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# Inhibitory mechanism of a newly synthesized proton pump inhibitor, YJA20379-8

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To treat peptic ulcer diseases, many potent proton pump inhibitors have been developed for suppressing the gastric acid secretion in clinical patients. However, most of these agents have common irreversible mechanisms against $H^+,K^+$-ATPase which might be the cause of hypergastrinemia and ECL cell hyperplasia. Therefore, the development of new reversible inhibitors is prompted.

In this study, we investigated the inhibitory mechanism of a newly synthesized proton pump inhibitor, YJA20379-8 using lyophilized hog gastric microsomes. YJA20379-8 inhibited $K^+$-stimulated $H^+/K^+$-ATPase activity uncompetitively with respect to $K^+$, and in the other hand, showed competitive inhibitory pattern with ATP, respectively. From these data, we suggest that YJA20379-8 may be a proton pump inhibitor with a new inhibitory mechanism.