

## Supporting Information

### **An endoplasmic reticulum-targeting and ratiometric fluorescent probe for hypochlorous acid in living cells based on a 1, 8-naphthalimide derivative**

Qiujuan Ma,<sup>\*,a</sup> Chunyan Wang,<sup>a</sup> Guojiang Mao,<sup>b</sup> Meiju Tian,<sup>a</sup> Jingguo Sun<sup>a</sup> and Suxiang Feng<sup>\*,a,c,d</sup>

<sup>a</sup> *Henan Research Center for Special Processing Technology of Traditional Chinese Medicine, School of Pharmacy, Henan University of Chinese Medicine, Zhengzhou 450046, PR China*

<sup>b</sup> *Henan Key Laboratory of Organic Functional Molecule and Drug Innovation, Collaborative Innovation Center of Henan Province for Green Manufacturing of Fine Chemicals, Key Laboratory of Green Chemical Media and Reactions, Ministry of Education, School of Chemistry and Chemical Engineering, Henan Normal University, Xinxiang, Henan 453007, PR China*

<sup>c</sup> *Zhengzhou Key Laboratory of Chinese Medicine Quality Control and Evaluation, Zhengzhou 450046, PR China*

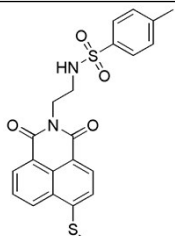
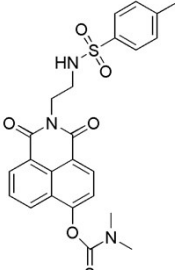
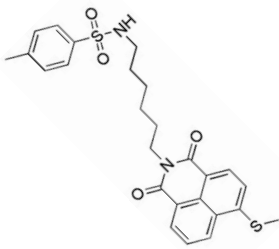
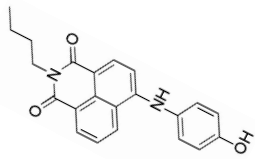
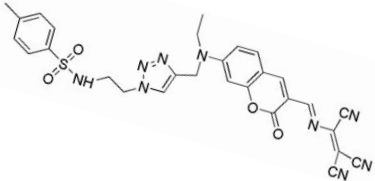
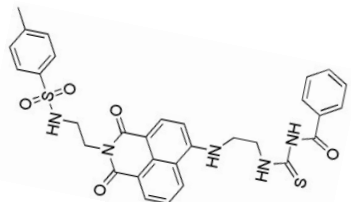
<sup>d</sup> *Co-construction Collaborative Innovation Center for Chinese Medicine and Respiratory Diseases by Henan & Education Ministry, Zhengzhou 450046, PR China*

\*Corresponding author, E-mail: maqiujuan104@126.com (Q. J. Ma); fengsx221@163.com (S. X. Feng); Tel: +86-371-65676656; Fax: +86-371-65680028.

## Table of contents

Comparison of fluorescent probes for HClO .....	S3
NMR and MS data for compounds .....	S4

**Table S1** Comparison of fluorescent probes for HClO

probe	detection wavelength(nm)	response type	detection limit ( $\mu\text{M}$ )	quantitative range	reference
	509	on-off	0.12 $\pm 0.04$	1.0-160 $\mu\text{M}$	27
	555	off-on	0.13	0-30 $\mu\text{M}$	28
	502	on-off	0.76	0-100 $\mu\text{M}$	29
	540	off-on	3.4	0-1 mM	30
	480, 554	ratiometric	0.59	0-120 $\mu\text{M}$	31
	484, 533	ratiometric	0.1	0.5-10 $\mu\text{M}$	This work

