



[View at publisher](#) |

[Download](#)

[Export](#)

[Print](#)

[E-mail](#)

[Create bibliography](#)

[Add to My List](#)

Journal of Heterocyclic Chemistry

Volume 43, Issue 1, January 2006, Pages 213-215

## Synthesis of 9-[1-benzyl-5-(alkylsulfonyl)-1H-2-imidazolyl]perhydro-1,8-acridinediones

Hadizadeh, F.<sup>ab</sup>, Mehri, N.<sup>b</sup>

<sup>a</sup> Biotechnology and Pharmaceutical Sciences Research Center, Mashhad University of Medical Sciences, Mashhad, Iran

<sup>b</sup> Pharmacy Faculty, Mashhad University of Medical Sciences, Mashhad, Iran

### Abstract

[View references \(11\)](#)

Tricyclic dihydropyridines like ZM244085 are potential K<sub>ATP</sub> channel openers. In this study 3-cyanophenyl ring of ZM244085 was replaced with imidazolyl ring. So, 9-[1-benzyl-5-(alkylsulfonyl)-1H-2-imidazolyl]perhydro-1,8-acridinediones (5d-f) were synthesized from 2-alkylsulfonyl-1-benzyl-5-formylimidazole (4d-f) and cyclohexane-1,3-dione according to classical Hantzsch synthesis as potential potassium channel modulators.

### Reaxys Database Information

[View Compounds](#) | [View Reactions](#)

### Indexed Keywords

EMTREE drug terms: 9 (3 cyanophenyl) 3,4,6,7,9,10 hexahydro 1,8(2h,5h) acridinedione; 9 [1 benzyl 5 (benzylsulfonyl) 1h 2 imidazolyl]perhydro 1,8 acridinedione; 9 [1 benzyl 5 (benzylsulfonyl) 1h 2 imidazolyl]perhydro 1,8 acridinedione; 9 [1 benzyl 5 (ethylsulfonyl) 1h 2 imidazolyl]perhydro 1,8 acridinedione; 9 [1 benzyl 5 (ethylsulfonyl) 1h 2 imidazolyl]perhydro 1,8 acridinedione; 9 [1 benzyl 5 (methylsulfonyl) 1h 2 imidazolyl]perhydro 1,8 acridinedione; 9 [1 benzyl 5 (methylsulfonyl) 1h 2 imidazolyl]perhydro 1,8 acridinedione; acridine derivative; cyclohexane derivative; dihydropyridine derivative; imidazole derivative; potassium channel stimulating agent; tricyclic dihydropyridine derivative; unclassified drug

EMTREE medical terms: article; drug synthesis; proton nuclear magnetic resonance; structure activity relation

Chemicals and CAS Registry Numbers: 9 (3 cyanophenyl) 3,4,6,7,9,10 hexahydro 1,8(2h,5h) acridinedione, 149398-59-4; acridine derivative, 34708-10-6

Drug tradename: zm 244085.

ISSN: 0022152X CODEN: JHTCA Source Type: Journal Original language: English

DOI: 10.1002/jhet.5570430133 Document Type: Article

### References (11)

[View in table layout](#)

- Goldmann, S., Stoltefuss, J.  
1 [1,4-dihydropyridines: Effects of chirality and conformation on the calcium antagonist and calcium agonist activities](#)  
(1991) *Angewandte Chemie - International Edition in English*, 30 (12), pp. 1559-1578. Cited 322 times.
- Langs, D.A., Strong, P.D., Triggle, D.J.  
2 [Receptor model for the molecular basis of tissue selectivity of 1,4-dihydropyridine calcium channel drugs](#)  
(1990) *Journal of Computer-Aided Molecular Design*, 4 (3), pp. 215-230. Cited 34 times.  
doi: 10.1007/BF00125011

### Cited by since 1996

This article has been cited 2 times in Scopus:

Fincan, G.S.O., Gündüz, M.G., Vural, I.M.  
[Investigation of myorelaxant activity of 9-aryl-3,4,6,7-tetra... 1,8-\(2H,5H,9H,10H\)-d... in isolated rabbit gastric fundus](#)  
(2012) *Medicinal Chemistry Research*

Gözde Gündüz, M., Evrim Doğan, A., İmrek, R.  
[Substituted 9-aryl-1,8-acridined... derivatives and their effects on potassium channels](#)  
(2009) *Medicinal Chemistry Research*

[View details of all 2 citations](#)

Inform me when this document is cited in Scopus:

[Set alert](#)

[Set feed](#)

### More By These Authors