

## **SUPPLEMENTARY INFORMATION**

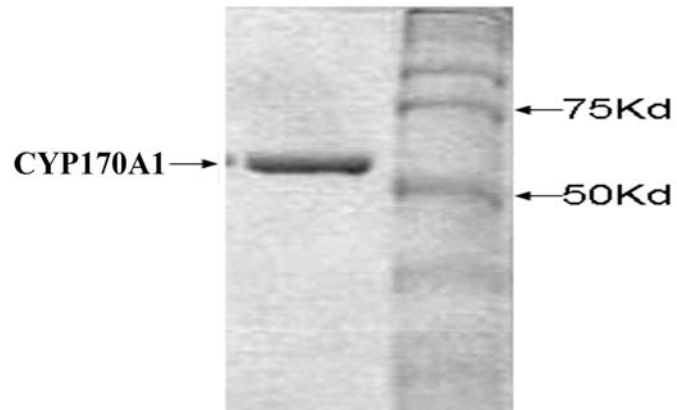
*J. Biol. Chem.* (2007) **282**, 000-000. **Bin Zhao, Xin Lin, Li Lei, David C. Lamb, Steven L.**

**Kelly, Michael R. Waterman, and David E. Cane**

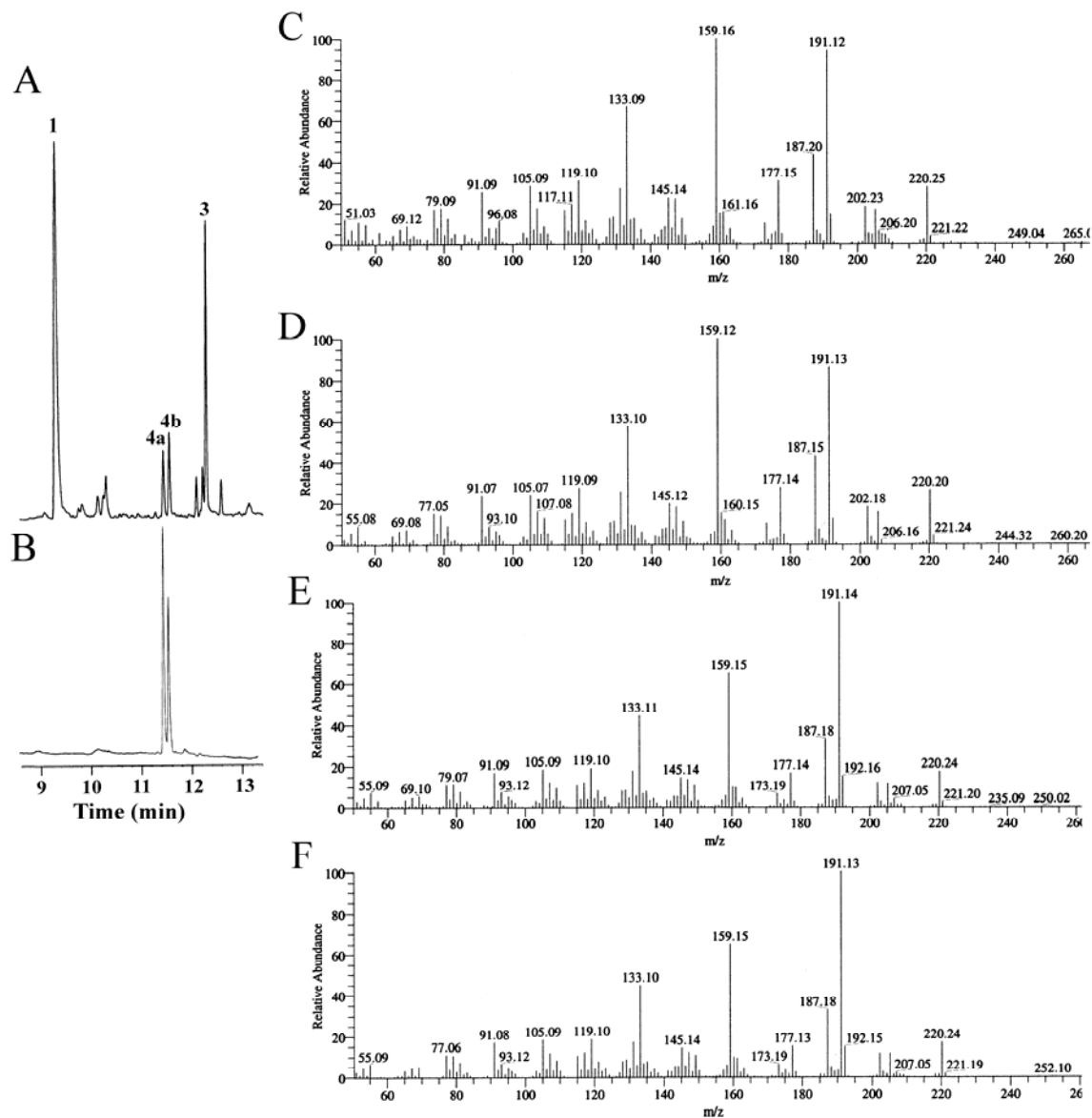
### **Biosynthesis of the Sesquiterpene Antibiotic Albaflavenone**

