Supplemental Table 1: Animal demographics, treatments, imaging dates for 2019 experiments

| Supplemental Table 1: 2019 Experiments |
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| Animal ID | Sex | Age | Chemical | Volume & conc. | Baseline | Injection | 1 Day | 3 Days | 7 Days | 14 Days | 21 Days |
| DM\_191301 | M | ~2.5 months | SNP | 30 µL 0.10 mM | OCT: 6/13SLO: 6/12AOSLO: 6/13 | 6/19 | OCT: 6/20 | OCT: 6/22 | OCT: 6/26 | OCT: 7/3 | OCT+AOSLO: 7/10 |
| DM\_191206 | F | ~2.5 months | SNP | 30 µL 0.10 mM | OCT: 6/14SLO: 6/17AOSLO: 6/17 | 6/18 | OCT: 6/19 | OCT: 6/21 | OCT: 6/25 | OCT: 7/2 | ND |
| DM\_191205 | M | ~2.5 months | SNP | 30 µL 0.25 mM | OCT: 6/14SLO: 6/12AOSLO: 6/17 | 6/18 | OCT: 6/19 | OCT: 6/21 | OCT: 6/25 | OCT: 7/2 | ND |
| DM\_191208 | F | ~2.5 months | SNP | 30 µL 0.25 mM | OCT: 6/12SLO: 6/12AOSLO: 6/19 | 6/19 | OCT: 6/20 | OCT: 6/22 | OCT: 6/26 | OCT: 7/3 | OCT+AOSLO: 7/10 |
| DM\_191209 | M | ~3.5 months | SNP | 30 µL 1.2 mM | OCT: 6/14SLO: 6/12AOSLO: 7/11 | 7/12 | OCT: 7/13 | OCT: 7/15 | OCT: 7/19 | ND | ND |
| DM\_190906 | F | ~4 months | SNP | 30 µL 1.2 mM | OCT: 7/30 SLO: 7/30AOSLO: 8/13 | 8/13 | OCT: 8/14 | OCT: 8/16 | OCT: 8/20 | OCT+AOSLO: 8/27 | ND |
| DM\_190904 | F | ~4 months | SNP | 30 µL 1.2 mM | OCT: 7/30SLO: 7/30AOSLO: 7/29 | 7/31 | OCT: 8/1 | OCT: 8/3 | OCT: 8/7 | OCT: 8/14 | OCT+AOSLO: 8/21 |
| DM\_190902 | F | ~4 months | SNP | 30 µL 1.2 mM | OCT: 8/3SLO: 7/29AOSLO: 7/31 | 8/5 | OCT: 8/6 | OCT: 8/8 | OCT: 8/12 | OCT+AOSLO: 8/19 | ND |
| DM\_190901 | M | ~4 months | SNP | 30 µL 1.5 mM | OCT: 8/3SLO: 7/30AOSLO: 7/31 | 8/5 | OCT: 8/6 | OCT: 8/8 | OCT: 8/12 | OCT+AOSLO: 8/19 | ND |
| DM\_190903 | M | ~4 months | SNP | 30 µL 1.5 mM | OCT: 7/30SLO: 7/29AOSLO: 7/29 | 8/13 | OCT: 8/14 | OCT: 8/16 | OCT: 8/20 | OCT+AOSLO: 8/27 | ND |
| DM\_190905 | M | ~4 months | SNP | 30 µL 1.5 mM | OCT: 7/30SLO: 7/29AOSLO: 7/29 | 7/31 | OCT: 8/1 | OCT: 8/3 | OCT: 8/7 | OCT: 8/14 | OCT+AOSLO: 8/21 |
| DM\_191202 | F | ~3.5 months | SNP | 30 µL 1.5 mM | OCT: 6/14SLO: 6/12AOSLO: 7/11 | 7/12 | OCT: 7/13 | OCT: 7/15 | OCT: 7/19 | ND | ND |
