5	t = 0.3198 df = 4	0.4625

7C (ii)	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Bcl-2	N = 3	t = 1.045 df = 11	0.7551
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Bax	N = 4/3	t = 1.013 df = 5	0.3574
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Caspase 3	N = 4	t = 1.502 df = 6	0.1839
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Caspase 9	N = 4	t = 0.8358 df = 5	0.4413
8A	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel	N = 3	t = 6.089 df = 2	0.0259
8B (ii)	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel pAkt	N = 4	t = 0.3907 df = 6	0.7095
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel Akt	N = 4	t = 0.09996 df = 6	0.9236
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel pmTOR	N = 4/3	t = 0.4778 df = 5	0.6529
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel mTOR	N = 4/3	t = 0.7423 df = 5	0.4913
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel pERK1	N = 4	t = 4.753 df = 6	** 0.0031
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel pERK2	N = 4	t = 3.516 df = 6	* 0.0126
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel ERK1	N = 4	t = 2.772 df = 6	* 0.0324
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel ERK2	N = 4	t = 0.2399 df = 6	0.8184
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel pMEK1/2	N = 4	t = 2.255 df = 6	0.0650
	Two-tailed unpaired t-test	rd10 V rd10 Norgestrel MEK1/2	N = 4	t = 0.4197 df = 6	0.6893
9A (ii)	One-way ANOVA with Dunnett's multiple comparisons	Vehicle V 10/50/100/200 pERK1	N = 3-4	F = 139.8 SS = 2.645 DF = 4 MS = 0.6612	**** <0.0001
	One-way ANOVA with Dunnett's multiple comparisons	Vehicle V 10/50/100/200 pERK2	N = 3-4	F = 37.20 SS = 0.3710 DF = 4 MS = 0.0927	**** <0.0001
	One-way ANOVA with Dunnett's multiple comparisons	Vehicle V 10/50/100/200 ERK1	N = 3-4	F = 0.6497 SS = 0.01883 DF = 4 MS = 0.0047	0.6389
	One-way ANOVA with Dunnett's multiple comparisons	Vehicle V 10/50/100/200 ERK2	N = 3-4	F = 0.2086 SS = 0.01310 DF = 4 MS = 0.003274	0.9283
9B (ii)	One-way ANOVA with Tukey's multiple comparisons	Vehicle V Norg V Norg + Trametinib	N = 6-8	F = 11.45 SS = 76918 DF = 2 MS = 38459	*** 0.0006

**Supplementary Table S2. Summary of statistical analyses.** Table showing the statistical tests used in all comparisons, along with the N & n numbers, statistic details and p-value.