

# **New $\beta$ -ketophosphonates for the synthesis of prostaglandin analogues. 2. Phosphonates with a bicyclo[3.3.0]octene and bicyclo[3.3.0]octane scaffolds linked to the $\beta$ -ketone group.**

Constantin Tănase<sup>a</sup>, Constantin Drăghici<sup>b</sup>, Miron T. Căproiu<sup>b</sup>

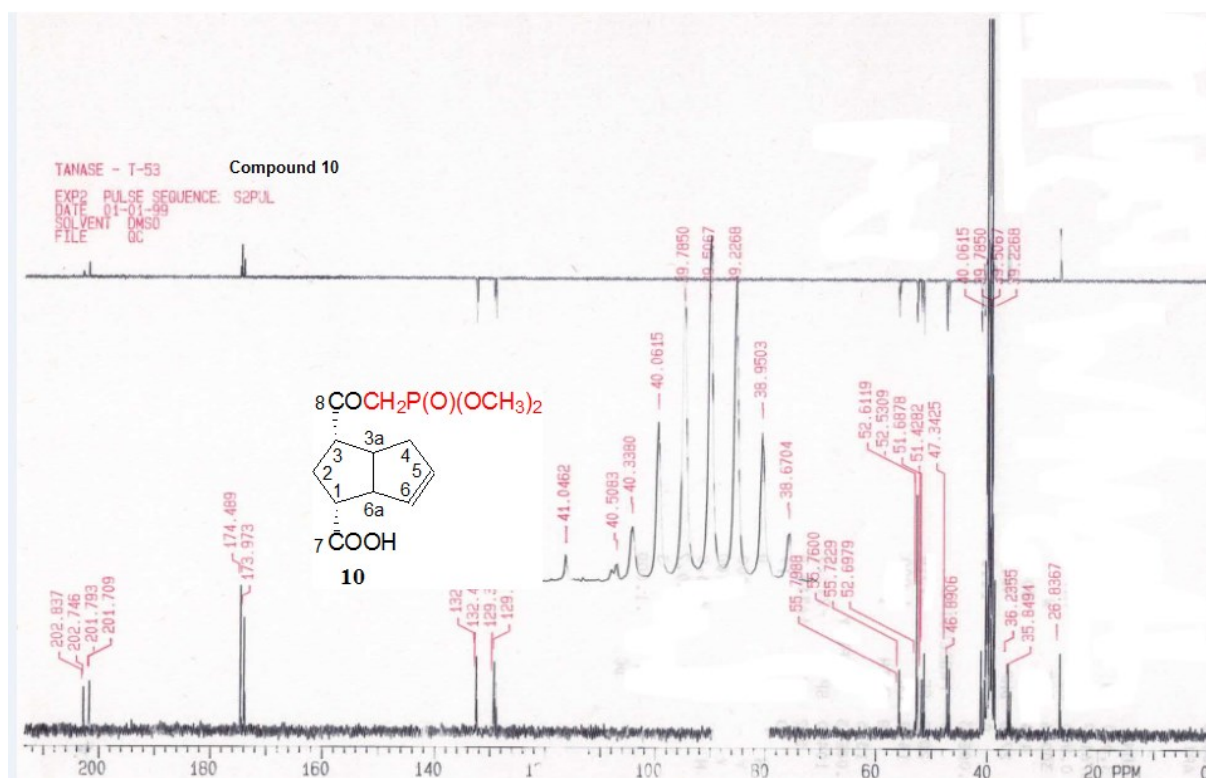
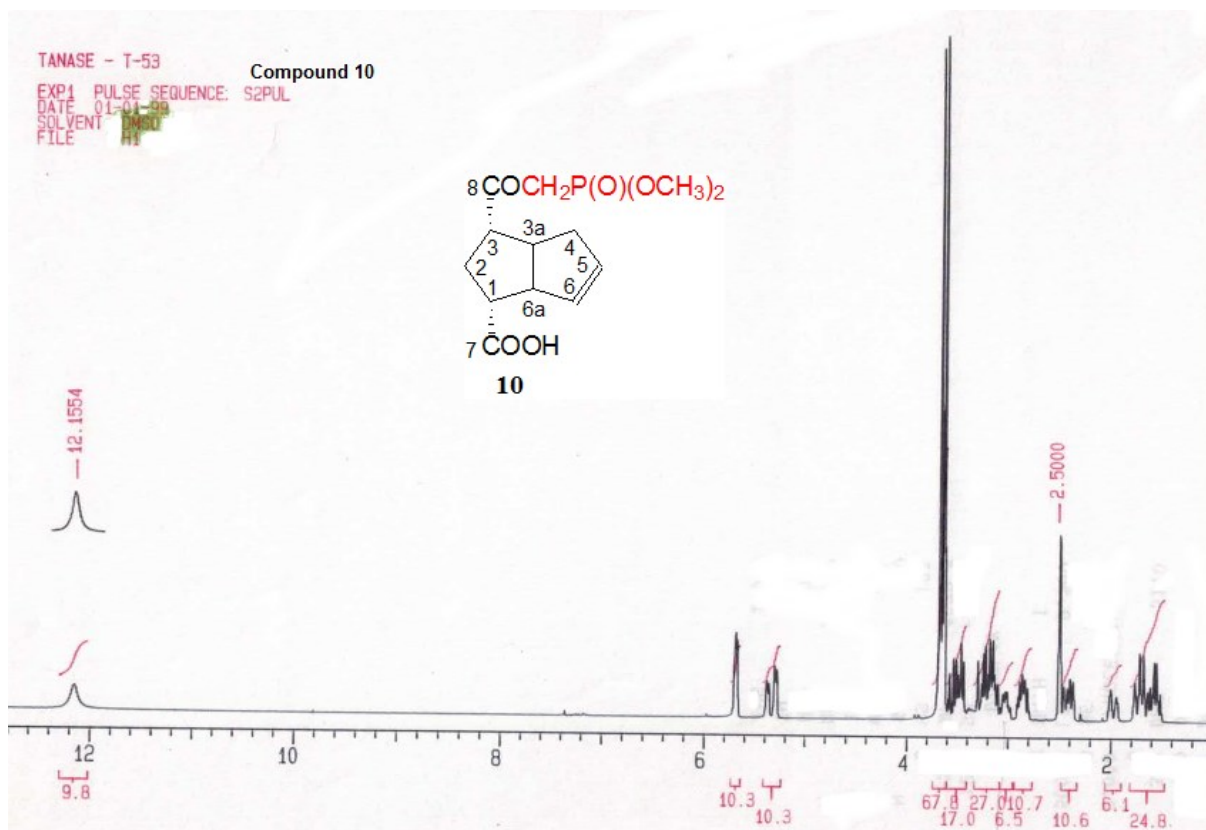
<sup>a</sup>*National Institute for Chemical-Pharmaceutical Research and Development, 112 Vitan Av., 74373, Bucharest 3, ROMANIA*

