AQUEOUS EXTRACT EMULSIFYING OINTMENT OF

*Marphysa moribidii* (ANNELIDA: POLYCHAETA) INCREASES

COLLAGEN DEPOSITION IN WOUND HEALING MODEL

AT LOW CONCENTRATION

LOGEISWARIY PERUMAL¹, NOR ‘AWATIF CHE SOH¹, HANNAH SYAHIRAH RAP|¹,

SUVIK ASSAW¹, MOHAMMAD AMEERUL AMIN BAKAR @ OMAR¹,

IZWANDY IDRIS² and WAN IRYANI WAN ISMAIL¹,³*

¹Cell Signaling and Biotechnology (CeSBTech), Universiti Malaysia Terengganu,

21030 Kuala Nerus, Terengganu

²South China Sea Repository and Reference Centre, Institute of Oceanography and Environment (INOS),

Universiti Malaysia Terengganu, Terengganu, Malaysia

³Biological Security and Sustainability (BioSeS) Research Group,

Faculty of Science and Marine Environment, Universiti Malaysia Terengganu,

21030 Kuala Nerus, Terengganu, Malaysia

*E-mail: waniryani@umt.edu.my
Acute wound cases are increasing every year. Meanwhile, current treatments have many adverse impacts; thus, alternative treatment is required. *Marphysa moribidii*; a local polychaete is found to have a promising potential as a wound-healing agent due to its regenerative capability. However, no prior study has been conducted to prove this notion. Hence, this study is aimed to determine the effectiveness of aqueous extract of *M. moribidii* in wound healing treatment. The polychaete was finely pulverized and lyophilized by freeze-dryer to form a powdery-form extract before preparing in three different concentrations: 0.3% (w/w), 1.0% (w/w), and 2.0% (w/w) in ointment form. The treatments including Gamat oil 0.4% (w/w) as control were applied to the rat model once daily for 14 days. Gamat oil (0.4%) demonstrated the most rapid wound healing, followed by polychaete ointment (0.3%). However, based on Masson’s trichrome staining, the polychaete ointment exhibited the most collagen deposition compared to other treatments. The staining indicates a more effective healing process of the wound after treated with the polychaete ointment. Based on the findings, polychaete extract has great potential in wound healing; more detailed studies are needed to gain more evidences.
Key words: Acute wound, collagen formation, *Marphysa moribidii*, polychaete, wound healing