Title:	Use of endogenous retroviral elements to discriminate pluripotency status of stem cells & Exploring the role of ezh2 during retina regeneration in danio rerio
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Abstract:	Pluripotent stem cells (PSC) are characterised by two main properties: self-renewal and ability to differentiate into cells of all three germ layers (ectoderm, mesoderm and endoderm). These two main properties make these cells an invaluable tool for disease modelling, devel- opmental studies and regenerative medicine. However, there are a few issues associated with stem cells: the quality of PSCs varies based on the origin of cells as well as the techniques used to derive them, transplantation of differentiated cells derived from PSCs presents high tumoral risk and there is a heterogeneity observed in the cells of the same population. So, defining a novel biological marker which can discriminate pluripotency states of cells even in the same population is of utmost importance. In this study, we are using Endogenous retrovirus-like sequences (ERVs) as a potential marker. ERVs are fossils of ancient retroviral integration into genome and are usually transcriptionally silenced. However, an increasing body of evidence has shown that some ERVs are reactivated only during early embryo development in mouse and their expression patterns fluctuate with the potency status of cells. This study explores the expression patterns of 4 different ERVs: EOS, Etn, IAP and ENS1 in rabbit iPSC populations. While EOS and Etn were unreliable, IAP showed some interesting results as its expression levels seemed to be high in populations of rabbit iPSCs which were expressing high Oct4 and H3K9 acetylation. ENS1, which shows expression in chicken ESCs also showed high expression of ESSRB corresponding to low levels of H3K27me3 in rabbit iPSCs.
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