SUPPLEMENTARY MATERIAL

Bioactivity-guided isolation of antiproliferative compounds from *Juniperus foetidissima* Willd.

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Abstract: Based on a literature survey on cytotoxic medicinal plants, *Juniper* species were identified as interesting source of antitumor compounds. Acetone extract of leaves and branchlets of *Juniperus foetidissima* Willd. (Cupressaceae) was evaluated for cytotoxic fractions against Caov-4 cancer cell line. The isolation and identification of active fractions were performed through high performance liquid chromatography and NMR analyses. This led to the isolation of a new 3H-benzofuran-2-one, 4-methyl-3-methoxy-3H-benzofuran-2-one (**1**), a new sesquiterpene, 4,9(α)-dihydroxy-nardosin-6-en (**2**) and an already known labdane type diterpene, 15-hydroxy-8(17),13(E)-labdadiene-19-carboxylic acid (**2**). The structures were elucidated based on spectroscopic analyses, while the cytotoxicity was evaluated through standard MTT assay against human ovary (Caov-4), and bladder (EJ-138) cancer cell lines.

Keywords: *Juniperus foetidissima*; cytotoxicity; ovary cancer cell, bladder cancer cell.

List of supporting information

Figure S1. ^1H NMR spectrum of 4-methyl-3-methoxy-3H-benzofuran-2-one (CDCl_3 , 400 MHz)

Figure S2. ^{13}C NMR spectrum of 4-methyl-3-methoxy-3H-benzofuran-2-one (CDCl_3 , 100 MHz)

Figure S3. ^1H NMR spectrum of 4,9(α)-dihydroxy-nardosin-6-en (CDCl_3 , 400 MHz)

Figure S4. ^{13}C NMR spectrum of 4,9(α)-dihydroxy-nardosin-6-en (CDCl_3 , 100 MHz)

Figure S5. ^1H NMR spectrum of 15-hydroxy-8(17),13(E)-labdadiene-19-carboxylic acid (CDCl_3 , 400 MHz)

Figure S6. ^{13}C NMR spectrum of 15-hydroxy-8(17),13(E)-labdadiene-19-carboxylic acid (CDCl_3 , 100 MHz)

Figure S1. ¹H NMR spectrum of 4-methyl-3-methoxy-3H-benzofuran-2-one (CDCl₃, 400 MHz)

Figure S2. ^{13}C NMR spectrum of 4-methyl-3-methoxy-3H-benzofuran-2-one (CDCl_3 , 100 MHz)

Figure S3. ^1H NMR spectrum of 4,9(α)-dihydroxy-nardosin-6-en (CDCl_3 , 400 MHz)

Figure S4. ¹³C NMR spectrum of 4,9(α)-dihydroxy-nardosin-6-en (CDCl₃, 100 MHz)

Figure S5. ^1H NMR spectrum of 15-hydroxy-8(17),13(E)-labdadiene-19-carboxylic acid (CDCl_3 , 400 MHz)

Figure S6. ^{13}C NMR spectrum of 15-hydroxy-8(17),13(E)-labdadiene-19-carboxylic acid (CDCl_3 , 100 MHz)