Scientific research process

name of Journal: *World Journal of Gastroenterology*

ESPS Manuscript NO: 34114

Manuscript Type: ORIGINAL ARTICLE

Title: P2Y1R involved in visceral hypersensitivity in irritable bowel system like rat model

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1 What did this study explore?

To explore the role of P2Y1R in visceral hypersensitivity of irritable bowel syndrome

2 How did the authors perform all experiments?

We first assessing the rat model of IBS which has been proven to demonstrate the major features of IBS. Then, we collected colonic tissue of the rats and detected protein expression of P2Y1R. After then, to further explore the role of P2Y1R in the development of visceral hypersensitivity, a specific agonist (MRS2365) and antagonist (MRS2179) of P2Y1R were used to regulate

the functional status of P2Y1R, and the abdominal responses were detected after this regulation.

3 How did the authors process all experimental data?

All examinations were performed in duplicate. Statistical analysis was performed using SPSS 17.0 software. Quantitative data were collected as the mean±SE. The one-way ANOVA approach was used to compare two groups. Two-way ANOVA was used for multiple group comparisons. A value of $p<0.05$ was regarded as statistically significant.

4 How did the authors deal with the pre-study hypothesis?

The hypothesis should be a conclusion drawn from a careful consideration of the problem. The negative and positive controls were designed and repeated experiments were needed. The conclusion were based on facts.

5 What are the novel findings of this study?

This study provided evidence that P2Y1R involved in generation and modulation of visceral hypersensitivity in IBS, and specific antagonists of P2Y1R may have potential therapeutic value in treating abdominal pain in IBS.

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2017-05-09