Synthesis of Novel Natural Product-Like Diaryl Acetylenes as Hypoxia-Inducible Factor 1 Inhibitors and Antiproliferative Agents

Shisheng Wang,†,‡ Liqiang Liu, † Xiuhan Guo, †‡ Guangzhe Li, *,†,‡ Xu Wang, † Huijuan Dong, † Yueqing Li †‡ and Weijie Zhao †,‡

†Department of Pharmacy, School of Chemical Engineering, Dalian University of Technology, Dalian 116023, China
‡State Key Laboratory of Fine Chemicals, Dalian University of Technology, Dalian 116023, China

Supporting Information

Characterization Data of Synthesized Key Compounds
$^1$H NMR Spectra of Compound 1a

$^{13}$C NMR Spectra of Compound 1a
\(^1\)H NMR Spectra of Compound 1b

\(^{13}\)C NMR Spectra of Compound 1b
$^1$H NMR Spectra of Compound 1c

$^{13}$C NMR Spectra of Compound 1c
COSY of Compound 1c

HSQC of Compound 1c
HMBC of Compound 1c

\[ \text{HMBC of Compound 1c} \]

\[ \text{\(^1\)H NMR Spectra of Compound 1d} \]
$^{13}$C NMR Spectra of Compound 1d

$^1$H NMR Spectra of Compound 1e
$^{13}$C NMR Spectra of Compound 1e

COSY of Compound 1e
HSQC of Compound 1e

HMBC of Compound 1e
$^1$H NMR Spectra of Compound 2a

$^{13}$C NMR Spectra of Compound 2a
$^1$H NMR Spectra of Compound 2b

$^{13}$C NMR Spectra of Compound 2b
$^1$H NMR Spectra of Compound 2c

$^{13}$C NMR Spectra of Compound 2c
$^1$H NMR Spectra of Compound 2d

$^{13}$C NMR Spectra of Compound 2d
$^1$H NMR Spectra of Compound 2e

$^{13}$C NMR Spectra of Compound 2e
$^1$H NMR Spectra of Compound 2f

$^{13}$C NMR Spectra of Compound 2f
$^1$H NMR Spectra of Compound 2g

$^{13}$C NMR Spectra of Compound 2g
$^1$H NMR Spectra of Compound 2h

$^{13}$C NMR Spectra of Compound 2h
$^1$H NMR Spectra of Compound 2i

$^{13}$C NMR Spectra of Compound 2i
$^1$H NMR Spectra of Compound 2j

$^{13}$C NMR Spectra of Compound 2j
COSY of Compound 2j

HSQC of Compound 2j
HMBC of Compound 2j