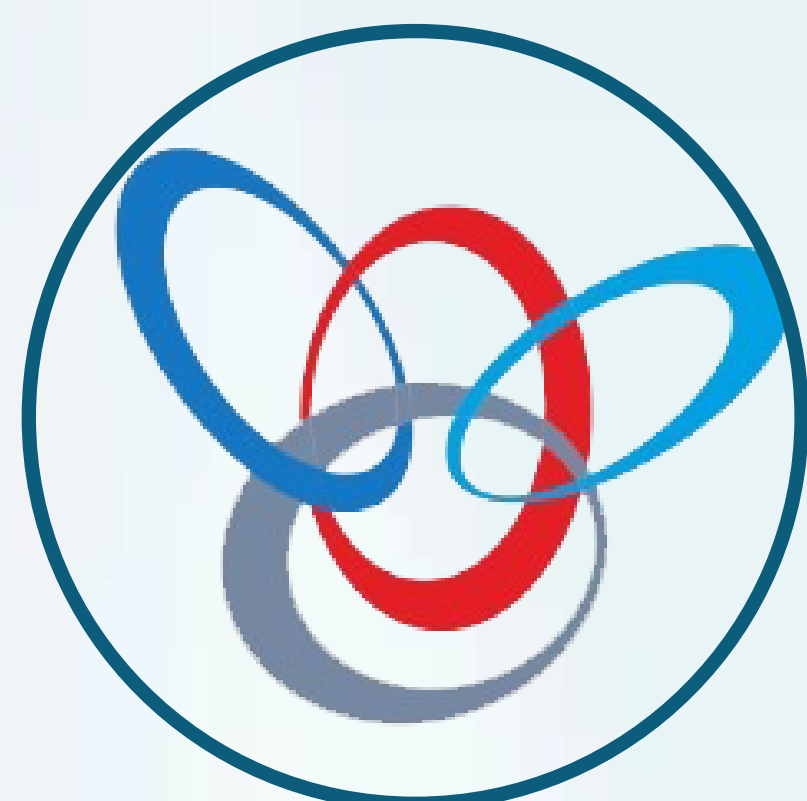


## 4TH INTERNATIONAL CONFERENCE ON PHARMACOLOGY & TOXICOLOGY

MARCH 15-16, 2023 | (Hotel Crowne Plaza Dubai - Deira)



**Dr. Kiumars Bahmani**

*University College of Conventional Medicine, Islamia university of Bahawalpur, Pakistan*

### Methotrexate as a safe immunosuppressive agent during the COVID-19 pandemic

During the ongoing COVID-19 pandemic, immunocompromised patients are at a higher risk of severe infection, since the immune system has an important role in defeating this disease. This study compares the severity of COVID-19 in patients taking methotrexate with the severity of their family members' illness as patients with normal immune system function. A total of 35 participants, including 14 patients taking methotrexate and 21 patients with normal immune function, entered this study, and the indicators of COVID-19 severity were compared between these two groups. The case group, who were on methotrexate therapy, had significantly less severe COVID-19 based on their symptoms, including fever ( $p=0.000$ ) and cough and dyspnea ( $p=0.01$ ) as well as in terms of COVID-19 severity indicators such as pulmonary involvement ( $p=0.001$ ), ferritin level ( $p=0.001$ ), white blood cell count ( $p=0.008$ ) and CRP level ( $p=0.006$ ), compared to the control group. There was a significant correlation between taking methotrexate and lower severity in COVID-19 disease. The present findings demonstrated that methotrexate does not predispose patients to severe COVID-19; on the contrary, patients taking methotrexate may experience a milder disease, possibly due to their reduced severe inflammatory reactions as a result of inhibited TNF $\alpha$ , lowered IL6, and increased T regulatory cells. According to these findings, methotrexate appears to be a suitable treatment option for patients who need immunosuppressive medications during the COVID-19 pandemic.

**Keywords:** Methotrexate, COVID-19, Immunocompromised