



**Figure S1: Representative image of lenses and retinae from pigs used for the vitreous proteomics study.**

Lenses were photographed directly after removal from the eye. Lenses from wt pigs are transparent with a typical shape (A), while lenses from *INS*<sup>C94Y</sup> pigs clearly show signs of cataract with an opaque appearance and a deformed shape (D).

Paraffin embedded retina sections were deparaffinized, rehydrated and stained with the modified Mallory's trichrome method. Compared to wt pigs (A-C), retinae from *INS*<sup>C94Y</sup> pigs (D-F) show characteristic morphological changes, such as increased retinal thickness, especially in the nerve fibre / ganglion cell layer (F, nerve fibre / ganglion cell layer marked with asterisk). Increased thickness is prominent up to 5  $\mu$ m from the optic nerve (E, optic nerve marked with triangle).