

17/02/2023

Dear Dr. Miftahul Ilmi,

I am pleased to submit our manuscript entitled **“The application of amino acid racemization geochronology of *Tubipora* sp. in marine terraces of Manokwari region, West Papua, Indonesia”** by **Rahmadi Hidayat, Sukahar Eka Adi Saputra, Salahuddin Husein** for consideration as a *Journal of Tropical Biodiversity and Biotechnology* research article.

In this manuscript, we show that the fossil coral *Tubipora* sp. deposited within marine terraces of the Manokwari region is considered a suitable specimen to establish amino acid racemization geochronology. Two distinct clusters of age associated with Marine Isotope Stage-1 and 5 from previous uranium-thorium dating can be confidently discriminated based on the extent of amino acid racemization as well as amino acid concentrations. Despite the low resolution of this dating method and relatively low age range (up to late Pleistocene) as a result of the warm and tropical climate in the Manokwari region, the cost-effective and rapid amino acid geochronology may be valuable as a complementary dating tool to provide information about mixed-age fossil assemblages, particularly in identifying reworked fossils.

We believe our paper is appropriate for publication in the *Journal of Tropical Biodiversity and Biotechnology* because the results of this manuscript open the research opportunity for advanced biotechnology associated with an instrument to infer the timing since the death of marine organisms determined by amino acid racemization. The evaluation of this geochronological method has not been applied widely in tropical regions such as Indonesia, particularly in terms of its warmer temperature affecting the racemization rate.

This manuscript has not been published before and is not being considered for publication elsewhere. We have no conflicts of interest to disclose. If you feel that the manuscript is appropriate for your journal, we suggest the following reviewers:

- Muhammad Ridha Adhari (Lecturer of Geological Department, Universitas Syiah Kuala Aceh). E-mail: mr.adhari@usk.ac.id
- Siti Umiyatun Choiriah (Lecturer of Geological Department, Universitas Pembangunan Nasional Veteran Yogyakarta). E-mail: sumiyatunch@upnyk.ac.id

Thank you for your consideration.

Sincerely,



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