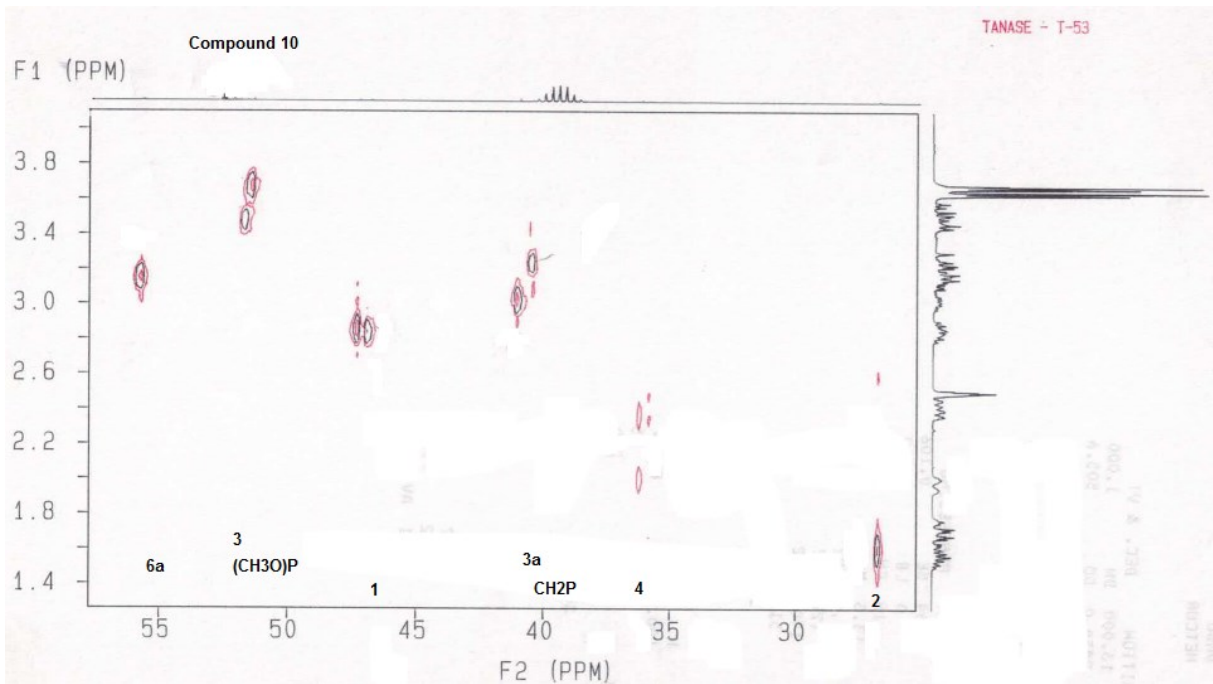
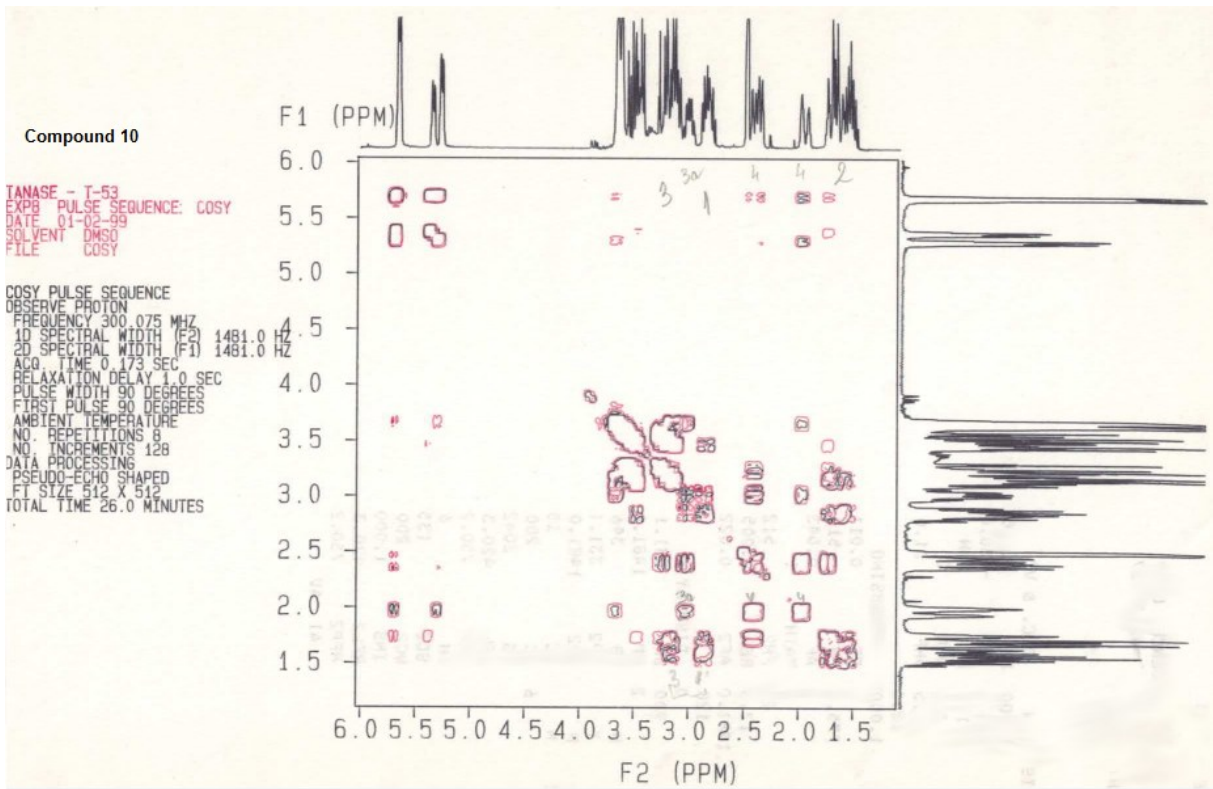
<sup>b</sup>*Organic Chemistry Center "C.D. Nenitzescu", 202 B, Splaiul Independentei, Bucharest 6, ROMANIA*

