

Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: 1) General comments Dr. Gu, Dr. Chen and Dr. Zhang, et al. investigated “SLC6A14 promotes ulcerative colitis progression by facilitating NLRP3 inflammasome-mediated pyroptosis”. This article is informative and well presented. 1. In Introduction, page 4, line 12, the term “NLRP3” is the first description in the text and can be spelled out in full.

Response: Thank you for your comment. We have revised the sentence as “Recent investigations underscore the vital role of the NLR family pyrin domain containing 3 (NLRP3) inflammasome in UC”.

Reviewer #2:

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Minor revision

Specific Comments to Authors: The manuscript is very interesting. Please:

#1 please give the number of the ethical approval by the Ethics Committee.

Response: Thank you for your comment. The number of the ethical approval by the Ethics Committee has been added, and revised as followed: “These biopsies were obtained during endoscopic examinations conducted at the Sichuan Academy of Medical Sciences & Sichuan Provincial People’s Hospital (Lunshen (Yan)2022-380)”. and “All animal experiments were performed with the approval of the Animal Care and Use Committee of Sichuan Academy of Medical Sciences & Sichuan Provincial

People's Hospital (Lunshen (Yan)2022-380)".

#2 Please give the batch numbers of the antibodies used in the manuscript.

Response: Thank you for your comment. This has been revised as "Primary antibodies against SLC6A14 (Thermo Fisher Scientific Cat# PA5-87998, RRID:AB_2804576, 1:1500), NLRP3 (Abcam Cat# ab263899, RRID:AB_2889890, 1:1000), ASC (Abcam Cat# ab283684, RRID:AB_3073880, 1:800), pro-IL-18 (Proteintech Cat# 10663-1-AP, RRID:AB_2123636, 1:1000), IL-1 β (Abcam Cat# ab254360, RRID:AB_2936299, 1:1000), IL-18 (Abcam Cat# ab207324, RRID:AB_3073881, 1:1000), and GAPDH (Abcam Cat# ab9485, RRID:AB_307275, 1:1000) were used to probe the blots overnight at 4 °C, after which the blots were incubated with secondary antibodies for 60 min at room temperature."

#3 Please please provide a certificate of English correction.

Response: Thank you for your comment. The language of our manuscript has been edited by American Journal Experts (<http://www.aje.com>), and English editing certificate has been submitted.

4 It is not possible to see: in the Figure 1 the scale bar = 100 μ m). Figure 1. SLC6A14 in UC Tissues.

(A) HE staining and immunohistochemical (IHC) analysis depicting SLC6A14 expression in normal and UC tissues (magnification, $\times 200$; scale bar = 100 μ m)

Response: Thank you for your comment. The scale bar has been added in Figure 1.

#5 Please provide in the Figure 7. the scale bar = 100 μ m in the legend. Figure 7. SLC6A14 Reduces Pyroptosis Induced by NLRP3 Activation in UC Mouse Models. (A) Measurement of colon length. (B)

Assessment of body weight changes. (C) Disease-activity index. (D) Histology (magnification 200x).

Response: Thank you for your comment. This has been revised in the legend of Figure 7.

6 For the discussion, please make it more current, please add 2023 articles if possible.

Response: Thank you for your comment. For the discussion, the references have been updated with 2023 articles.