The present invention relates to a new process for the synthesis of ivabradine of formula (I):

or 3-{3-[{[(7S)-3,4-dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl]methyl}(methyl)amino]propyl}-7,8-dimethoxy-1,3,4,5-tetrahydro-2H-3-benza-zepin-2-one, addition salts with pharmaceutically acceptable acids, and hydrates thereof. The process is characterized in that the compound of formula (VI):

$$H_3CO$$
 H_3CO
 OCH_3
 OCH_3
 OCH_3
 OCH_3

is subjected to a lactamisation reaction in the presence of a coupling agent and a base, in an organic solvent. This process allows of increasing the yield of the end product.

Claims: 28 a 2013 0016