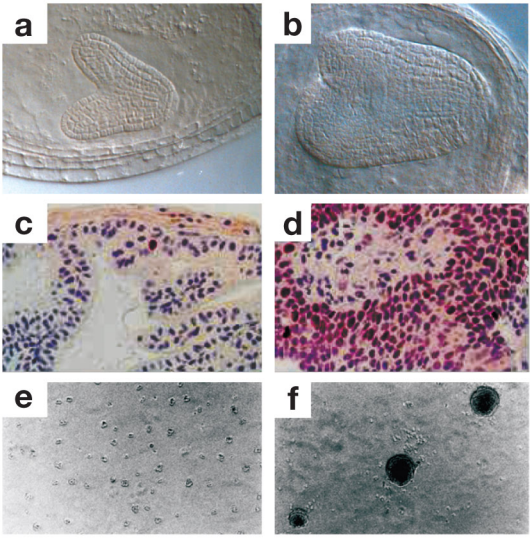

Figure 8. PRC2 Regulates Cell Proliferation in Mammals and Plants

(*a, b*) Plant embryos derived from wild-type and *mea* mutant egg cells. *MEA* encodes a protein of the FIS complex and regulates cell proliferation. The giant *mea* embryo is much larger than the corresponding wild-type embryo at the same stage of development (late heart stage). Mutant embryos develop more slowly and have approximately twice the number of cell layers. (*c, d*) Normal and cancerous prostate epithelium. In the cancerous epithelium, Ezh2 expression is highly increased (labeled with an anti-Ezh2 antibody). Thus, both loss of E(Z) function in plants and overexpression of E(Z) function in humans can lead to defects in cell proliferation. (*e, f*) Control and RING1 overexpressing rat 1a fibroblast cells. Overexpression of RING1 leads to anchorage-independent growth in soft agar, typical of neoplastically transformed cells. (*a,b,* Courtesy of J.-P. Vielle-Calzada and U. Grossniklaus; *c,d,* reprinted, with permission, from Kuzmichev et al. 2005 [© National Academy of Sciences]; *e,f,* reprinted, with permission, from Satijn and Otte 1999 [© American Society for Microbiology].)