

PHYTOCHEMICAL AND ANTITUMORAL BIOACTIVITY STUDIES OF *PLECTRANTHUS HADIENSIS* (FORSSK.) SCHWEINF. EX SPRENGER AERIAL PARTS

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1. INTRODUCTION

- ❖ Plectranthus genus belongs to Lamiaceae family.
- ❖ 300 species distributed from Africa to Asia, and Australia.
- ❖ These species are rich in abietane-type diterpenes, such as royleanones^[1].
- ❖ *Plectranthus hadiensis* (Forssk.) Schweinf. ex Sprenger, used in traditional medicines could be a drug source for cancer treatment^[2-4].



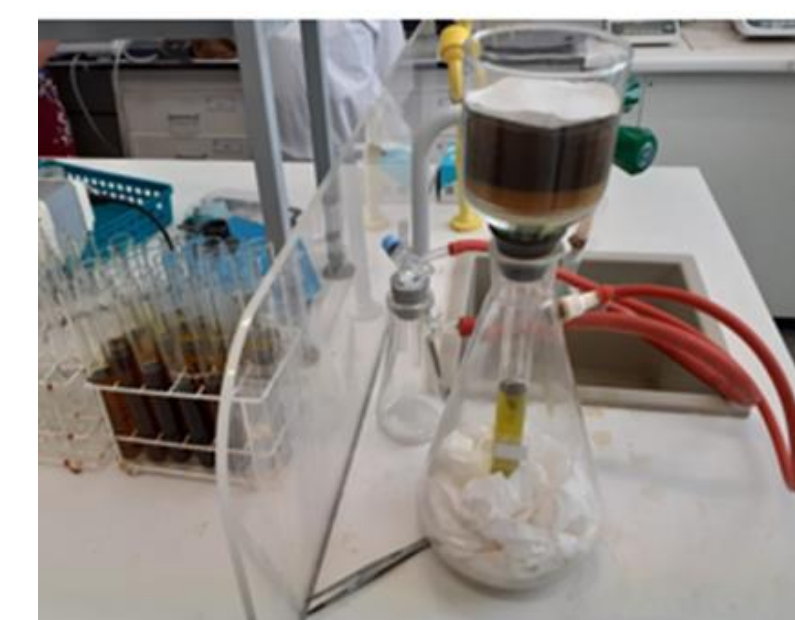
Aerial parts of *P. hadiensis*

2. OBJECTIVE

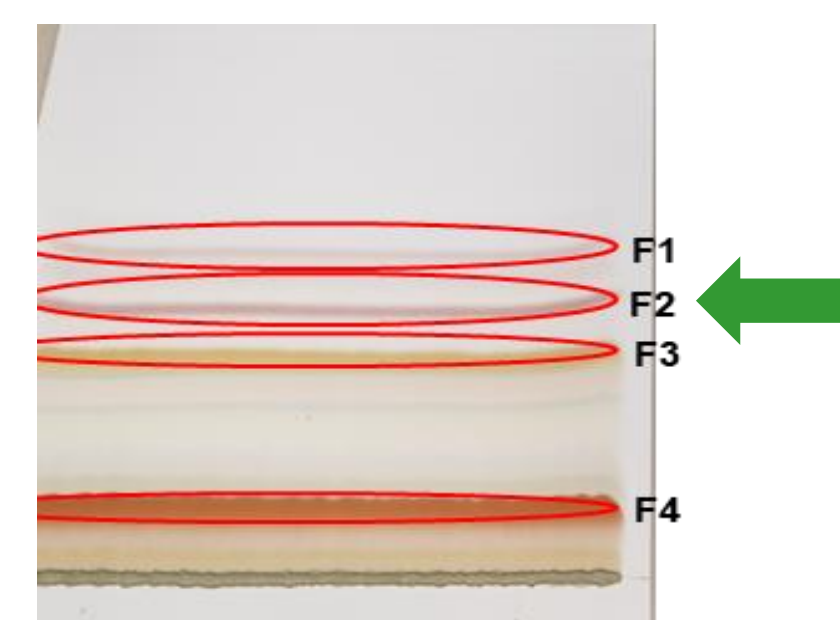
The aim of this work is to present the preliminary results of extraction, fractionation, isolation and bioactivity of stems and leaves of *P. hadiensis*.

