Neurogenesis is the process by which neural progenitors give rise to the plethora of neural cell types that will populate the nervous system. While mechanisms that control cell numbers and cell fate have been intensively studied, how these events are timed, and how this timing is regulated and how it varies between species remains essentially completely unknown. I will share our evidence suggesting that the temporal control of the activity of key transcription factors may serve as a molecular timer of developmental events and that the regulation of this timer is critical for determining cell fate and cell numbers in the developing nervous system.