

Decrease heart rate and cardiac output How?– Acetylcholine binds to the M2 receptor in the heart activating  $G_i$  (GPCR), which will eventually lead to the hyperpolarization of the cell, because it opens the  $K^+$  channels and allows the  $K^+$  to leave the cell (makes the intercellular environment more negative). Recall that the Vagus nerve originates from cranial nerve X, which branches to the heart and ???.(lungs and the GI-tract (see figure