

Appendix 2. A Comparative Look at the Fold Change of Gene Expression at the Peak of Photoreceptor Death between Models of Retinal Degeneration. The table presents some of the genes and pathways often observed in microarray studies on various models of photoreceptor degeneration, including naturally-occurring mutations, genetically-engineered, and injury-induced models. The selected microarray studies is by no mean an exhaustive list. (*rd3* (P21), our study; *rd1* (P10) [2]; *rd2* (P21) [2]; *Rds* (P21) [23]; *Bbs4*-/- (5mo) [24]; *Rs1h*-/y (P14) [25]; *prCAD*-/- (1mo) [5]; *Nrl*-/- (4mo) [26]; *NxnlI*-/- (P40) [27]; Light-damaged (LD, 24hrs) [2, 5]; Retinal detachment (24 hrs) [22, 28]; Hyperoxia [7])

| Gene Symbol | Models of Retinal Degeneration | | | | | | | | | | |
|------------------|--------------------------------|------------|------------|------------|--------------------|--------------------|---------------------|-------------------|---------------------|-----------------|-----------|
| | <i>rd3</i> | <i>rd1</i> | <i>rd2</i> | <i>Rds</i> | <i>Bbs4</i> -/- | <i>Rs1h</i> -/y | <i>prCAD</i> -/- | <i>Nrl</i> -/- | <i>NxnlI</i> -/- | Detach- ment | Hyperoxia |
| | | | | | | | | | | LD | |
| Apoptosis | | | | | | | | | | | |
| | <i>Bcl3</i> | 33.3 | | | | | | | | 5.3 | 3.7 |
| | <i>Xiap</i> | -2.9 | | | -2.9 | | | | | | |
| Glial activation | | | | | | | | | | | |
| | <i>Gfap</i> | 11.4 | | | | 1.9 | 5.0 | | | 7.2 | |
| | <i>Vim</i> | 2.2 | | | | 1.8 | | | 3.9 | | |
| Immune response | | | | | | | | | | | |
| | <i>Clqa</i> | 7.6 | | 6.9 | | | | | | | |
| | <i>Clqb</i> | 4.9 | 3.0 | 12.0 | | 1.8 | | | | | |
| | <i>Clqc</i> | 7.8 | | 7.2 | | | | | | | |
| | <i>C3</i> | 4.4 | | | | | | | 3.9 | 2.4 | 10.4 |
| | <i>CfI</i> | 10.8 | | | | | 2.0 | | | | |
| | <i>Lcn2</i> | 8.3 | | | | | 2.2 | | 17.9 | 2.5 | |
| | <i>Lrrc2</i> | 8.8 | | | | | 3.8 | | | 6.2 | |
| | <i>Serpingle</i> | 5.7 | | | | | | 2.1 | | 3.9 | |
| | <i>Stat3</i> | 4.0 | | | | | 2.1 | | | | |
| | <i>Tnfrsf1a</i> | 2.8 | | | | | | | 2.3 | | |

| | | | | | | | |
|------------------------|------------------|-------|------|-------|------|------|------|
| Lipid metabolism | | | | | | | |
| | <i>Pla2g7</i> | -2.3 | | -4.5 | | | |
| | <i>Pnpla3</i> | -2.4 | | | | -2.3 | |
| | <i>Ppap2c</i> | -3.7 | | | | | -3.0 |
| Photoreceptor function | | | | | | | |
| | <i>Dmd</i> | -2.3 | | -6.1 | | | -5.4 |
| | <i>Gnat1</i> | -2.3 | | -3.9 | | | |
| | <i>Gnb3</i> | 2.9 | | | | 2.0 | |
| | <i>Guca1b</i> | -2.1 | | -6.4 | | | |
| | <i>Opnlsw</i> | -2.2 | | -20.4 | | | -3.1 |
| | <i>Prph</i> | 4.6 | | 2.0 | | | |
| | <i>Rorb</i> | -2.6 | | -2.9 | | | |
| Stress response | | | | | | | |
| | <i>Cebpd</i> | 16.6 | 3.2 | 2.5 | 2.1 | 5.7 | 19.3 |
| | <i>Cp</i> | 5.2 | | | | | 8.2 |
| | <i>Edn2</i> | 165.2 | | 5.8 | 11.4 | 35.0 | 12.9 |
| | <i>Egr1</i> | 2.3 | 11.8 | 9.0 | 2.0 | | 2.6 |
| | <i>Gadd45b</i> | 4.5 | | | | | 4.8 |
| | <i>Mt1</i> | 4.1 | | | 2.0 | | 5.0 |
| | <i>Mt2</i> | 5.5 | | | 2.5 | | 7.5 |
| | <i>Serpina3n</i> | 7.3 | | 4.7 | | | 5.7 |
| | <i>Socs3</i> | 10.7 | | | 2.9 | | 13.5 |