SUPPLEMENTARY MATERIAL

Anti-neuroinflammatory constituents from the Fungus

***Penicillium purpurogenum* MHZ 111**

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ABSTRACT

A new dihydroisocoumarin (**1**) and a new coumarin (**2**), along with eight known metabolites (**3–10**), were isolated from the solid substrate fermentation cultures of the fungus *Penicillium purpurogenum* MHZ 111. Their structures were elucidated by extensive spectroscopic analysis and comparison of their spectroscopic and physicochemical data with the literature values. Compounds **2** and **8** showed inhibition of nitric oxide production in lipopolysaccharide-activated BV-2 microglial cells with IC₅₀ values of 26.5 and 52.7 μ M, respectively.

KEYWORDS

Penicillium purpurogenum; dihydroisocoumarin; coumarin; anti-neuroinflammatory activity

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Figure S1 ¹H NMR spectrum of compound **1** (500 MHz, methanol-*d*₄)

Figure S2 ¹³C NMR spectrum of compound **1** (125 MHz, methanol-*d*₄)

Figure S5 ^1H - ^1H COSY spectrum of compound **1** (500 MHz, methanol- d_4)

Figure S6 Selected HMBC correlations of **1** and **2**.

Figure S7 ECD spectrum of compound **1**

Figure S8 ^1H NMR spectrum of compound **2** (500 MHz, CDCl_3)

Figure S9 ^{13}C NMR spectrum of compound **2** (125 MHz, CDCl_3)

Figure S10 gHSQC spectrum of compound **2** (500 MHz, CDCl₃)

Figure S11 gHMBC spectrum of compound **2** (500 MHz, CDCl₃)

S12 The 18S rDNA sequences data of *Penicillium purpurogenum* MHZ 111.

CCAGTAGTCATATGCTTGTCTCAAAGATTAAGCCATGCATGTCTAAGTATAA
GCACTCTTTTACTGTGAAACTGCGAATGGCTCATTAATCAGTTATCGTTTA
TTTGATAGTACCCTACTACATGGATACCTGTGGTAATTCTAGAGCTAATACAT
GCGCAAAACCCCGACTTCGGAAGGGGTGTATTTATTAGATAAAAAACCAAT
GCCCTTCGGGGCTCCTTGGTGATTCATAATAACTTCACGAATCGCATGGCCT
TGCGCCGGCGATGGTTCATTCAAATTTCTGCCCTATCAACTTTTCGATGGTAG
GATAGTGGCCTACCATGGTGGCAACGGGTAACGGGGAATTAGGGTTCGATT
CCGGAGAGGGAGCCTGAGAAACGGCTACCACATCCAAGGAAGGCAGCAG
GCGCGCAAATTACCCAATCCCGATACGGGGAGGTAGTGACAATAAATACTG
ATACAGGGCTCTTTTGGGTCTTGTAATTGGAATGAGAACAATCTAAATCCCT
TAACGAGGAACAATTGGAGGGCAAGTCTGGTGCCAGCAGCCGCGGTAATT
CCAGCTCCAATAGCGTATATTAAAGTTGTTGCAGTTAAAAAGCTCGTAGTTG
AACCTTGGGCCCCGTCCTGCCGGTCCGCCTCACCGCGAGTACTGGTCCGGAT
GGGCCTTTCTTTCTGGGGAATCCCATGGCCTTCACTGGCTGTGGCGGGGAA
CCAGGACTTTTACTGTGAAAAAATTAGAGTGTTCAAAGCAGGCCTTTGCTC
GGATACATTAGCATGGAATAATAGAATAGGACGTGCGGTTCTATTTTGTTGG
TTTCTAGGACCGCCGTAATGATTAATAGGGATAGTCGGGGGCGTCAGTATTC
AGCTGTCAGAGGTGAAATTCTTGGATTTGCTGAAGACTAACTACTGCGAAA
GCATTCGCCAAGGATGTTTTCATTAATCAGGGAACGAAAGTTAGGGGATCG
AAGACGATCAGATACCGTCGTAGTCTTAACCATAAACTATGCCGACTAGGG
ATCGGGCGGGGTTTCTATGATGACCCGCTCGGCACCTTACGAGAAATCAAA
GTTTTTGGGTTCTGGGGGGAGTATGGTCGCAAGGCTGAACTTAAAGAAAT
TGACGGAAGGGCACCACAAGGCGTGGAGCCTGCGGCTTAATTTGACTCAA
CACGGGGAAACTCACCAGGTCCAGACAAAATAAGGATTGACAGATTGAGA
GCTCTTTCTTGATCTTTTGGATGGTGGTGCATGGCCGTTCTTAGTTGGTGA
GTGATTTGTCTGCTTAATTGCGATAACGAACGAGACCTCGGCCCTTAAATAG
CCCGGTCCGCGTTTTCGGGGCCGCTGGCTTCTTAGGGGGACTATCGGCTCAA
GCCGATGGAAGTACGTGGCAATAACAGGTCTGTGATGCCCTTAGATGTTCT
GGGCCGACGCGCGCTACACTGACAGGGCCAGCGAGTACATCACCTTGGC

CGAGAGGTCTGGGTAATCTTGTTAAACCCTGTCGTGCTGGGGATAGAGCAT
TGCAATTATTGCTCTTCAACGAGGAATGCCTAGTAGGCACGAGTCATCAGC
TCGTGCCGATTACGTCCCTGCCCTTTGTACACACCGCCCGTCGCTACTACCG
ATTGAATGGCT

S13 The ITS rDNA sequences data of *Penicillium purpurogenum* MHZ 111.

TCCGTAGGTGAACCTGCGGAAGGATCATTACCGAGTGCGGGCCCTCGTGGC
CCAACCTCCCACCCTTGTCTCTATACACCTGTTGCTTTGGCGGGCCCACCG
GGGCCACCTGGTCGCCGGGGGACATCTGTCCCCGGGCCCCGCGCCCGCCGA
AGCGCTCTGTGAACCCTGATGAAGATGGGCTGTCTGAGTACTATGAAAATT
GTCAAACTTTCAACAATGGATCTCTTGGTTCCGGCATCGATGAAGAACGC
AGCA