| DM\_191203 | M | ~2.5 months | ATP | 30 µL 0.066 M | OCT: 6/14SLO: 6/24AOSLO: 6/22 | 6/24 | OCT: 6/25 | OCT: 6/27 | OCT: 7/1 | OCT: 7/8 | OCT+AOSLO: 7/15 |
| DM\_191207 | M | ~3 months | ATP | 30 µL 0.066 M | OCT: 6/12SLO: 6/12AOSLO: 6/20 | 7/2 | OCT: 7/3 | OCT: 7/5 | OCT: 7/9 | OCT+AOSLO: 7/16 | ND |
| DM\_191303 | M | ~2.5 months | ATP | 30 µL 0.066 M | OCT: 6/12SLO: 6/12AOSLO: 6/20 | 6/26 | OCT: 6/27 | OCT: 6/29 | OCT: 7/3 | ND | ND |
| DM\_191204 | F | ~2.5 months | ATP | 30 µL 0.132 M | OCT: 6/12SLO: 6/12AOSLO: 6/21 | 6/24 | OCT: 6/25 | OCT: 6/27 | OCT: 7/1 | OCT: 7/8 | OCT+AOSLO: 7/15 |
| DM\_191210 | F | ~2.5 months | ATP | 30 µL 0.132 M | OCT: 6/14SLO: 6/12AOSLO: 6/21 | 6/26 | OCT: 6/27 | OCT: 6/29 | OCT: 7/3 | ND | ND |
| DM\_191212 | F | ~3 months | ATP | 30 µL 0.132 M | OCT: 6/14SLO: NDAOSLO: 6/21 | 7/2 | OCT: 7/3 | OCT: 7/5 | OCT: 7/9 | OCT+AOSLO: 7/16 | ND |
| WC\_1906 | F | Unknown, of sexual maturity | IAA | 30 µL 0.5 mM | OCT: 8/16SLO: 8/16AOSLO: ND | 8/26 | OCT: 8/27 | OCT: 8/29 | OCT: 9/2 | OCT: 9/8 | OCT+AOSLO: 9/16 |
| WC\_1901 | M | Unknown, of sexual maturity | IAA | 30 µL 1 mM | OCT: 8/16SLO: 8/16AOSLO: ND | 8/26 | OCT: 8/27 | OCT: 8/29 | OCT: 9/2 | OCT: 9/8 | OCT+AOSLO: 9/16 |
| MCW\_190204 | F | ~2.5 months | IAA | 30 µL 3.2 mM | OCT: 8/3SLO: 8/3AOSLO: ND | 8/6 | OCT: 8/7 | OCT: 8/9 | OCT: 8/13 | OCT: 8/20 | ND |
| MCW\_190203 | M | ~2.5 months | IAA | 30 µL 4.7 mM | OCT: 8/3SLO: 8/3AOSLO: ND | 8/6 | OCT: 8/7 | OCT: 8/9 | OCT: 8/13 | OCT: 8/20 | ND |
| MCW\_190201 | M | ~2 months | IAA | 30 µL 7.4 mM | OCT: 7/23SLO: 7/24AOSLO: ND | 7/24 | OCT: 7/25 | OCT: 7/27 | OCT: 7/31 | OCT: 8/7 | OCT: 8/14 |
| MCW\_190202 | F | ~2 months | IAA | 30 µL 15.4 mM | OCT: 7/23SLO: 7/24AOSLO: ND | 7/24 | OCT: 7/25 | OCT: 7/27 | OCT: 7/31 | OCT: 8/7 | OCT: 8/14 |

Dates are in month/day format.

All contralateral eyes received 30 µL intravitreal injections 1X PBS.

SNP, sodium nitroprusside; ATP, adenosine triphosphate; IAA, iodoacetic acid; OCT, optical coherence tomography; SLO, scanning light ophthalmoscopy; AOSLO, adaptive optics scanning light ophthalmoscopy; conc., concentration; ND, no data;