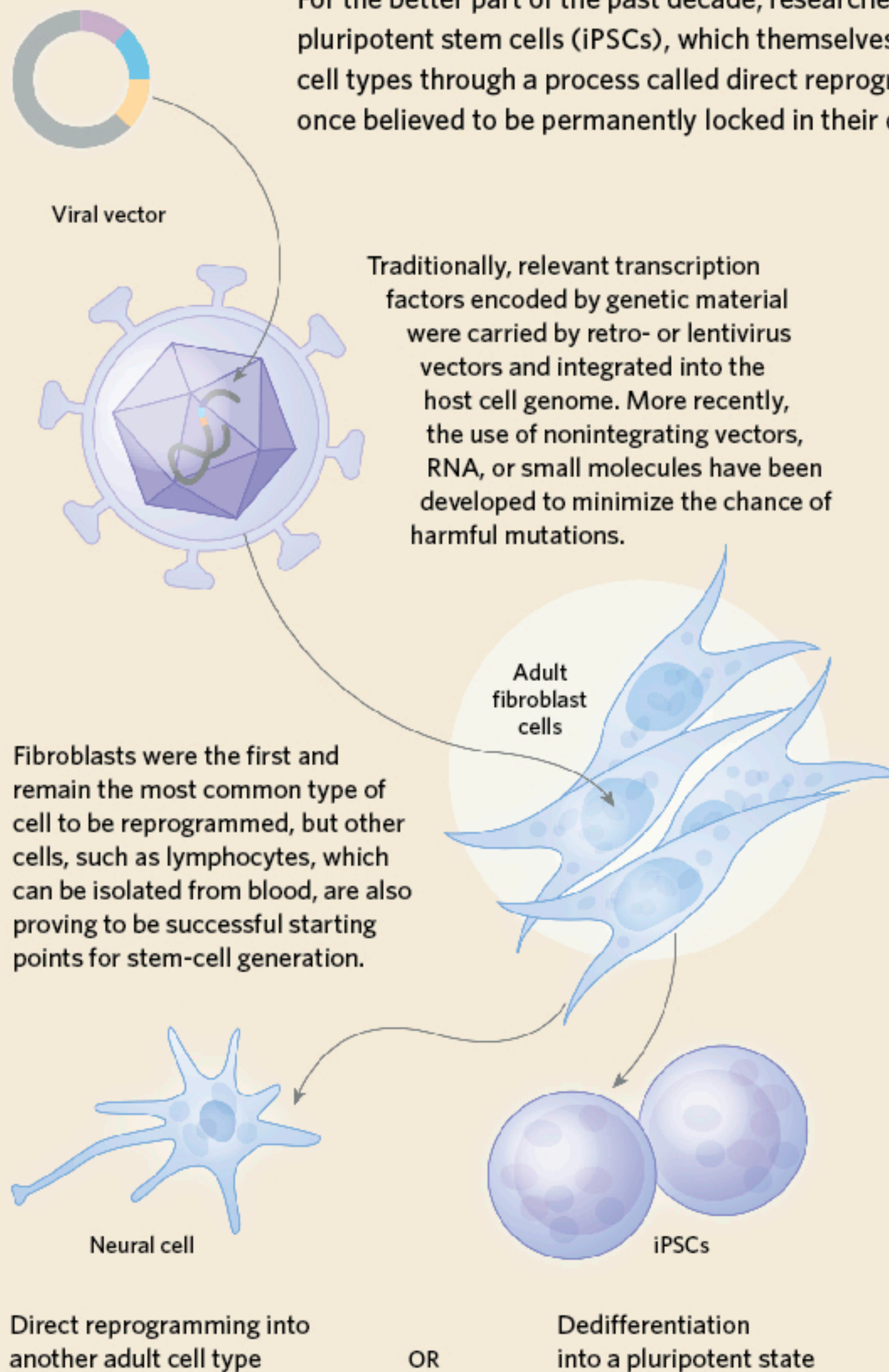


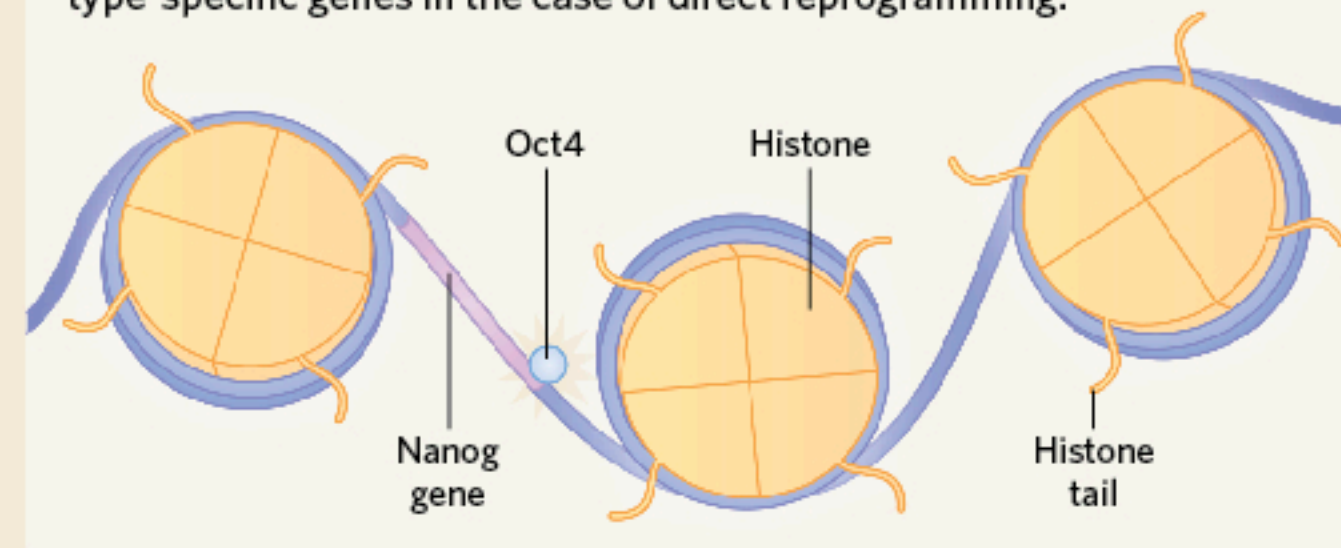
CELLULAR REPROGRAMMING

For the better part of the past decade, researchers have been reprogramming adult cell types, either into induced pluripotent stem cells (iPSCs), which themselves can give rise to diverse cell types, or directly into other differentiated cell types through a process called direct reprogramming. Such approaches support the switching of diverse cell types once believed to be permanently locked in their differentiated form.



OPEN CHROMATIN

Transfected transcription factors, such as Oct4, induce the expression of pluripotency-related genes, such as *Nanog*, or cell-type-specific genes in the case of direct reprogramming.



CLOSED CHROMATIN

Sequences from pioneer factors, such as the myogenic factor MyoD, are also employed to increase reprogramming efficiency in the face of closed chromatin, which can inhibit access of the transfected transcription factors to their target genes.