\* Correspondence author: cvtanase@gmail.com; Tel.: +40-21-321-2117; Fax: +40-21-322-291

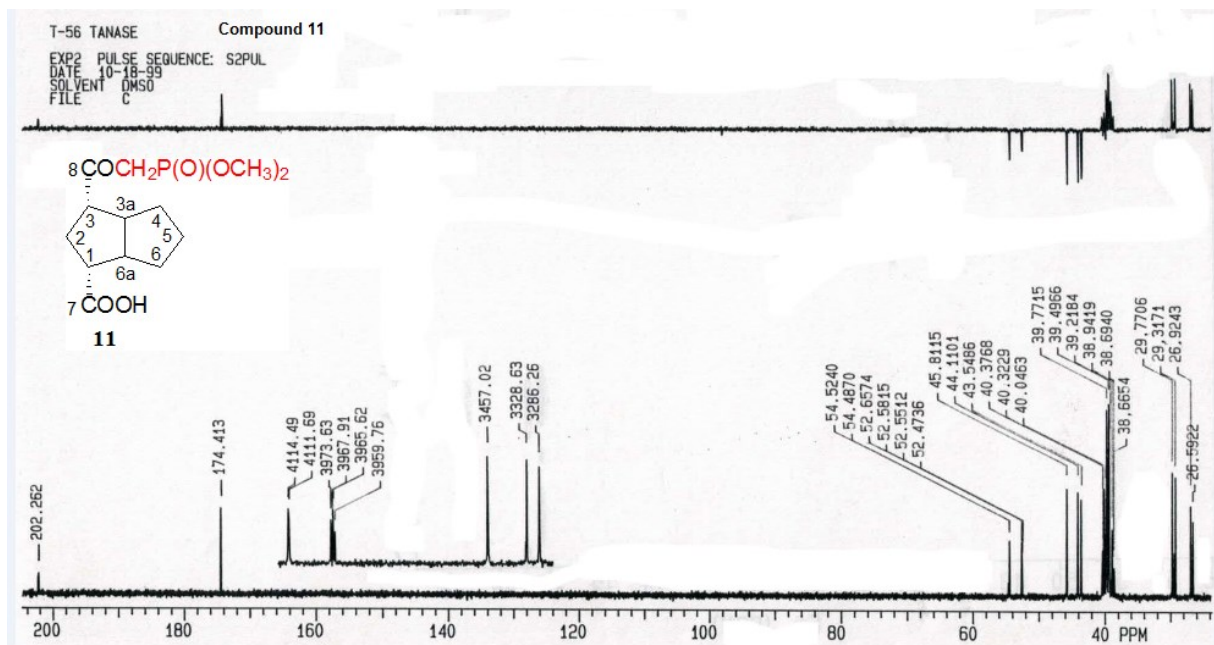
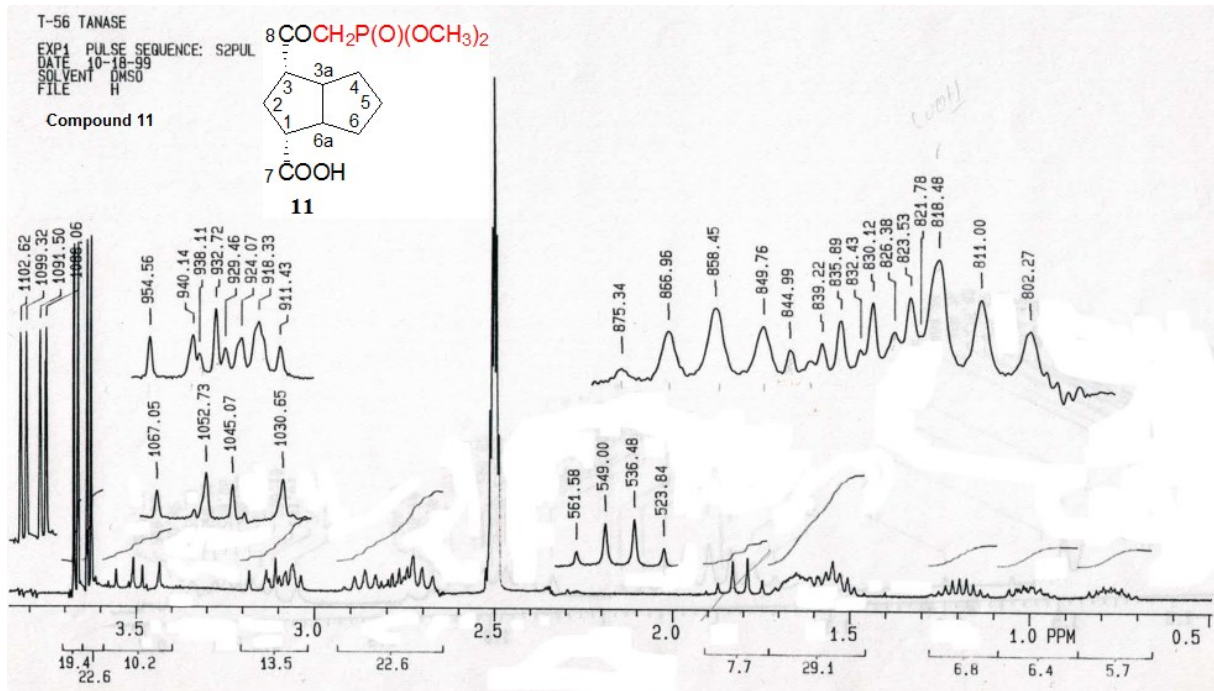
## **1. NMR Spectra of the compounds**

