

February 10, 2024

Neal Larson Scholarship and Grant Chairperson Association of Applied Paleontological Sciences

To the members of the Association of Applied Paleontological Sciences (AAPS),

I am writing to express my most sincere gratitude for awarding me with the A. Allen Graffham Paleontology Research Grant.

I plan to study gross dental pathology in mosasaurid marine reptile teeth. Tooth pathologies occur as a result of trauma, disease, diet, and feeding biomechanics. While tooth abnormalities are well-documented in mammalians and some selachians, reports in extinct non-mammalian vertebrates are scarce. In coordination with the AAPS fossil dealers, I will build a sample size of both pathologic and physiologic mosasaur tooth fossils for comparative study. I plan to study and document the various types of mosasaur dental pathology. Further, I hope to determine if these examples of pathology have any implications on mosasaur behavior and diet.

I am truly honored to be recognized for the A. Allen Graffham Grant. Your generous support will allow for the collection, preparation, and research of a plentitude of rare pathological vertebrate fossils. I look forward to providing updates to the members of the AAPS as the project progresses.

Sincerely,

Trevor H. Rempert Department of Physiology and Biophysics Case Western Reserve University, School of Medicine Trevor H. Rempert Principal Investigator

Alexander P. M. Vinkeles-Melchers Associate Researcher

Serge Xerri Researcher, Paleolab Rabat

Boubker Chaibi Owner, Fossils Oued Zem

Brennan Martens Undergraduate Student

Kaleb Thomas Undergraduate Student

Rempert Paleontology Research Group is an independent paleontological research outfit