

### **Palynomorphs from Upper Cretaceous Sequences in Central Colombia: Using Paleopalynology as a Correlation Tool for Oil Exploration**

Garzon, Sandra <sup>1</sup>; Warny, Sophie <sup>1</sup>; Jaramillo, Carlos <sup>2</sup>; De La Parra, Felipe <sup>3</sup> (1) Geology and Geophysics, Louisiana State University, Baton Rouge, LA. (2) Smithsonian Tropical Research Institute, Panama City, Panama. (3) Instituto Colombiano del Petroleo ECOPETROL ICP, Bucaramanga, Colombia.

The Cretaceous marine siliciclastic and carbonate sequences from the Upper Magdalena Valley Basin (UMVB), located in the central part of the Colombian Andes, constitute one of the main targets for hydrocarbon exploration in northern South America. Due to the structural complexity of the area, it is fundamental to refine the biostratigraphy of these sequences, in order to improve correlation and reduce exploratory risks. To do so, 60 samples were collected from La Buitrera Creek and Aico Creek stratigraphic sections. These sections range from Santonian to Lower Maastrichtian and they are currently being analyzed for palynological content. In samples analyzed thus far, organic-walled dinoflagellate cysts such as *Alisogymnium euclaense*, *Andalusiella* spp, *Dinogymnium* spp., *Cerodinium* spp., *Exochosphaeridium* spp., *Odontochitina costata*, *Odontochitina operculata* and *Xenascus ceratioides* were recovered. Acritarchs such as *Leiosphaeridia* sp., *Pterospermopsis* sp., *Polykrikos?* sp., and sporomorphs such as *Araucariacites* sp., *Ephedripites* sp., *Retipollenites* sp., have also been documented. The new data will help refine the palynological zonation in these two Colombian sections. A comparison of the results with worldwide documented occurrences of these events will be presented. The refined biostratigraphic zonation for Cretaceous sequences of central Colombia should contribute to improve our current knowledge on late Cretaceous stratigraphy.