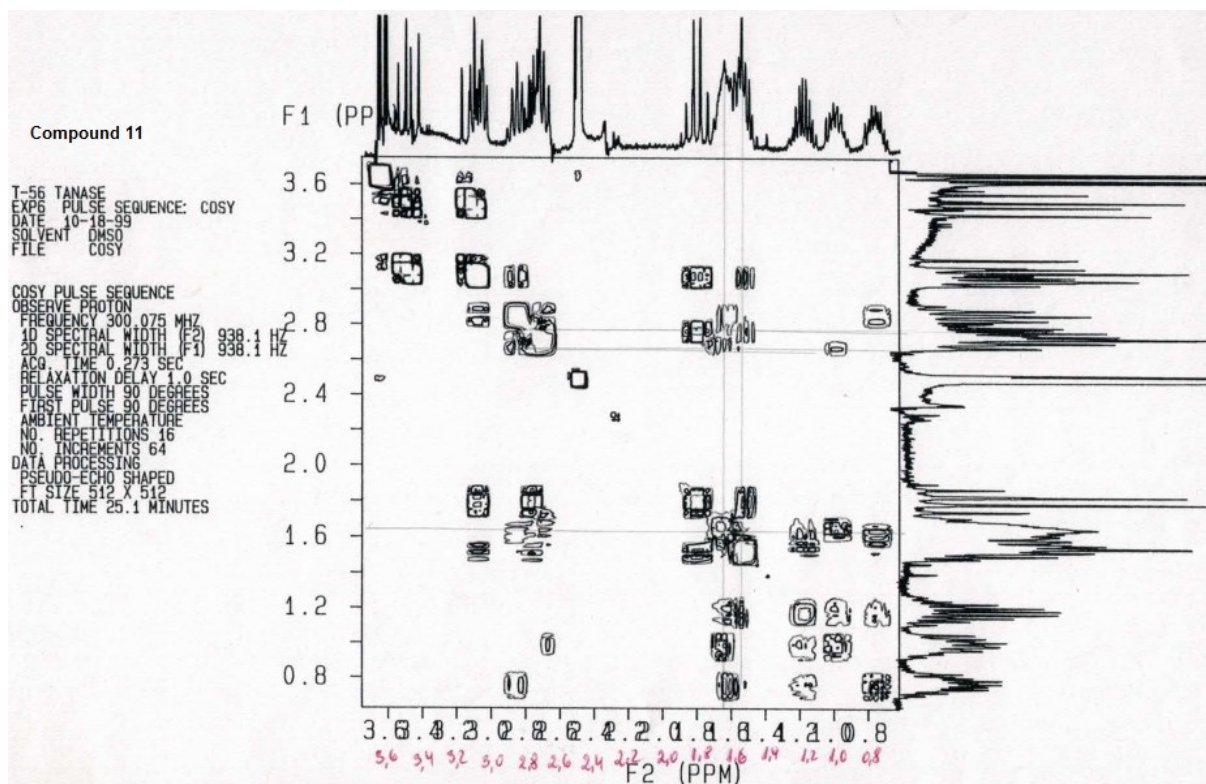
1.1.  $^1\text{H}$ ,  $^{13}\text{C}$ , COSY and HETCOR (aliphatic)-NMR spectra in DMSO of the compound **10**



