Appendix 2. Past transcriptome and proteomic studies of refractive error animal models**.** This table provides details of the transcriptome and proteomics studies of refractive error animal models that were included in the comparative analysis. Abbreviations are as follows: h/d/w/m= hours/days/weeks/months, RPE= Retinal pigment epithelium, iTRAQ= Isobaric tag for relative and absolute quantitation.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Author** | **Year** | **Method** | **Species** | **Tissue** | **Experimental Condition/s** | |
| ***Individual transcriptome studies*** | | | | | | |
| Tkatchenko | 2006 | Microarray | Primate | Retina | | 2.1-3.9m occlusion |
| Brand | 2007 | Microarray | Mouse | Retina | | 0.5h, 4h, & 12h occlusion |
| McGlinn | 2007 | Microarray | Chick | Retina/ RPE | | 6h & 3d occlusion |
| Schippert | 2008 | Microarray | Chick | Retina | | 1d lens-induced hyperopia |
| Rada | 2009 | Microarray | Chick | Retina/ RPE/ choroid | | 10d occlusion, 1d & 4d recovery |
| Ashby | 2010 | Microarray | Chick | Amacrine cell layer | | 1d lens-induced myopia |
| 1d lens-induced hyperopia |
| Stone | 2011 | Microarray | Chick | Retina/ RPE | | 6h & 3d lens-induced myopia |
| 6h & 3d lens-induced hyperopia |
| Riddell | 2016 | RNA-sequencing | Chick | Retina/ RPE/ choroid | | 1, 2, & 3 days lens-induced myopia |
| 1, 2, & 3 days lens-induced hyperopia |
| Metlapally | 2016 | Microarray | Mouse | Sclera | | 2w occlusion |
| ***Transcriptome meta-analyses*** | | | | | | |
| Riddell | 2017 | Meta-analysis of the McGlinn, Schippert, Ashby, Stone, and Riddell studies listed above | Chick | Retina, RPE, and/or choroid | | ≤1d myopia (lens and occlusion induced) |
| 2-3d myopia (lens and occlusion induced) |
| ≤1d hyperopia (lens induced) |
| 2-3d hyperopia (lens induced) |
| ***Individual proteomic studies*** | | | | | | |
| Bertrand | 2006 | Gel electrophoresis | Chick | Retina | | 1d & 7d occlusion/lens-induced myopia |
| 1d & 7d lens-induced hyperopia |
| Lam | 2007 | Gel electrophoresis | Chick | Retina | | 7d lens-induced myopia |
| Frost | 2007 | Gel electrophoresis | Tree Shrew | Sclera | | 4d lens-induced myopia |
| 11-13d lens-induced myopia, 4d recovery |
| Jostrup | 2009 | Gel electrophoresis | Tilapia | Retina/ RPE/ Choroid | | 4w occlusion |
| Zhou | 2010 | Gel electrophoresis | Guinea Pig | Posterior Sclera | | 7w occlusion |
| 7w occlusion, 4d recovery |
| Frost | 2012 | Gel electrophoresis | Tree Shrew | Sclera | | 4d lens-induced myopia |
| 11d lens-induced myopia, 4d recovery |
| Li | 2012 | Gel electrophoresis | Mouse | Retina | | 2w occlusion |
| Wu | 2014 | Gel electrophoresis | Albino Guinea Pig | Retina | | 4w occlusion |
| Barathi | 2014 | iTRAQ | Mouse | Retina | | 6w lens-induced myopia |