Sungyoon Hong

Grant Proposal: Finalized topic and hypothesis

Topic:

Mechanism of survivor taxon from the mass extinction: case study from Dinosauria during Triassic-Jurassic extinction in South Africa

Hypothesis and Objectives:

Triassic-Jurassic extinction is thought to be triggered by volcanic gas emission from the Central Atlantic Magmatic Province, which shows similar global warming trend with modern sixth extinction. One of the survivors of this extinction is Dinosaurs. By studying Dinosaurs, the mechanism of terrestrial survival during mass extinction would be well-understood. To identify this mechanism, firstly, I will compare the morphological difference between Late Triassic and Early Jurassic dinosaur faunas in South Africa, which has successive bed sequence from these time periods, by using morphometric analysis. Second, environmental analysis of these beds will be performed to identify the change of environments between two time periods. Third, morphological and environmental datas will be compared to find the pattern and mechanism of the survival of Dinosaur during Triassic-Jurassic mass extinction.