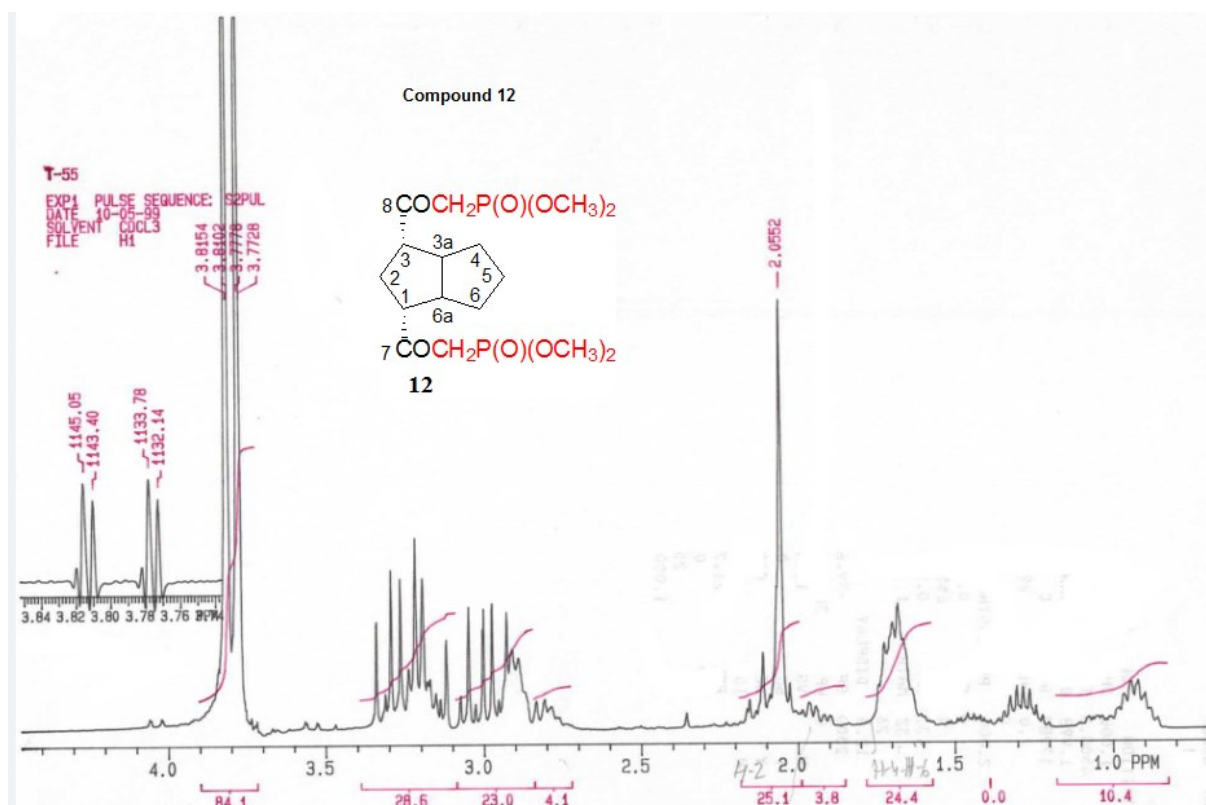


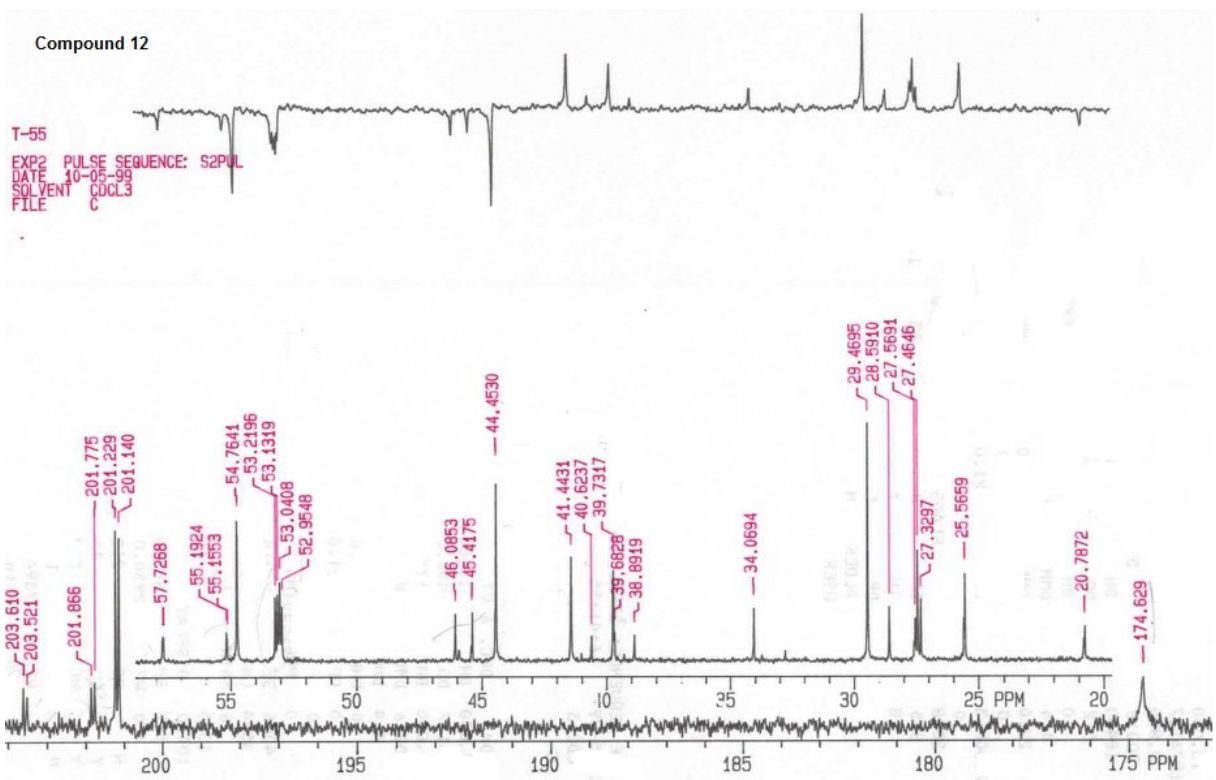
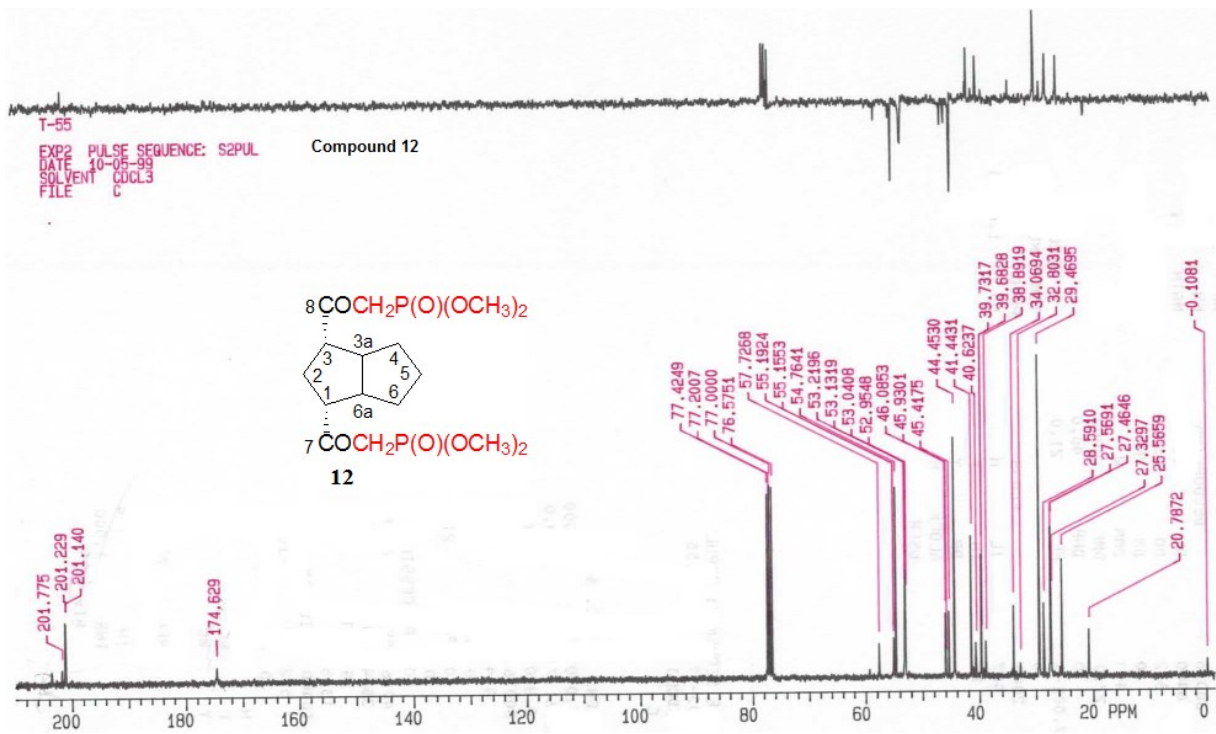
1.2.  $^1\text{H}$ ,  $^{13}\text{C}$  and COSY-NMR spectra in DMSO of the compound **11**