NMR and MS data for compounds

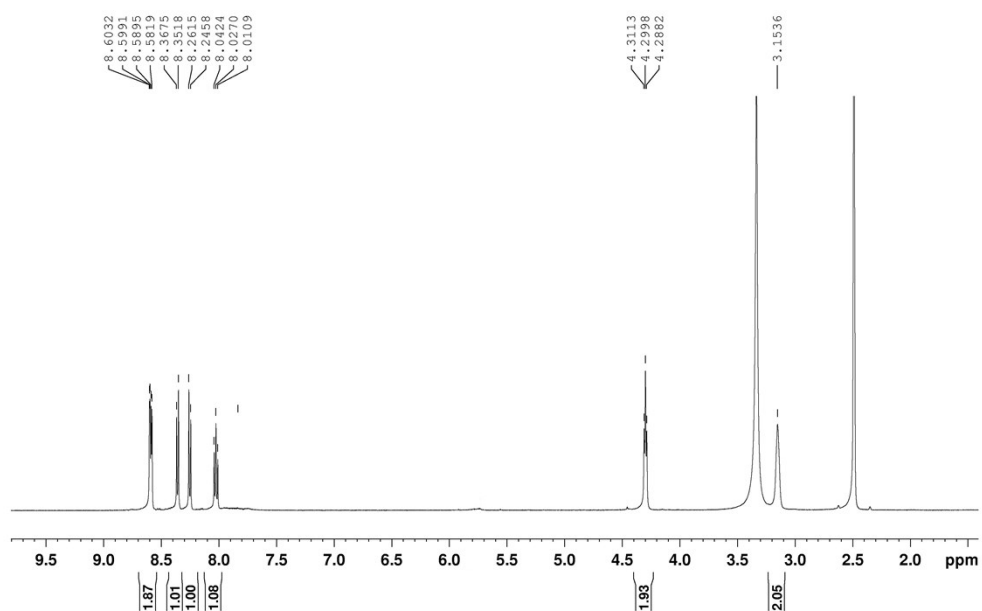


Figure S1.  $^1\text{H}$  NMR spectrum of compound **4** in  $\text{DMSO-}d_6$ .

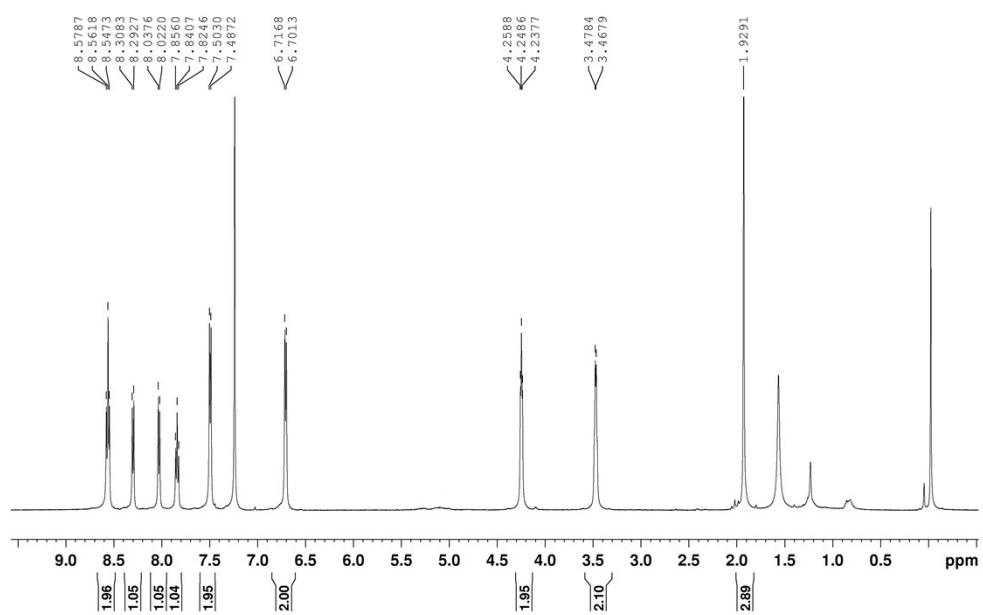


Figure S2.  $^1\text{H}$  NMR spectrum of compound **5** in  $\text{CDCl}_3$ .

