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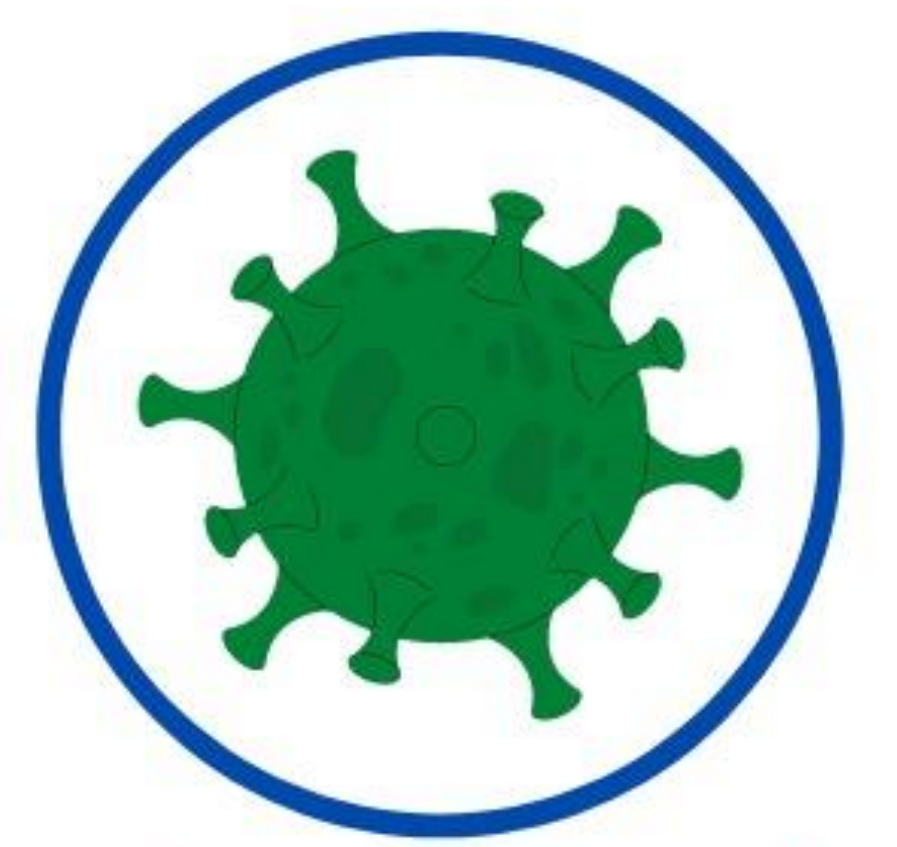
FACULTY OF
MEDICAL SCIENCES

A SYSTEMATIC REVIEW OF THE PRIMARY THERAPEUTIC INTERVENTIONS USED IN COVID-19 PATIENTS WHO WERE REINFECTED.

