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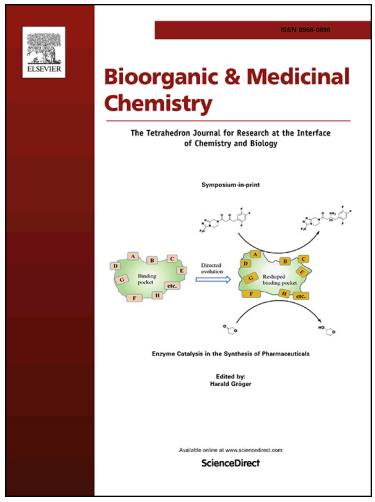

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Chemical Synthesis of Febrifugine and Analogues

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Abstract-The quinazolinone-containing 2,3-disubstituted piperidines febrifugine and isofebrifugine have been the subject of significant research efforts since their occurrence in *Dichroa febrifuga* and their anti-malarial actions were first described in the late 1940s. Subsequently they have also been shown to be present in other plants belonging to the hydrangea family and various analogues of febrifugine have been prepared in attempts to tune biological properties. The most notable analogue is termed halofuginone and a substantial body of work now demonstrates that this compound possesses potent human disease relevant activities. This review focuses on the literature associated with efforts dedicated towards uncovering the structures of febrifugine and isofebrifugine, the development of practical methods for their synthesis and the syntheses of structural analogues.

Keywords: Febrifugine; isofebrifugine; dichroine A and B; quinazolinone; 3-hydroxypiperidine; isomerization; halofuginone; anti-protozoal; anti-angiogenic; anti-fibrotic

Contents