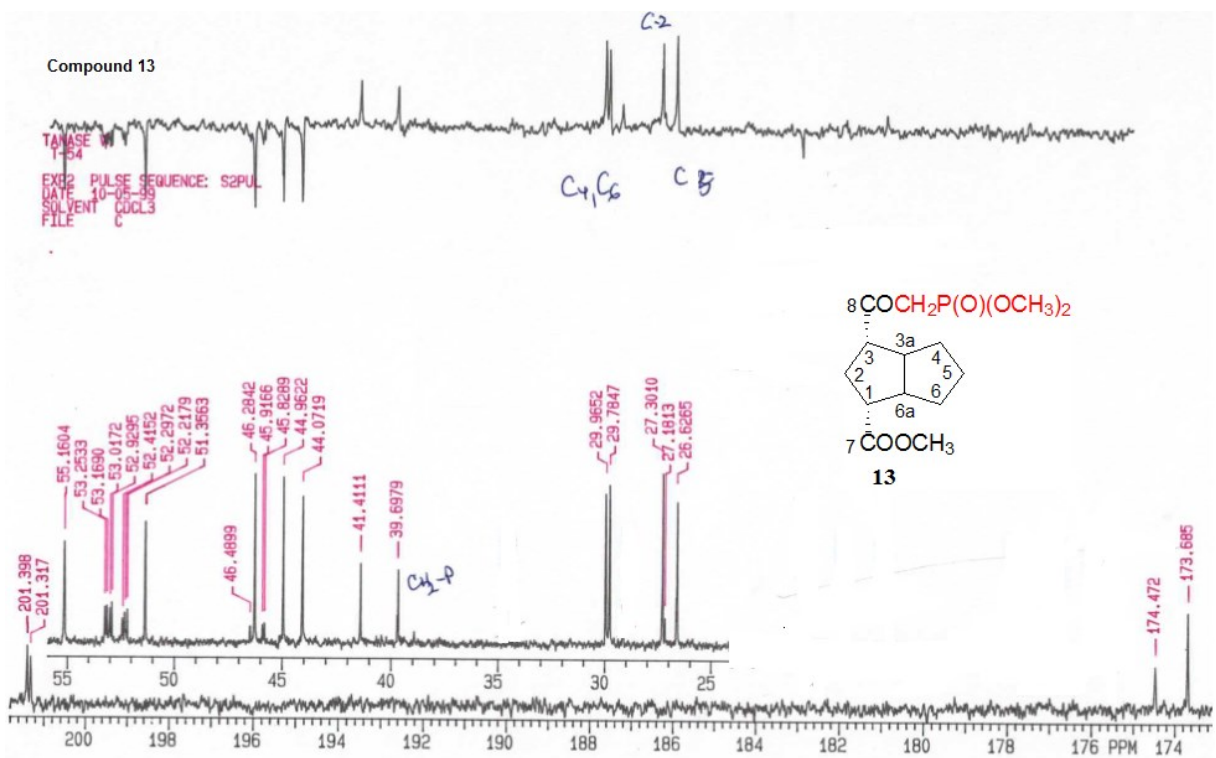
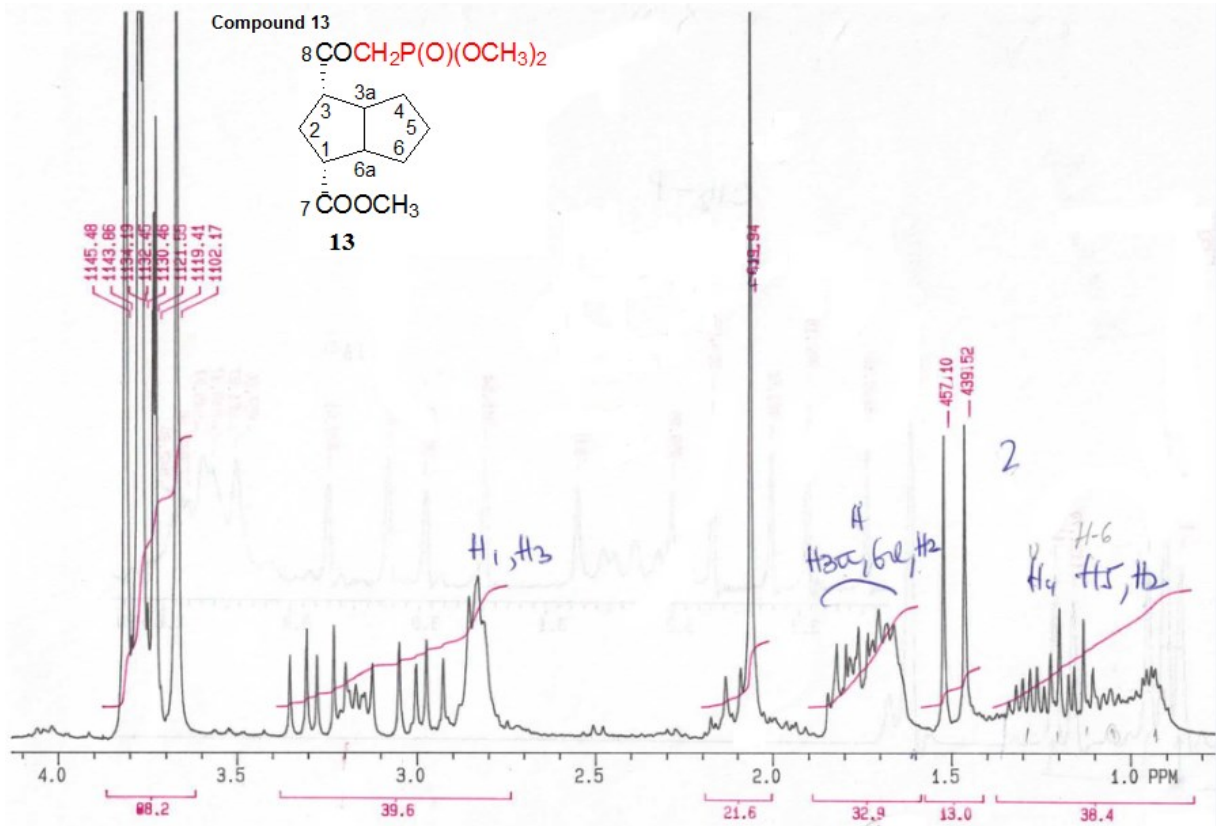


1.3.  $^1\text{H}$  and  $^{13}\text{C}$ -NMR spectra in  $\text{CDCl}_3$  of the compound **12**

