

SMALL GRANT IN AID OF RESEARCH – 2020

**Paleodiversity and paleobiology of Pan-Physeteroidea from Miocene of Patagonia (Rio Negro and Chubut provinces, Argentina)**

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*ANNUAL SUMMARY REPORT*

The aims of this project were to re-evaluate the taxonomic status of the specimens from Rio Negro province ("*Aulophyseter*" *rionegrensis* and *Preaulophyseter gualichensis*) and reinforce the prospection and exploration in this area, specially at the northeast of Rio Negro richest Formation: Gran Bajo del Gualicho. As a part of PhD project of the applicant, several anatomic and phylogenetic studies were carried out to evaluate the taxonomic validity of these Patagonian species. As a result, it was obtained that "*A.*" *rionegrensis* is a valid taxon related to another Patagonian taxon (*Idiorophus patagonicus*) within Physeteridae, but it belongs to a new genus other than *Aulophyseter* (Paolucci et al. 2020). On the other hand, *P. gualichensis* resulted in not valid taxon due to its type and reference materials (isolated otic bones and teeth) are not diagnostic at specific level (having low phylogenetic signal) because intraspecific variations and interspecific similarities (Paolucci et al. in Press). The fieldwork proposed in the grant was to perform geopaleontological research in San Antonio Oeste locality (40°43'00"S 64°55'00"O, Rio Negro) in March 2020. Unfortunately, this had to be postponed due to the restrictions imposed because of the COVID-19 pandemic. For this reason no new information or new material has yet been obtained from the underexplored lands of northern Patagonia.