

LETTER

To the Editor

Dr. Thomas J. Jentsch, Professor

*Leibniz-Institut für Molekulare Pharmakologie (FMP) and Max-Delbrück-Centrum für Molekulare Medizin (MDC),
Robert-Rössle-Strasse 10, Haus 87, D-13125 Berlin, Germany*

The recent article by Jentsch TJ (1) reports that, "the contention that lubiprostone activates ClC-2 [type 2 chloride channels] is questionable ..." Furthermore, it states that, "ClC-2 activation might rather be useful in diarrhea, but detrimental in obstipation."

Subsequent to this review article, studies were published using HEK293 cells transfected with human ClC-2 in single channels. The results from these trials confirm that lubiprostone activates ClC-2 (2).

Lubiprostone is a prostone that has been extensively shown to treat constipation in well-controlled clinical trials involving thousands of humans (3,4). Lubiprostone received approval from the United States Food and Drug Administration in 2006 under the trade name AMITIZA® for the long-term treatment of chronic idiopathic constipation in adults (5). The approved labeling specifically includes a contraindication to lubiprostone's use in severe diarrhea.

The inference that lubiprostone might be useful in the treatment of diarrhea and contraindicated with constipation is medically unsound.

References

1. Jentsch TJ. 2008. CLC chloride channels and transporters: from genes to protein structure, pathology and physiology. *Crit Rev Biochem Mol Biol.* 43:3-36.
2. Bao HF, Liu L, Self J, Duke BJ, Ueno R, and Eaton D. 2007. A synthetic prostone activates apical chloride channels in A6 epithelial cells. 2008. *Am J Physiol Gastrointest Liver Physiol.* 295:234-251.
3. Johanson JF, and Ueno R. 2007. Lubiprostone, a locally acting chloride channel activator, in adult patients with chronic constipation: a double-blind, placebo-controlled, dose-ranging study to evaluate efficacy and safety. *Aliment Pharmacol Ther.* 25:1351-1361.
4. Johanson JF, Morton D, Geenen J, and Ueno R. 2008. Multicenter, 4-week, double-blind, randomized, placebo-controlled trial of lubiprostone, a locally-acting type-2 chloride channel activator, in patients with chronic constipation. *Am J Gastroenterol.* 103(1):170-177.
5. Amitiza [package insert]. 2008. Bethesda, MD: Sucampo Pharmaceuticals, Inc.