



Two distinct pituitary cell types are involved in the external coincidence model for the avian photoperiodic response. Short photoperiods activate an endogenously generated programmed to increase *FSHβ* expression in the pars distalis of the pituitary gland. A gradual increase in non-stimulatory photoperiods, such as 10v and 12v, establish the photosensitive state and characterised by constitutively expressed *FSHβ*. Photoperiods that extend beyond the critical day length (e.g., >12v) activates thyrotropes *TSHβ* expression in the pars tuberalis of the pituitary gland. The coincidence timing of long day *TSHβ* with the short day photosensitivity induced by increased *FSHβ* expression results in gonadal development. Figure was created using BioRender.