3. METHODS AND MATERIALS

1. Extraction & Fractionation



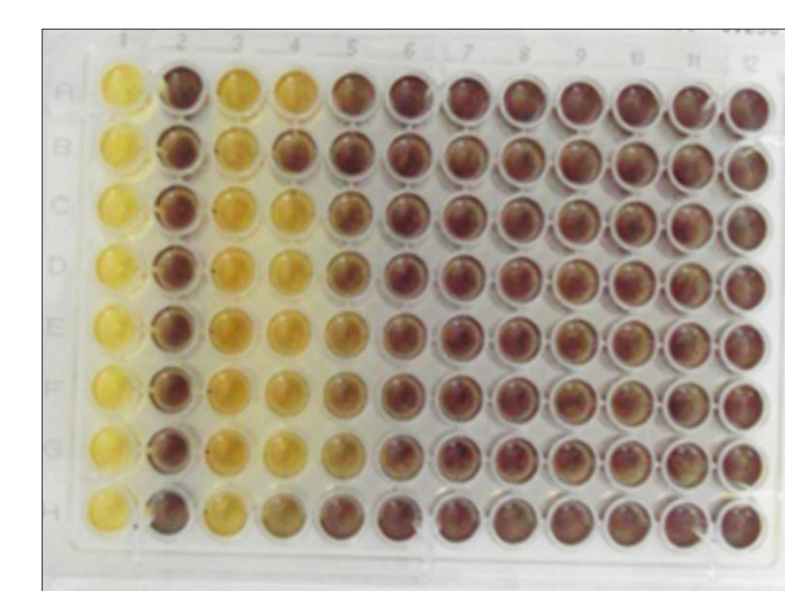
2. Isolation & Structure Elucidation



3. Analysis & Quantification



4. Antitumoral Activity Studies



5. CONCLUSION

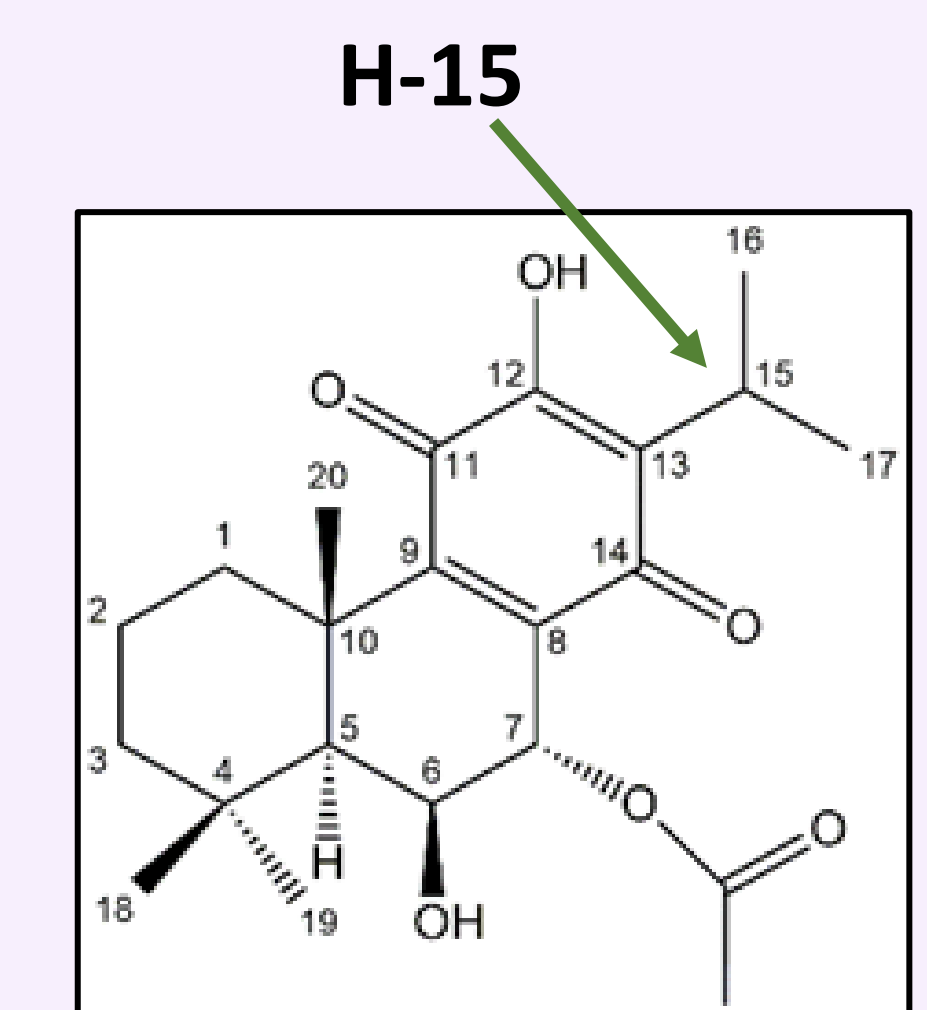
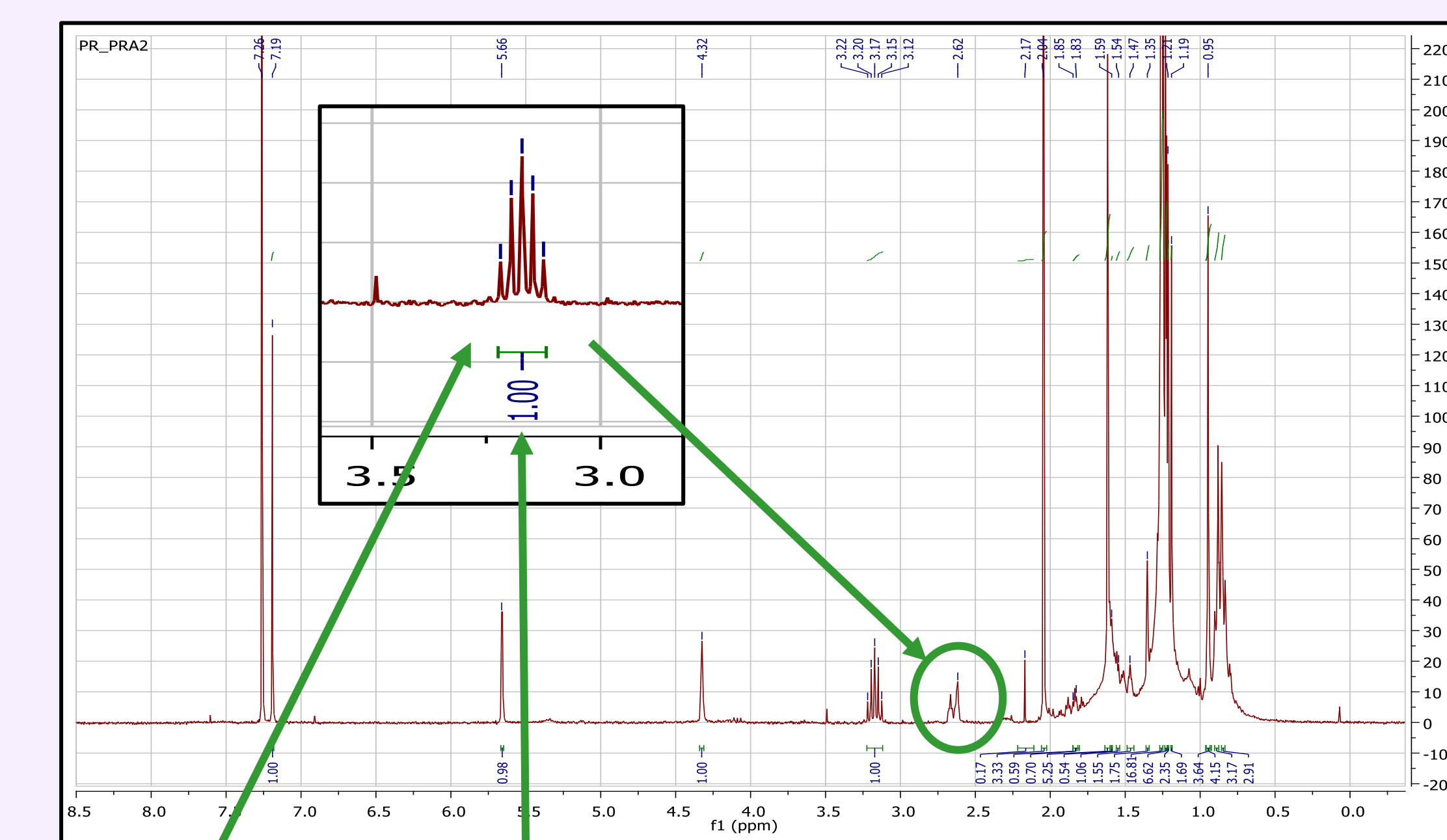
Currently, studies are ongoing to purify, quantify and elucidate the main abietanes responsible for the biological activity.

6. ACKNOWLEDGMENTS

This work was supported in part by FCT – Fundação para a Ciência e Tecnologia grants PEst-OE/SAU/UI4013/2014, UID/DTP/04567/2016, UIDB/04567/2020 and UIDP/04567/2020. E.M.D-M gratefully acknowledges being the recipient of a predoctoral FPU 2019 fellowship from University of Alcalá.

4. RESULTS

- Leaves and stems samples were extracted five times.
- Great difference between extracts from leaves, with those from stems, mainly in their content of 7 α -acetoxy-6 β -hydroxyroyleanone (Roy). This has been verified by Thin Layer Chromatography (TLC) (authentic sample) and HPLC profile.
- A pure Roy fraction (F2) was obtained from the leaves, characterized by ¹H-NMR, which is almost non-existent in the stems.



¹H-RMN Spectra and chemical structure of 7 α -acetoxy-6 β -hydroxyroyleanone (Roy)

- *P. hadiensis* leaves extract showed cytotoxicity in Artemia salina assay and in colorectal, breast and lung cancer cell lines under Sulforhodamine B test.
- The stems present a wide variety of other compounds, including three other diterpenes whose chemical and biological activities are under study.

7. BIBLIOGRAPHY

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