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Dear Editor
Journal of Biomedicine and Translational Research (JBTR)

We wish to submit article entitled “Melatonin, a promising therapeutic for diabetic and complications: a narrative review” for publication in Journal of Biomedicine and Translational Research.

Diabetes mellitus (DM) is one of the non-communicable diseases which is still a health problem and becomes a priority for controlling non-communicable diseases both in the world and in Indonesia because it can cause further complications. Patients with type 2 DM (T2DM) experience abnormalities in the hormones that plays a role in carbohydrate metabolism and regulates blood sugar levels. One of hormone which is responsible in carbohydrate metabolism and regulates blood sugar levels in Diabetes mellitus is melatonin hormone. Several studies proved that administration of melatonin is useful in the diabetes therapy and its complication by performing antioxidant activity through many kind of signalling pathway in addition to other effects in influencing the immune system. Therefore this review aims to discuss the role of melatonin administration in the incidence of diabetes mellitus and complications. The process of preparing this systematic review is by searching articles using electronic databases with the inclusion criteria were quantitative research, original articles with observational research designs in both animals and humans from 2009-2019, and can be accessed by full text. Melatonin plays a role in preventing various diabetes complications, for example in the eyes, cardiac, male reproductive organs through antioxidant effects and inhibited proinflammatory that involved several signaling pathway. Signaling pathway involved included PI3K)/Akt-Nrf2, PERK/eIF2a/ATF4,cGMP-PKG signaling, Nrf-2-HO-1 and MAPK signaling, Syk, Mst1/Sirt3 signaling, p38MAPK pathway. In the conclusion, this review provides various roles of melatonin in diabetes and complications so that it can present a promising new breakthrough in the treatment of DM. It is necessary to explore the role of melatonin in other DM complications.

The manuscript content is original and has not been submitted or published elsewhere.

Author YT developed the analytical techniques of study, performed data analysis, interpretation, drafting of the article and prepared the final version for publication; AK performed data analysis and interpretation of data; AY and RS helped review the data analysis and reviewed the article.

We do not have any conflicts of interest to declare.
We are looking forward to hearing from you.

Yours sincerely,

Authors,

Name YANUARITA TURSINAWATI Sig.

Name ARUM KARTIKADEW Sig.

Name ARI YUNIASTUTI Sig.

Name R. SUSANTI Sig.