**in *Streptomyces coelicolor* A3(2)**

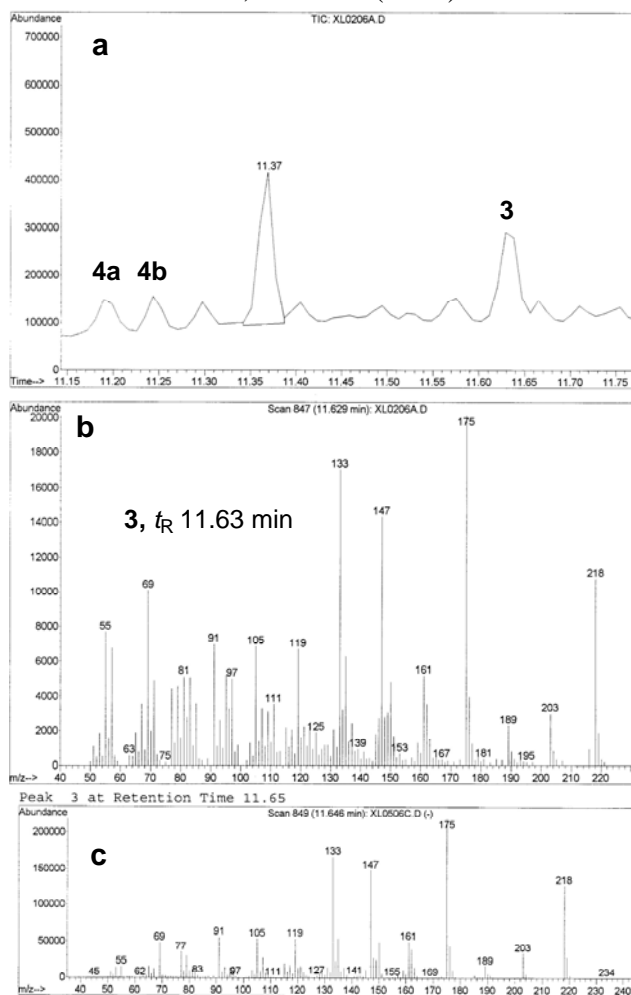
**SI Figure 1.** SDS PAGE of recombinant CYP170A1.



**SI Figure 2.** Identification of products with  $m/z$  220 ( $t_R$  11.4 min;  $t_R$  11.6 min) by GC/MS comparison with retention time and mass spectral fragmentation patterns of synthetic albaflavenols **4a** and **4b**. (A) GC chromatogram (TIC) of organic extract of incubation of epi-isozizaene (**1**) with CYP170A1; (B) GC chromatogram of synthetic albaflavenols **4a** and **4b**; (C) MS full scan of **4a** from incubation of epi-isozizaene (**1**) with CYP170A1; (D) MS full scan of (5*S*)-albaflavenol (**4a**); (E) MS full scan of **4b** from incubation of epi-isozizaene (**1**) with CYP170A1; (F) MS full scan of (5*R*)-albaflavenol (**4b**).



**Supplementary Figure 3.** Identification of product with  $m/z$  218 by GC/MS comparison with synthetic and naturally occurring albaflavenone. GC/MS spectra were recorded on a Hewlett-Packard Series 2 GC-MSD at 70 eV electron impact (EI), operating in positive ion mode with a 30 m  $\times$  0.25 mm HP5MS capillary column, using a temperature program of 50–280  $^{\circ}\text{C}$ , 20  $^{\circ}\text{C}$   $\text{min}^{-1}$  with a 3.5 min solvent delay. **a**, GC chromatogram (TIC) of organic extract of incubation of epi-isozizaene (**1**) with CYP170A1. The peaks at  $t_R$  11.20 (**4a**) and 11.25 min (**4b**),  $m/z$  220, correspond to the peaks at  $t_R$  11.4 min and  $t_R$  11.6 min in **Fig. 2**, main text, recorded on the Finnigan DSQ Quantum mass spectrometer using the corresponding GC column and temperature program, as described, while the peak at  $t_R$  11.63 min corresponds to the peak  $t_R$  12.3 min,  $m/z$  218, in **Fig. 2**, main text; **b**, MS full scan of **3**,  $t_R$  11.63, from incubation of epi-isozizaene (**1**) with CYP170A1; **c**, MS full scan of synthetic albaflavenone (**3**); **d**, MS full scan of authentic albaflavenone produced by *Streptomyces albidoflavus* AMI 246 (provided by Dr. K. Wilkins, cf. Scholler, C.E., Gurtler, H., Pedersen, R., Molin, S. & Wilkins, K. Volatile metabolites from actinomycetes. *J. Agric. Food Chem.* **50**, 2615-21 (2002).



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7 Aug 95 10:46 HRP +EI AMI 246 ror 218

