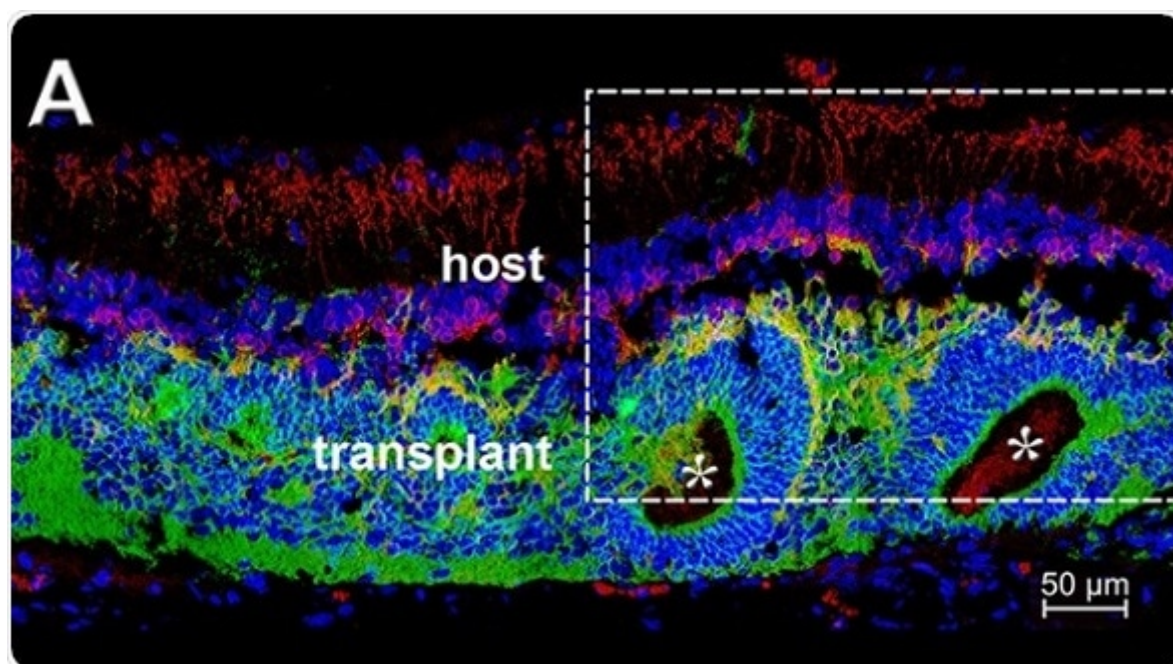


Retinal sheet transplants restore vision in blind rats

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Sheets of fetal cells integrate into the retina and generate nearly normal visual activity in the brains of blind rats, reports new research published in *JNeurosci*.



Degeneration of the retina as a result of age or progressive eye disease damages the light-detecting cells necessary for accurate vision. Current treatments can only help protect existing cells from further damage and are ineffective during late stages of disease once these cells are gone. Retinal sheet transplants have been demonstrated in prior animal and human studies, but their ability to restore complex vision has not yet been assessed.

Measuring the response of neurons in the primary visual cortex, David Lyon and colleagues demonstrate rats with severe retinal degeneration that received donor cells became sensitive to various attributes of visual stimuli, including

size, orientation, and contrast, as early as three months following surgery. The study represents an important step forward in combating age- and disease-related vision loss in human adults.