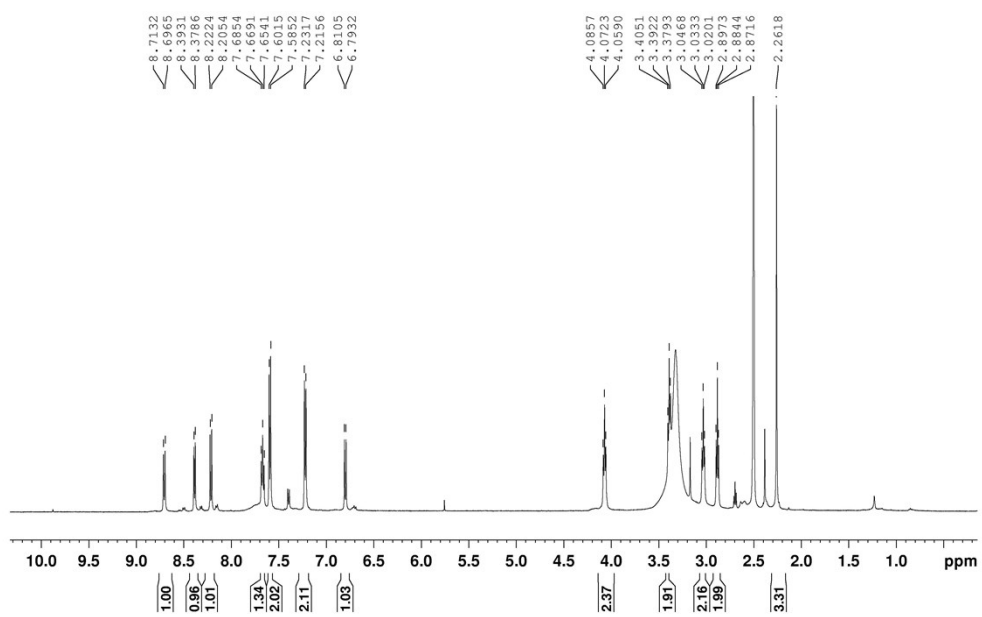
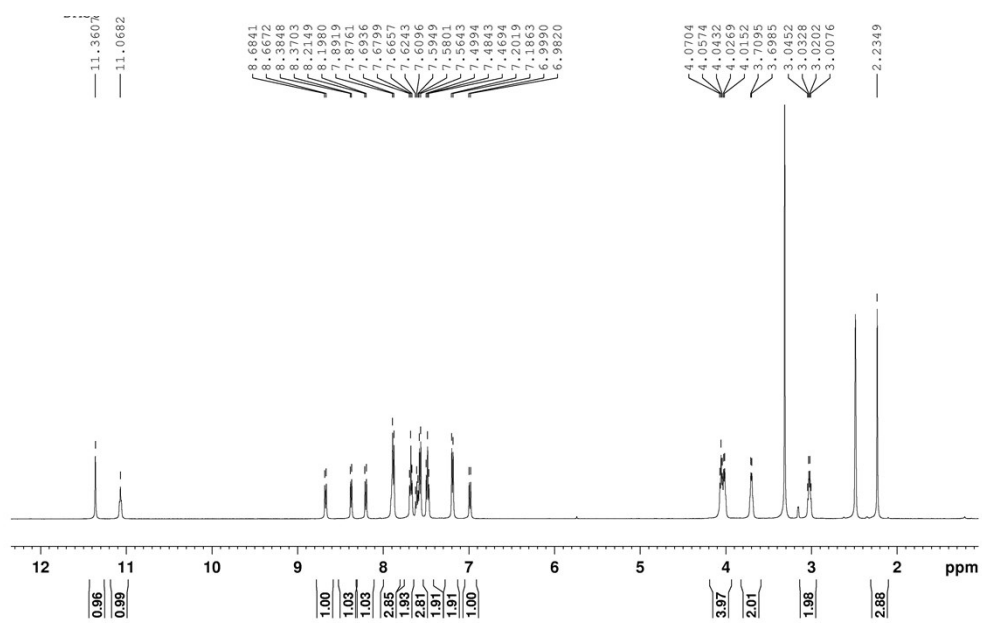
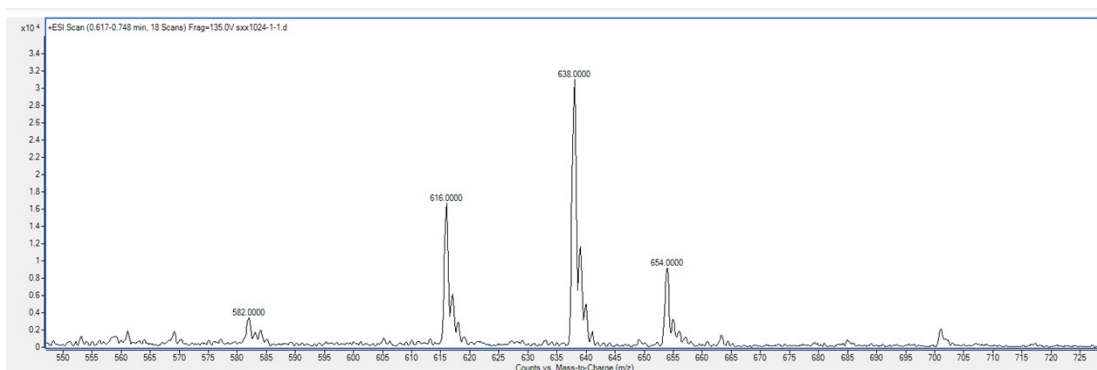


Figure S3.  $^1\text{H}$  NMR spectrum of compound **6** in  $\text{DMSO-}d_6$ .



