Synthesis of a 5HT\textsubscript{7}/5HT\textsubscript{2} Dual Antagonist

**Significance:** The target pyrazolo[3,4-d]azepane is a 5HT\textsubscript{7}/5HT\textsubscript{2} dual antagonist that was of interest for the treatment of depression, psychosis, anxiety and sleep disorders. This notably short synthesis features (1) the regioselective construction of pyrazole \textbf{E} by reaction of hydrazone \textbf{D} with nitroalkene \textbf{C} and (2) the four-step, one-pot reductive annulation sequence converting \textbf{E} into the target azepane.

**Comment:** Hydrazone \textbf{D} was prepared in 98% yield (crude) by the reaction of benzyl-N-(3-oxo-propyl)carbamate with isopropylhydrazine in the presence of Et\textsubscript{3}N (1.2 equiv) in refluxing i-PrOH. The reaction of \textbf{C} and \textbf{D} was conducted in Et\textsubscript{3}N as solvent in order to efficiently capture the HNO\textsubscript{2} eliminated during the pyrazole annulation.