Pale Indian plantain (Arnoglossum atriplicifolium (L.) H. Rob.) is a plant with traditional medicinal usage among the Cherokee Native American tribe for treating cancer. Two oplopane sesquiterpenoids were isolated from an extract of Arnoglossum atriplicifolium from western North Carolina. The compounds were isolated by bioassay-guided fractionation using an MCF-7 breast tumor cell line assay. The known compound (1S,6R,7R,8R)-1-acetoxy-6,7-diangeloxy-8,10-epoxy-2-oxo-oplopa-3,14Z,11,12-dien-13-al (1) had an EC$_{50}$ value of 9.0 µM against MCF-7 cells, while the new compound (1S,3R,6R,7R,8R,11S)-1-acetoxy-6, 7-diangeloxy-8,10,11,13-bisepoxyoplopan-2-one (2) had an EC$_{50}$ value of 96 µM. The compounds were characterized by 1D and 2D NMR spectroscopy and by comparison with literature values in the case for 1. Based on NOESY analysis, a correction of the relative configuration for 1 is presented. The presence of these compounds may help to explain the folk remedy usage of this plant as an anticancer agent.

Keywords: Oplopane; sesquiterpenoid; Arnoglossum atriplicifolium
Figure S1. $^1$H NMR spectrum of compound 1 (in C$_6$D$_6$, 300 MHz)
Figure S2: $^{13}$C NMR spectrum of compound 1 (in C$_6$D$_6$, 75.6 MHz)
Figure S3: COSY spectrum of compound 1 (in C$_6$D$_6$, 300 MHz)
Figure S4: NOESY spectrum of compound 1 (in C₆D₆, 300 MHz)
Figure S5: HSQC spectrum of 1 (C₆D₆)
Figure S6: HMBC spectrum of 1 (C$_6$D$_6$)
Figure S7: $^1$H NMR spectrum of compound 2 (in CDCl$_3$, 300 MHz)
Figure S9: COSY spectrum of compound 2 (in CDCl$_3$, 300 MHz)
Figure S10: NOESY spectrum of compound 2 (in CDCl₃, 300 MHz)
Figure S11: HSQC spectrum of 2 (CDCl$_3$)
Figure S12: HMBC spectrum of 2 (CDCl₃)