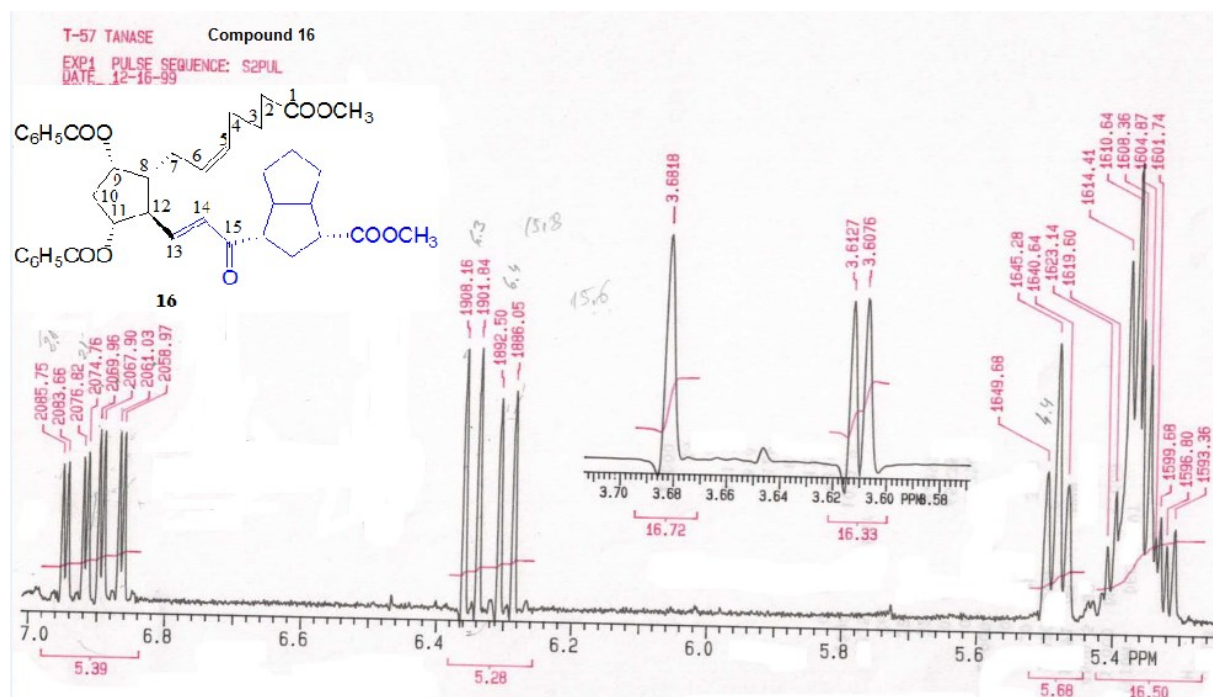
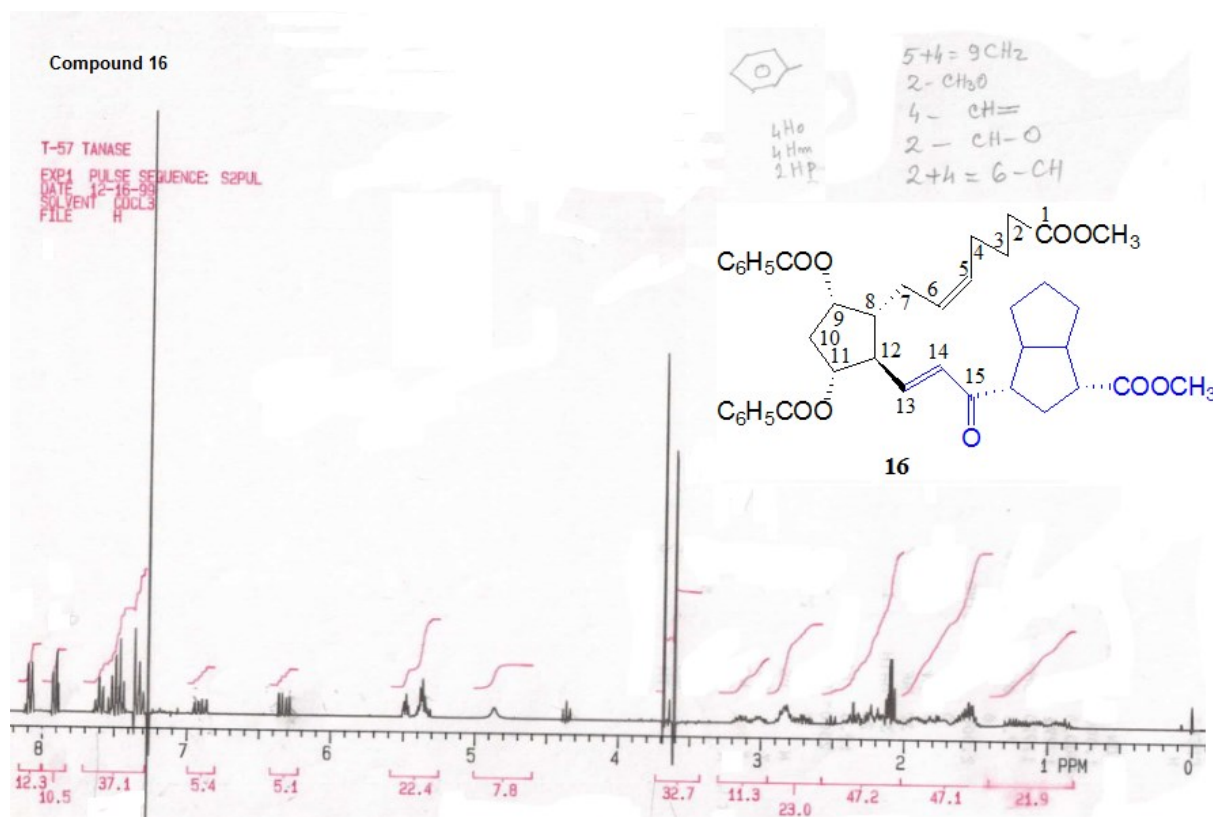




