Studies towards the synthesis of dictyolomides A and B, and 6-methoxydictyolomide

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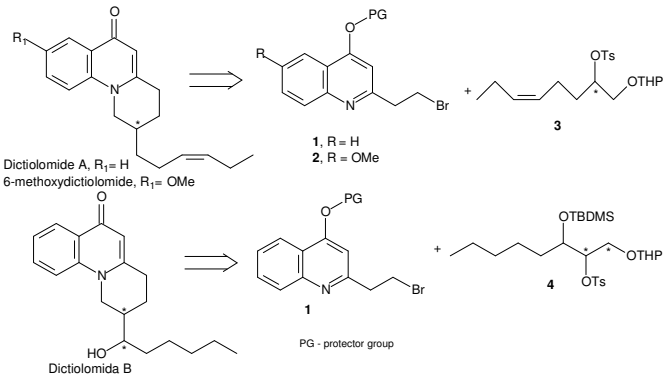
INTRODUCTION

Leishmaniasis is a tropical disease caused by protozoa parasites of the genus *Leishmania* and remains a significant health issue in large part due to the lack of effective and affordable drugs and increasing resistance against existing drugs.[1]
4-Quinolones, for example dictyolomides, have been reported as potential antileishmanial agents.[2] In this work we describe the studies towards the synthesis of dictyolomides A and B, and 6-methoxydictyolomide which will be evaluated against *Leishmania* sp and determine the stereochemistry of the center 3'.

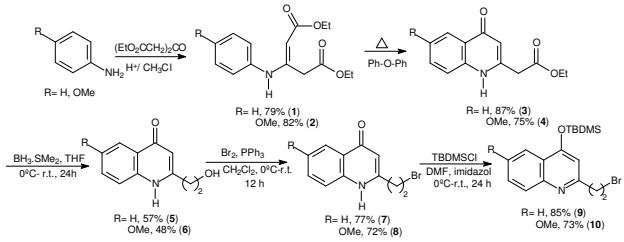
RESULTS AND DISCUSSION

We proposed a convergent synthesis for dictiolomides as described in Scheme 1.[3]



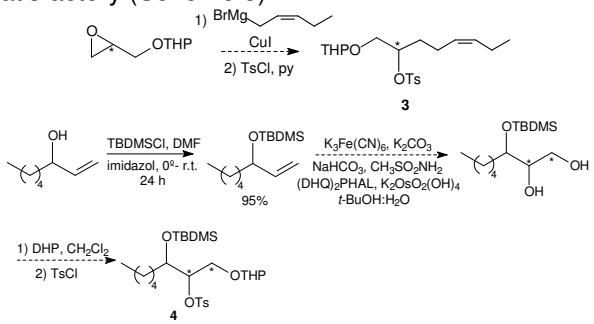
Scheme 1

The synthesis of bromides **1** and **2** began with the methodology reported by Kaslow et al.[4], where 4-quinolinone derivatives were prepared employing the condensation of aryl amines with ethyl acetonedicarboxylate, in refluxing, under acid catalyzes, following by cyclization at 250°C using phenyl ether as solvent. After, the reduction of the ester group was performed using borane, followed by bromination, and protection of the quinolinone ring with TBDMSCl (Scheme 2).



Scheme 2. Preparation of bromides 1 and 2

The synthesis of tosylates **3** and **4** are being studied, some tests were performed, but the coupling, via Grignard reaction[5] has not yet provided tosylate **3** satisfactory (Scheme 3).



Scheme 3

CONCLUSION

In conclusion, bromides **1** and **2** were successfully synthesized. The studies for the synthesis of **3** will continue, and the synthesis of tosylate **4** will be completed, for subsequent coupling reaction and obtaining Dictiolomides.

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