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COVID-19 and Comorbidities

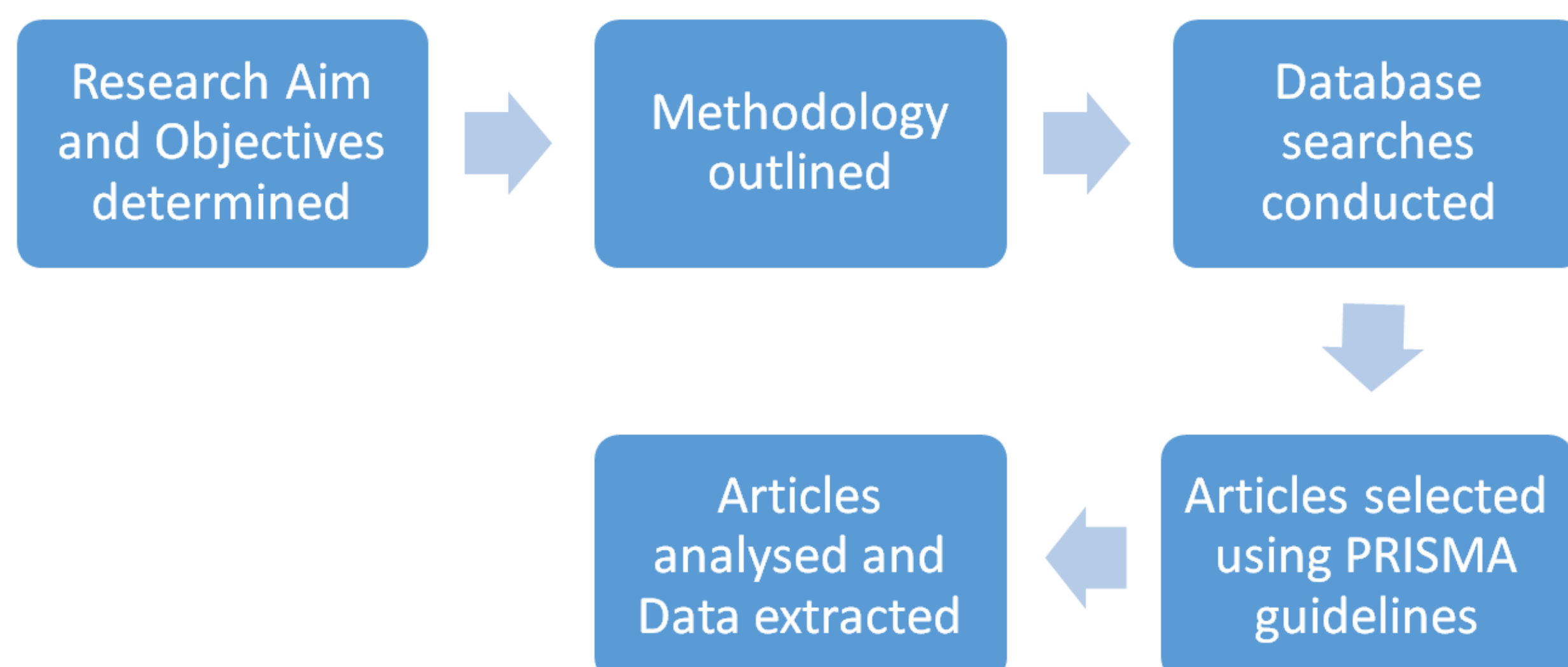
Introduction

On March 11th, 2020, COVID-19 was declared a global pandemic. Since then, data has been recorded, correlated and reviewed in an effort to better understand how to combat the spread and lower the morbidity of the disease. In this pursuit, many studies have linked the presence of comorbidities, diabetes among those, with a higher mortality rate. To further this line of thought, this review was meant to investigate the factors affecting this poorer prognosis and the risk of reinfection among this population.

Objective

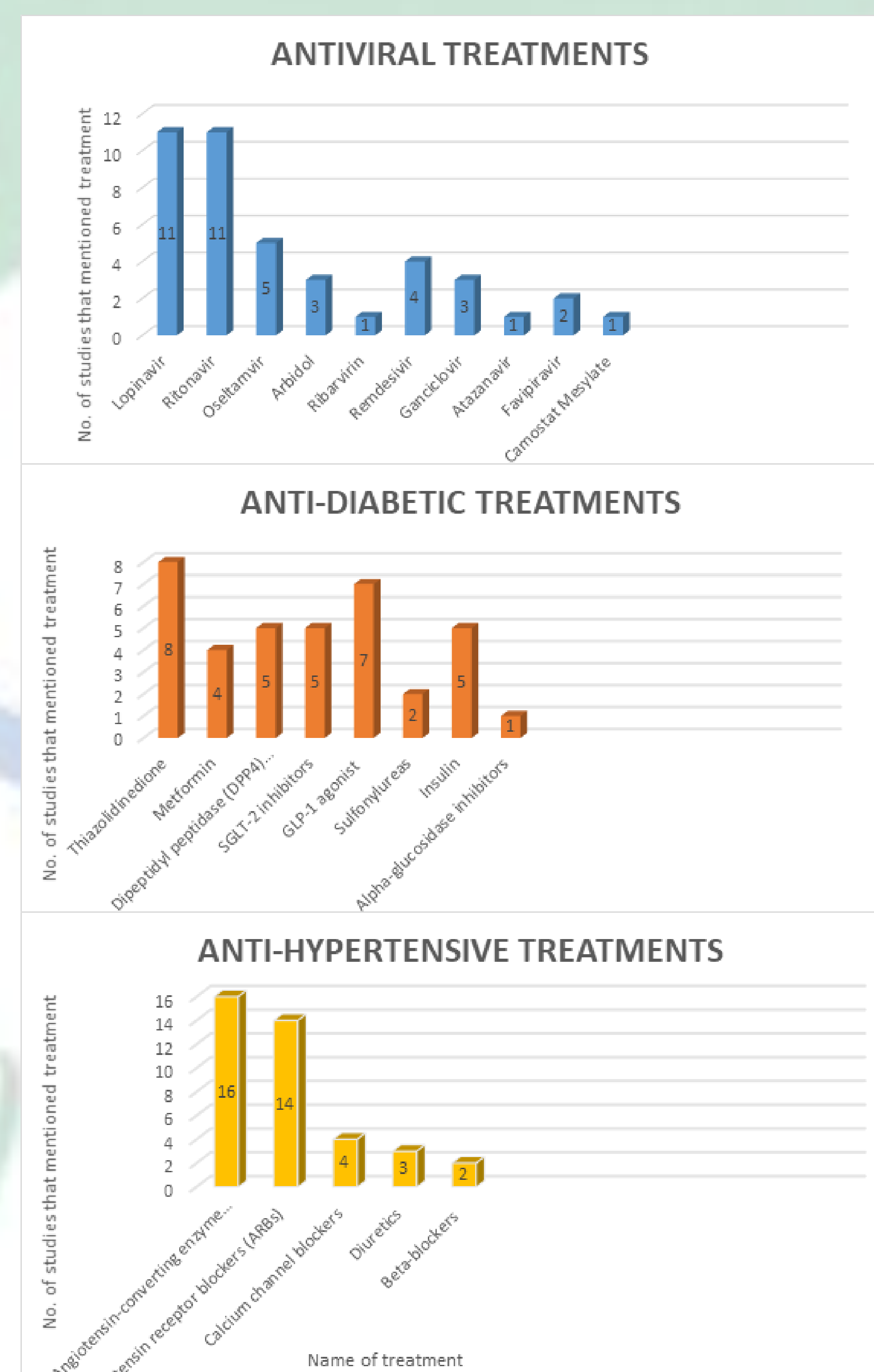
To examine the specific drug treatment administered to COVID-19 patients with comorbidities, and the factors affecting reinfection among these patients

