

INTRODUCTION

Zoantharians are marine invertebrates (Cnidaria, Anthozoa) that are widely spread throughout the Indo-Pacific Oceans. While several studies have been performed to describe their diversity around the Western part of the Pacific, the Eastern part of this Ocean has been less investigated. According to literature, it has been shown that zoantharian and specially the genus *Parazoanthus* has led to three main families of natural products: ecdysteroids, zoanthoxanthin analogues and parazoanthines. However, no chemical studies of the genus *Terrazoanthus* has been described. We report herein the isolation and structure elucidation of a new family of 2-aminoimidazole from the zoantharian *Terrazoanthus onoi*. Reimer and Fujii 2010 collected at the Coast of Ecuador.



OBJECTIVES

- To investigate the chemical diversity of one of the most common zoantharian *Terrazoanthus onoi* collected at the Islet "El Pelado" off the coast of Ecuador.
- To Identify novel chemical entities with potential bioactivity
- Present the first chemical study of Zoantharians inhabiting the Ecuadorian Pacific Coast.

METHODOLOGY

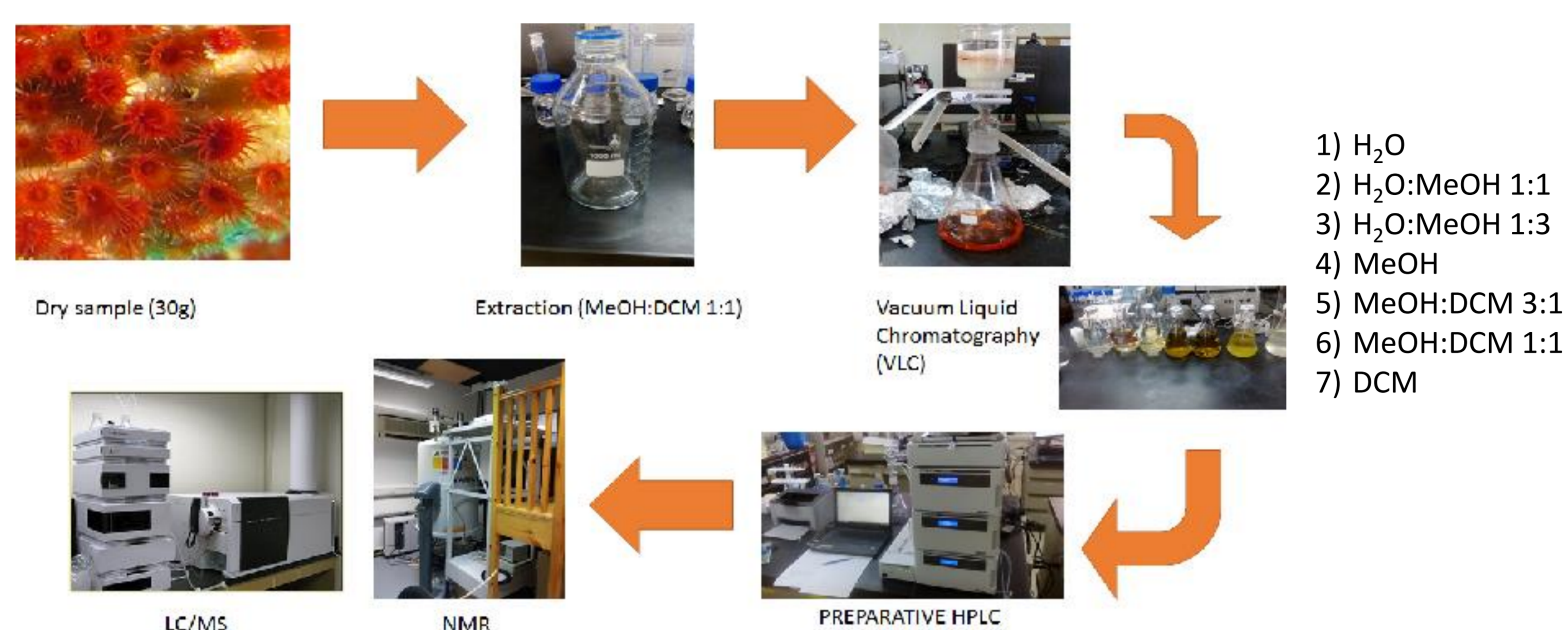


Figure 1. Workflow of extraction, fractionation, purification and structure elucidation of the purified compounds of *T. onoi*.

