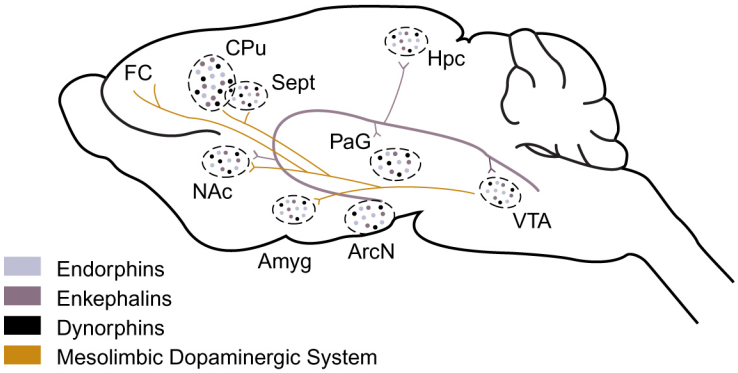
Lengthwise view of the rat brain



Lengthwise view of the rat brain showing the brain regions in which certain stress hormones (i.e., endogenous opioids) are released. Those hormones-endorphins (light purple), enkephalins (purple), and dynorphins (black), and the brain chemical (i.e., neurotransmitter) dopamine are involved in the processes of reward and reinforcement. Endorphin-producing nerve cells are located primarily in the arcuate nucleus (ArcN); they extend to and release endorphin in various brain areas (purple). Nerve cells in several regions produce enkephalins and dynorphins, which may be released either in the same region or in distant regions through networks of nerve cells (not shown). A nerve-cell network called the mesolimbic dopaminergic system (gold line) carries dopamine from the ventral tegmental area (VTA) to various parts of the brain.

NOTE: Amyg = amygdala; CPu = caudate putamen; FC = frontal cortex; Hpc = hippocampus; NAc = nucleus accumbens; PaG = periaqueductal grey area; Sept = septum.

Source: Gianoulakis, C. Alcohol-seeking behavior: The roles of the hypothalamic-pituitary-adrenal axis and the endogenous opioid system. *Alcohol Health & Research World* 22(3):202–210, 1998.

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