Methodology



Results

- Antivirals were the most common COVID-19 treatments, especially lopinavir & ritonavir.
- Common anti-diabetics used: thiazolidinedione, GLP-1 agonist, DPP4 inhibitors & insulin
- Common antihypertensives used: ACE-inhibitors & ARBs
- Three studies in this project included reinfected patients.
- 1st Study - Initial treatment: Arbidol, Ribavirin, IV antibiotic therapy, symptomatic treatment, antimicrobial therapy, inhaled interferon- α & traditional Chinese medicine. Treatment upon reinfection: Arbidol, Chloroquine phosphate & inhaled interferon- α .
- 2nd Study - 12 out of 117 recovered COVID-19 patients, retested positive. The infected group received antibiotic treatment.
- 3rd Study - 61 out of 1368 patients were reinfected with COVID-19. Glucocorticoid/ anticoagulant prescriptions upon discharge, showed no association to reduced admissions.



Discussion

- Antiviral and antiretroviral drugs prescribed to patients whom were at increased of COVID 19 infection
- First class treatment-RAAS Inhibitors, insulin and DPP4i together with lopinavir/ ritonavir, oseltamivir and remdesivir
- Most effective treatment- Arbidol, Ribavirin and lopinavir/ritonavir
- Corticosteroids,glucocorticosteroids,cortisone,antibiotics,oxygen therapy and interferon were also effective
- Hydroxychloroquine, chloroquine and traditional Chinese medicine showed no protection against reinfection
- Diabetic patients suffered more severe symptoms when infected with COVID 19 compared to non- diabetics due to a compromised innate immune system

Conclusion

Increased hospital stays together with remdesivir/lopinavir and corticosteroid treatment in diabetic COVID-19 patients accounts for the suppressed immune response and increase hyperglycemic events, compared to non-diabetics, thus higher chance of reinfection with the virus or its mutants. Alternatively insulin therapy is recommended as a substitute to oral treatment. A comprehensive guide to the treatment of COVID-19 in patients with other chronic ailments is recommended

References

Chengyun Dou, Xia Xie, Zhongtian Peng, Haibo Tang, Zheng Jiang, Zhefeng Zhong, Jian Tang. A case presentation for positive SARS-CoV-2 RNA recurrence in a patient with a history of type 2 diabetes that had recovered from severe COVID-19 [Internet]. NCBI. 2020 [Cited 21st June 2021] Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7354258/>

Acknowledgments

We would like to give our uttermost gratitude towards Dr. Arlene Williams for her encouragement, support and guidance throughout this project.