

## Accepted Manuscript

Synthesis and bioactivities of novel thioether/sulfone derivatives containing 1,2,3-thiadiazole and 1,3,4-oxadiazole/thiadiazole moiety

Wei-Ming Xu, Shi-Ze Li, Ming He, Song Yang, Xiang-Yang Li, Pei Li

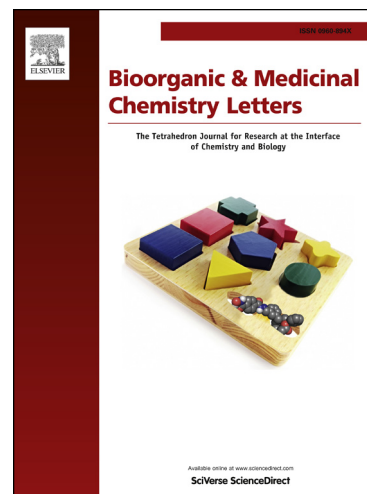
PII: S0960-894X(13)01056-1  
DOI: <http://dx.doi.org/10.1016/j.bmcl.2013.08.107>  
Reference: BMCL 20845

To appear in: *Bioorganic & Medicinal Chemistry Letters*

Received Date: 10 April 2013  
Revised Date: 5 August 2013  
Accepted Date: 28 August 2013

Please cite this article as: Xu, W-M., Li, S-Z., He, M., Yang, S., Li, X-Y., Li, P., Synthesis and bioactivities of novel thioether/sulfone derivatives containing 1,2,3-thiadiazole and 1,3,4-oxadiazole/thiadiazole moiety, *Bioorganic & Medicinal Chemistry Letters* (2013), doi: <http://dx.doi.org/10.1016/j.bmcl.2013.08.107>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



1 **Synthesis and bioactivities of novel thioether/sulfone derivatives containing**  
2 **1,2,3-thiadiazole and 1,3,4-oxadiazole/thiadiazole moiety**

3 Wei-Ming Xu\*, Shi-Ze Li, Ming He, Song Yang\*, Xiang-Yang Li, Pei Li

4 *Center for Research and Development of Fine Chemicals, State Key Laboratory*  
5 *Breeding Base of Green Pesticide and Agricultural Bioengineering, Key Laboratory of*  
6 *Green Pesticide and Agricultural Bioengineering, Ministry of Education, Guizhou*  
7 *University, Guiyang 550025, PR. China.*

8 \* Author to whom correspondence should be addressed; E-Mail:

9 [xuweiming2009@163.com](mailto:xuweiming2009@163.com); [yngsdqj@126.com](mailto:yngsdqj@126.com).

10 Tel.: +86 851 829 2090; Fax: +86 851 362 2211.

11 **Abstract:** A series of new thioether/sulfone compounds containing 1,2,3-thiadiazole  
12 and 1,3,4-oxadiazole/1,3,4-thiadiazole moiety were synthesized, the structures of all  
13 products were confirmed by IR, <sup>1</sup>H NMR, <sup>13</sup>C NMR, and element analysis.  
14 Preliminary antifungal activity test showed that compound **8a** exhibited moderate  
15 antifungal activity against *F. oxysporum* at 50 µg/mL. Preliminary antiviral activity  
16 results showed that compounds **7a**, **7c**, **7d**, **8a**, and **9a** displayed high antiviral activity  
17 against tobacco mosaic virus. The present work demonstrates that thioether/sulfone  
18 heterocyclic derivatives could be considered as new lead compounds for antiviral  
19 studies.

20 **Keywords:** synthesis; thioether/sulfone; heterocycle; antiviral activity;

21 Tobacco mosaic virus (TMV) is known to infect members of 9 plant families, and  
22 at least 125 individual species, including tobacco, tomato, pepper, cucumbers, and a  
23 \_\_\_\_\_  
24 Abbreviations used: IR, infra-red spectroscopy; <sup>1</sup>H NMR, <sup>1</sup>H nuclear magnetic resonance; <sup>13</sup>C  
25 NMR, <sup>13</sup>C nuclear magnetic resonance; *G. zaeae*, *Gibberella zaeae*; *F. oxysporum*, *Fusarium*  
26 *oxysporum*; *C. mandshurica*, *Cytospora mandshurica*.

Download English Version:

<https://daneshyari.com/en/article/10587252>

Download Persian Version:

<https://daneshyari.com/article/10587252>

[Daneshyari.com](https://daneshyari.com)