

Review of: "Self-organization, quality control, and preclinical studies of human iPSC-derived retinal sheets for tissue-transplantation therapy"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

in this study, authors have developed an original quality control process to ensure the selection of transplantable retinal sheets and avoiding inclusion of non retinal tissue by mistake. They dissect the retinal organoid in two parts called cap and ring. Cap being transplanted and ring being processed for QC. Moreover, they have developed a new non-freezing preservation method that ensure stability of the retinal sheet before transplantation.

They tested the safety of transplantation by assessing tumorigenicity in NUDE rats and show no adverse events like proliferation or malignant features. They also performed preclinical proof of concept engraftment in retinal degeneration model rat. they showed good engraftment and signs of photoreceptor maturation. They also measured, ex-vivo response of retinal ganglion cells when co grafted with retinal sheets. However, in vivo efficacy measures were not presented (ERG or functional tests) which decrease a little this article interest.