

2023 Faculty Research Proposal for UAMS College of Pharmacy Summer Student Research Fellowship

FACULTY INFORMATION:

NAME: Maya Wai, PharmD, BCPS

DEPARTMENT: Pharmacy Practice

Pharmaceutical Sciences

LOCATION: NW campus

PROJECT INFORMATION:

TITLE: Tocilizumab use in severe hospitalized COVID-19 infection

LOCATION OF THE PROJECT: Mercy Hospital NW and UAMS NW

BRIEF DESCRIPTION OF THE PROJECT OR SPECIFIC AIMS:

Several randomized controlled studies have described the use of tocilizumab in hospitalized COVID-19 patients with differing results. CONVACTA investigators described improved patient clinical status at day 28 with the use of tocilizumab compared to placebo (median value on ordinal scale was 1.0 for tocilizumab vs. 2.0 for placebo). However, they reported no significant difference in mortality at day 28 between tocilizumab and placebo groups ($p = 0.94$). RECOVERY investigators reported a lower incidence of mortality in tocilizumab (31%) compared to usual care (35%) at day 28 (RR 0.85, $p = 0.028$). EMPACTA investigators reported decreasing the likelihood of progression to mechanical ventilation or death in tocilizumab (12.0%) compared to placebo (19.3%; HR 0.53, $p = 0.04$) at day 28, but did not improve survival at day 28. The impact of tocilizumab on hospitalized severe COVID-19 beyond 28 days remains unclear. At Mercy Hospital, many long-term complications related to COVID-19 infection were anecdotally observed with longer lengths of stay and longer mechanical ventilation. This study aims to contribute to existing knowledge by evaluating the clinical outcomes of patients with COVID-19 related hospitalizations who may have received tocilizumab with a longer duration of follow up.

STUDENT'S RESPONSIBILITIES/DUTIES FOR THE PROPOSED PROJECT:

Student's main responsibility will be retrospective patient chart review and data collection. Student will also help prepare poster and write manuscript.

ESTIMATED TIME FOR PROJECT COMPLETION: 12 weeks (≥ 10 weeks required)

DOES THE WORK INVOLVE ANIMAL RESEARCH? YES

NO

ORAL/POSTER PRESENTATION OPPORTUNITY:

Yes, plan to present at ASHP Clinical Midyear meeting in Anaheim, CA in Dec 2023

MANUSCRIPT SUBMISSION:

Yes, plan to write and submit for publication