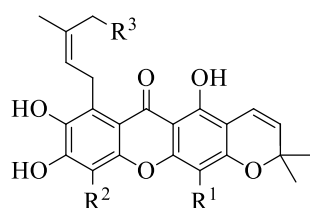


CHAPTER 4

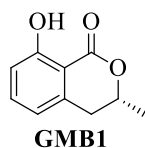
Conclusion

Phytochemical investigation from the acetone extracts of the stem bark and leaves of *G. mckeaniana* led to the isolation and identification of three new xanthenes, mckeanianones A-C (**GML1**, **GML4** and **GML5**) and one new biflavone, mckeaniabiflavone (**GML6**) together with 15 known compounds (**GMB1-GMB11**, **GML2**, **GML3**, **GML7** and **GML8**). All isolated compounds were evaluated for antimalarial and cytotoxic activities. Tetracyclic xanthenes (**GML1-GML5**) exhibited good activity against *P. falciparum* with the IC_{50} values ranging 6.0 ± 1.1 - 8.5 ± 1.2 and 3.6 ± 1.7 - 7.3 ± 1.2 μM while compounds **GMB4**, **GMB6** and **GMB7** showed moderate activity with the IC_{50} values in the range of 10.4 ± 1.9 - 56.0 and 11.5 ± 2.0 - 38.4 ± 5.2 μM for TM4 and K1 multidrug drug resistant strains, respectively. In addition, compounds **GML1-GML4** showed cytotoxicity against KB and Vero cells with the IC_{50} values in the range of 2.3 - 26.9 ± 3.6 and 5.1 - 13.2 ± 4.6 μM and compound **GMB4** exhibited weak activity with the IC_{50} values of 53.8 and 44.8 ± 10.6 μM , respectively. Unfortunately, all compounds were inactive for antibacterial testing.

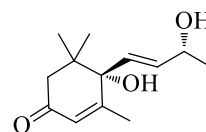
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GML1: $R^1 = \text{prenyl}$, $R^2 = \text{OH}$, $R^3 = \text{H}$



GMB1



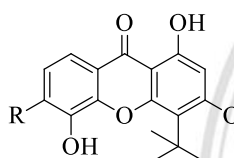
GML8

GML2: $R^1 = \text{prenyl}$, $R^2 = \text{H}$, $R^3 = \text{OH}$

GML3: $R^1 = \text{prenyl}$, $R^2 = \text{H}$, $R^3 = \text{OH}$

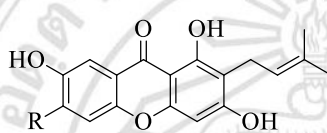
GML4: $R^1 = \text{H}$, $R^2 = \text{prenyl-OH}$, $R^3 = \text{OH}$

GML5: $R^1 = \text{H}$, $R^2 = \text{prenyl-OAc}$, $R^3 = \text{OH}$



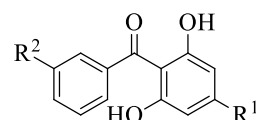
GMB4: $R = \text{H}$

GMB5: $R = \text{OH}$



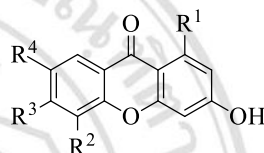
GMB6: $R = \text{H}$

GMB7: $R = \text{OH}$



GMB2: $R^1 = \text{H}$, $R^2 = \text{OCH}_3$

GMB3: $R^1 = R^2 = \text{OH}$

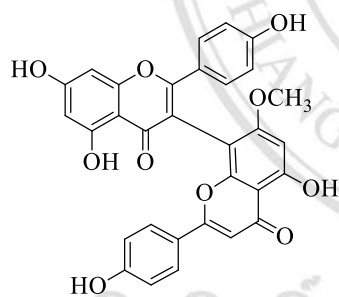


GMB8: $R^1 = R^2 = \text{OH}$, $R^3 = R^4 = \text{H}$

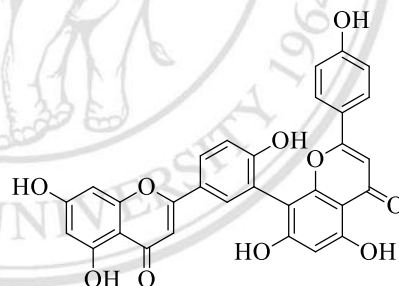
GMB9: $R^1 = R^4 = \text{OH}$, $R^2 = R^3 = \text{H}$

GMB10: $R^1 = R^3 = R^4 = \text{OH}$, $R^2 = \text{H}$

GMB11: $R^1 = \text{OCH}_3$, $R^2 = \text{H}$, $R^3 = R^4 = \text{OH}$



GML6



GML7

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