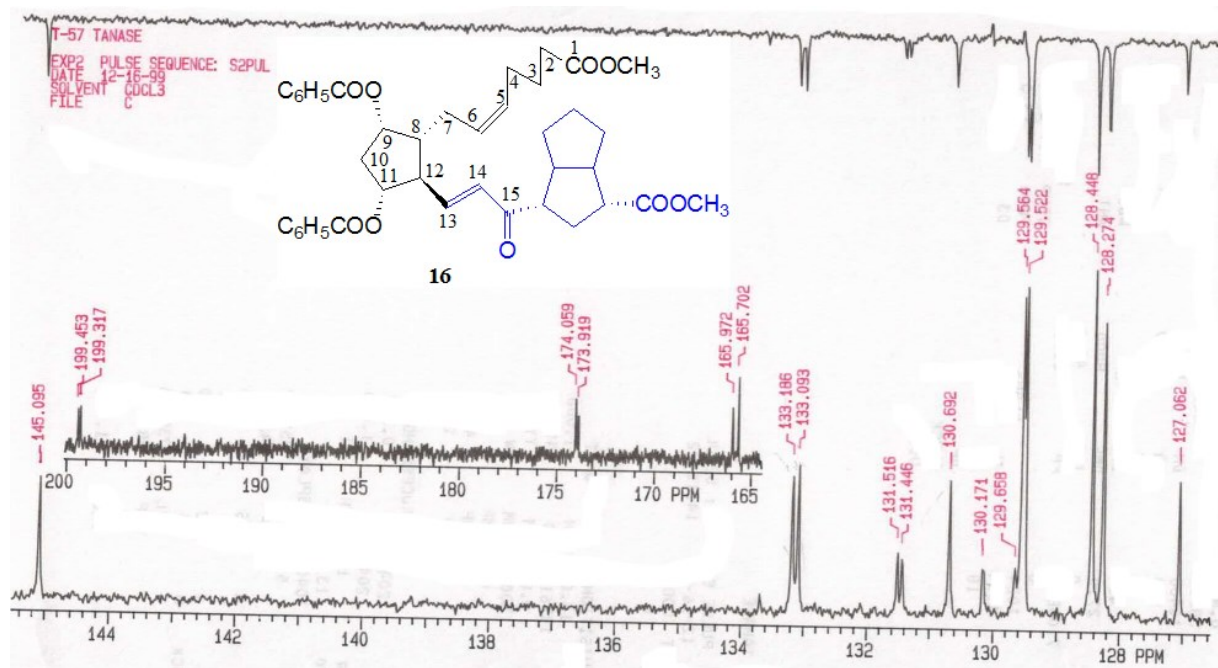
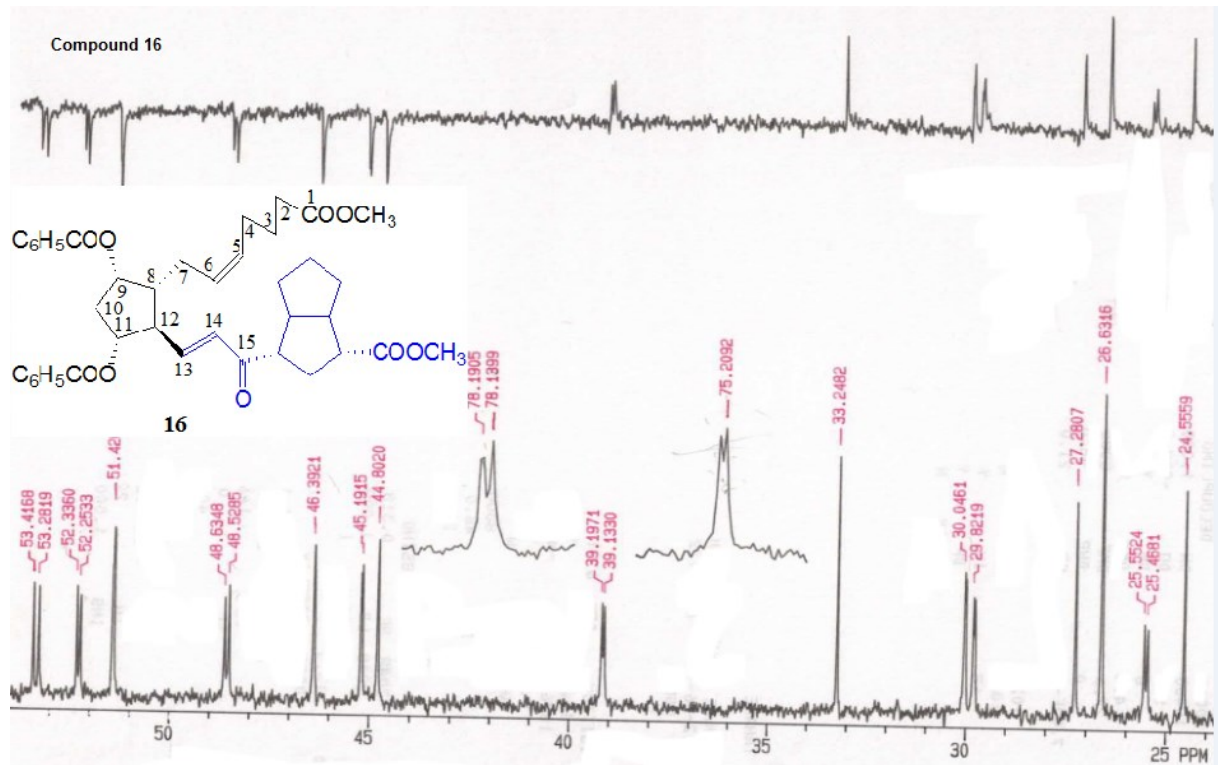
1.4.  $^1\text{H}$  and  $^{13}\text{C}$ -NMR spectra in  $\text{CDCl}_3$  of the compound **13**



1.5.  $^1\text{H}$  and details,  $^{13}\text{C}$  and details, COSY and HETCOR (aliphatic)-NMR spectra in  $\text{CDCl}_3$  of the compound **16**



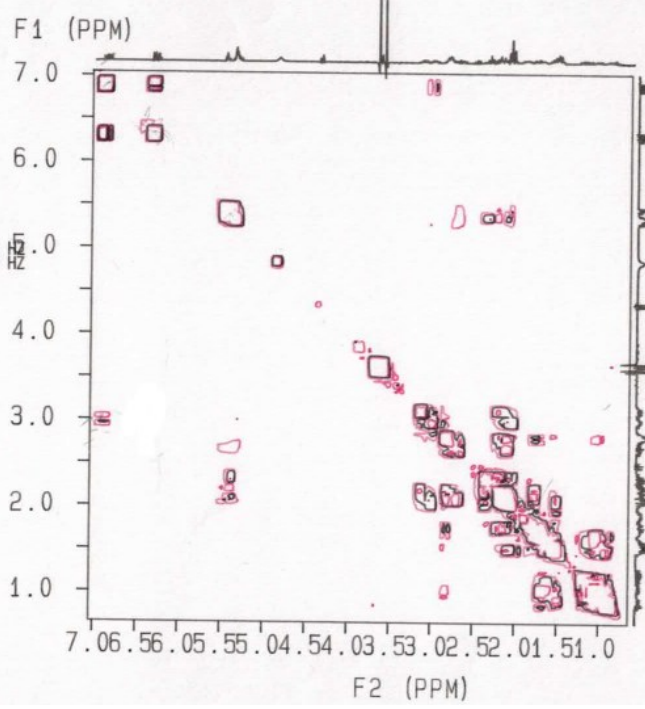




Compound 16

T-57 TANASE  
EXP# PULSE SEQUENCE: COSY  
DATE 12-16-99  
SOLVENT CDCl3  
FILE COSY

COSY PULSE SEQUENCE  
OBSERVE PROTON  
FREQUENCY 300.075 MHz  
1D SPECTRAL WIDTH (F2) 1918.3 Hz  
2D SPECTRAL WIDTH (F1) 1918.3 Hz  
AQ TIME 0.133 SEC  
RELAXATION DELAY 1.0 SEC  
PULSE WIDTH 90 DEGREES  
FIRST PULSE 90 DEGREES  
AMBIENT TEMPERATURE  
NO. REPEATITIONS 16  
NO. INCREMENTS 64  
DATA PROCESSING  
PSEUDO-ECHO SHAPED  
FT SIZE 512 X 512  
TOTAL TIME 22.1 MINUTES



Compound 16

T-57 TANASE

