BINAEEM 2017

October 5-6, 2017, San Juan, Puerto Rico

INSTRUCTIONS FOR ABSTRACTS

Graduate and undergraduate students, researchers and professionals are invited to submit their abstracts for oral or poster presentations. The deadline for submitting abstracts is on **Friday, September 1st, 2017.** The abstracts should be submitted in the appropriated format (using the template below) to the following e-mail address: binaeem2017@cafec.org.pr

1. **Abstracts** must be in English with a maximum extension of 250 words. Chemical structures, schemes or mathematical equations are permitted.
2. **Font sizes**: Follow the template sizes below. Title: Arial 12 (centered with first word capitalized).
3. Authors: Underline presenter. Affiliation and e-mail address should be included.
4. Timely registration and payment for the meeting are pre-requisite for presenters.
5. Notification of Programming – if the abstract is accepted for presentation, the first author will be notified by September 15, 2017.
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Preferred format

Oral: ☒ **Poster:** ☐

Enantioselective non-aldol approach for polypropionate construction: Epoxide-Based methodology for the synthesis of ansamycins

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The polypropionate moiety consists of an aliphatic carbon chain with alternating methyl and hydroxy groups with a specific absolute configuration. This substructure is found in many polyketide natural products that exhibit a broad range of biological activities. Our contribution to this area has been the development of a non-aldol epoxide-based methodology for the stereoselective construction of polypropionate stereo-*n*-ads.[1] This approach combines the diastereoselective epoxidation of alkenols and the regioselective cleavage of the resulting epoxy alcohol as main steps in a reiterative fashion. This approach has been applied to the synthesis of a number of polypropionate moieties. To further advance the synthetic utility of our methodology and implement a second-generation extension, we engaged on the synthesis of the C5-C15 polypropionate chain of streptovaricin D (**1**), including the incorporation of the C10 hydroxymethyl group (a precursor the C10 carbomethoxy substructure). Correspondingly, our methodology was also applied to the construction of the C28-C20 fragment of the rifamycin S (**2**) polypropionate chain. The details of this study will be presented. Work supported by the NIH SCORE (2S06GM-08102-29) and NIH RISE (5R25GM061151-15) programs.