**Figure S4.**  $^1\text{H}$  NMR spectrum of compound **1** in  $\text{DMSO-}d_6$ .



**Figure S5.** MS spectrum of compound **1**.



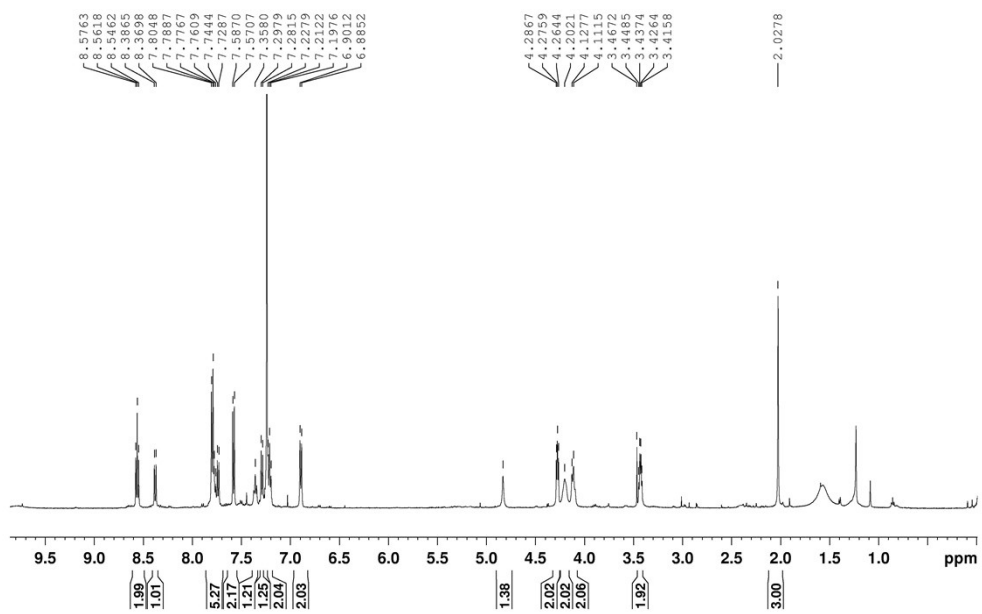
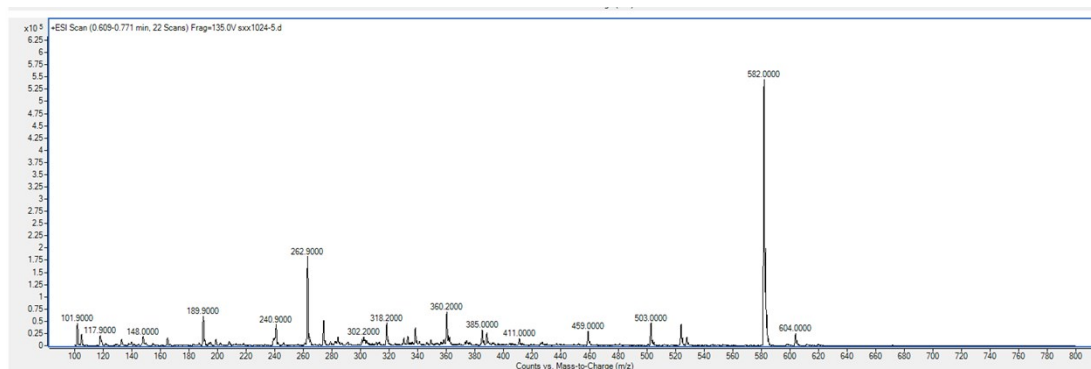


Figure S6.  $^1\text{H}$  NMR spectrum of compound **7** in  $\text{CDCl}_3$ .



**Figure S7.** MS spectrum of compound **7**.