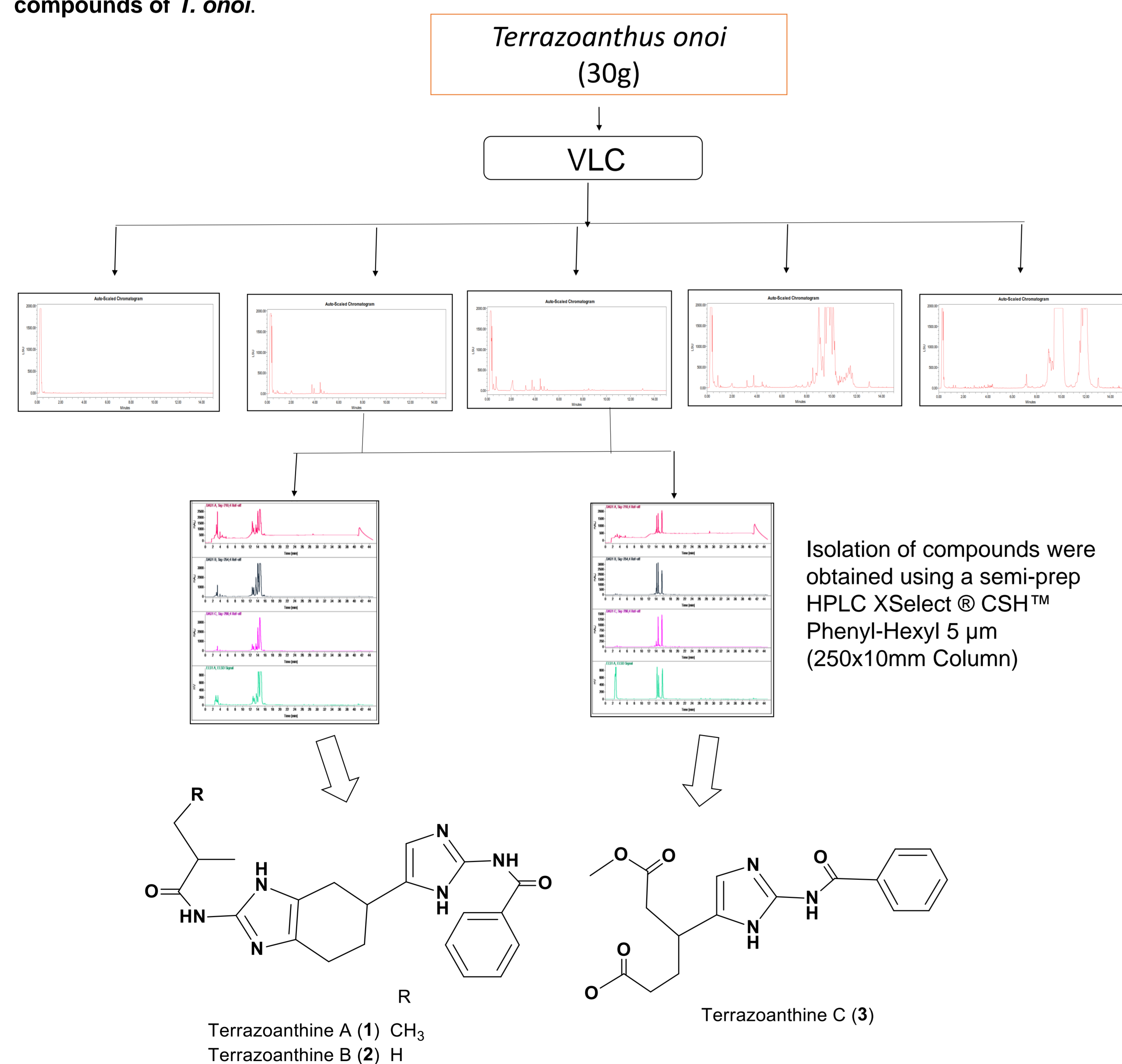
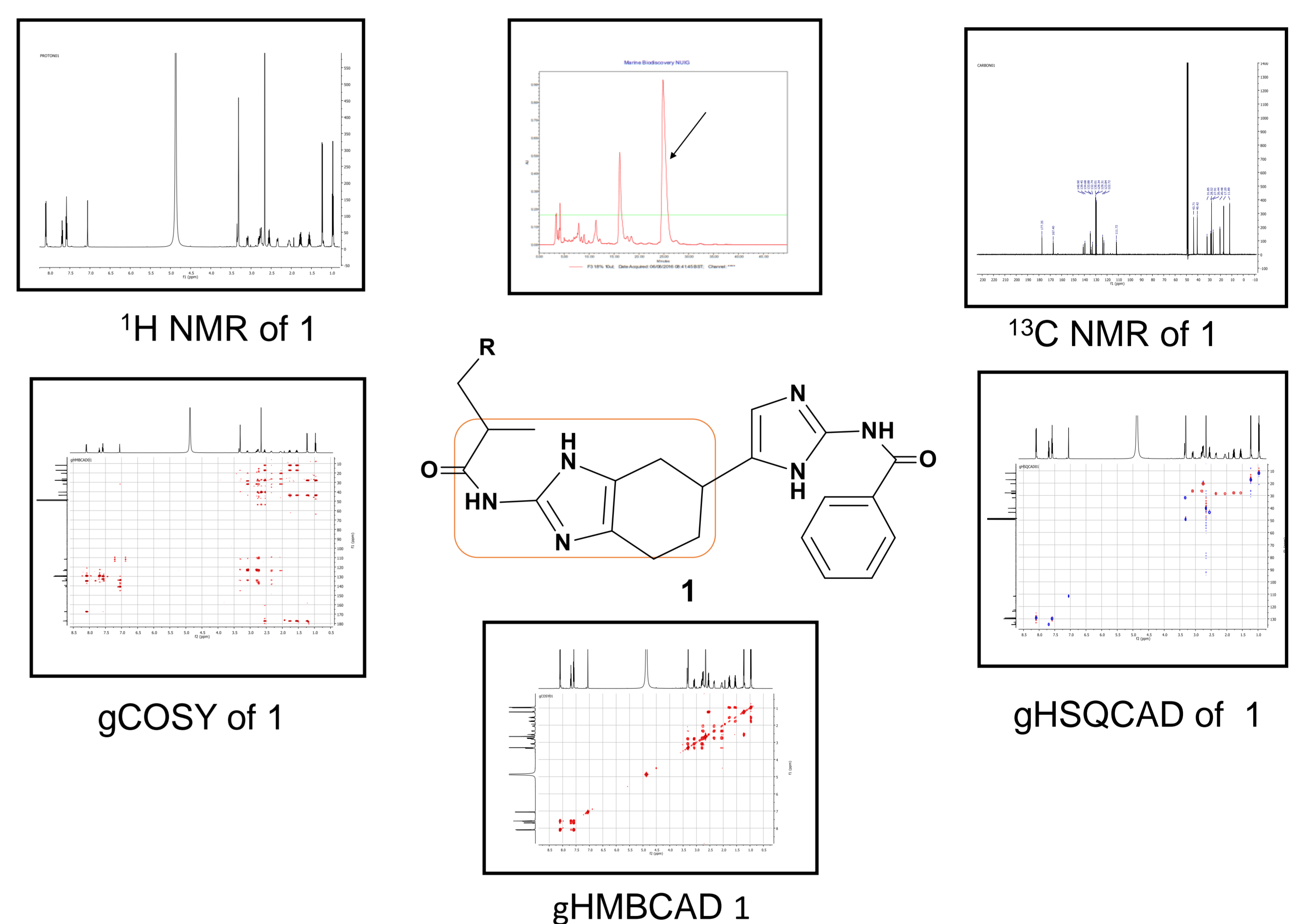


Figure 2 Flowchart of the isolation of 3 novel compounds from *T. onoi*

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RESULTS

- A new family of guanidine alkaloids featuring a 2-aminoimidazole ring fused to a cyclohexene has been isolated.
- Three novel compounds named Terrazoanthines A-C were identified from *T. onoi*.



CONCLUSION

- This is the first chemical study of the Zoantharian *Terrazoanthus onoi*,
- A new family of 2-aminoimidazoles has been isolated from *T. onoi*.
- These compounds could be used as chemotaxonomic marker of the genus *Terrazoanthus*.
- Zoantharians are very promising sources of a great chemical diversity
- Source of potential pharmaceutical agents as guanidine alkaloids have proven to be bioactive natural products

FUTURE WORK?

- Further isolation of polar and non-polar compounds from *T. onoi* will be carried out in the future due to the interesting results obtained in this study from the Methanolic fractions.
- Testing the compounds against different cancer cell lines and other human and animal diseases.
- Chemical study on other Ecuadorian Zoantharians