

FIG. 1

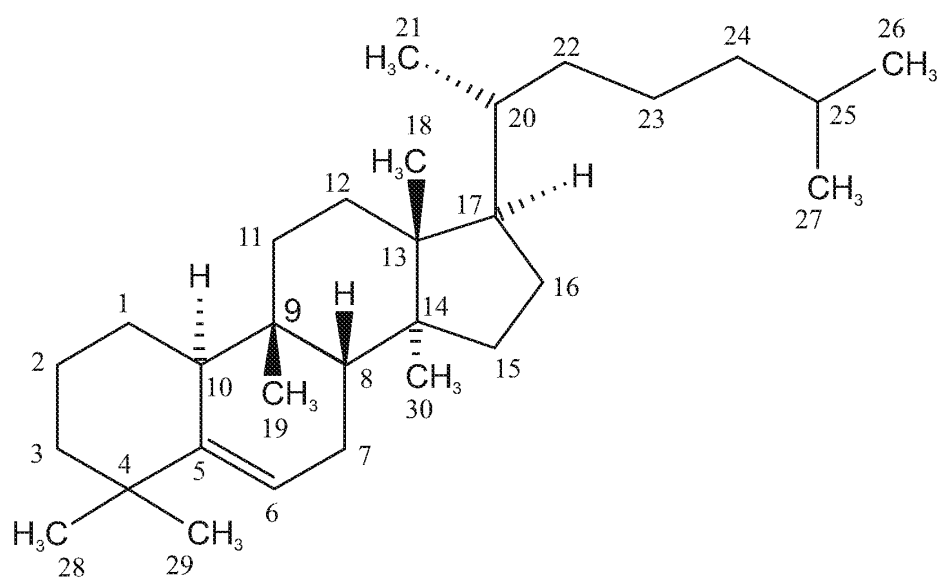


FIG. 1 continued

Structure of the cucurbitacins [7,51]

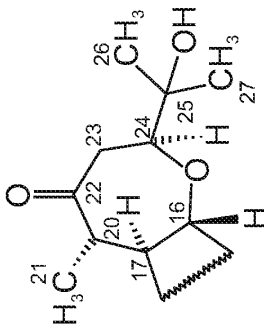
Compound	Modification of the basic structure											
	1-2	2	3	11	16	19	20	22	23-24	24	25	
Cucurbitacin A	-	-OH	=O	=O	-OH	-OH	-OH	=O	=	-	-OAc	
Cucurbitacin B	-	-OH	=O	=O	-OH	-	-OH	=O	=	-	-OAc	
Cucurbitacin C	-	-	-OH	=O	-OH	-OH	-OH	=O	=	-	-OAc	
Cucurbitacin D	-	-OH	=O	=O	-OH	-	-OH	=O	=	-	-OH	
Cucurbitacin E	=	-OH	=O	=O	-OH	-	-OH	=O	=	-	-OAc	
Cucurbitacin F	-	-OH	-OH	=O	-OH	-	-OH	=O	=	-	-OH	
Cucurbitacin G = Cucurbitacin H	-	-OH	=O	=O	-OH	-	-OH	=O	-	-OH	-OH	
Cucurbitacin I	=	-OH	=O	=O	-OH	-	-OH	=O	=	-	-OH	
Cucurbitacin J	=	-OH	=O	=O	-OH	-	-OH	=O	-	-OH	-OH	
Cucurbitacin K	=	-OH	=O	=O	-OH	-	-OH	=O	-	-OH	-OH	
Cucurbitacin L	=	-OH	=O	=O	-OH	-	-OH	=O	-	-	-OH	
Cucurbitacin O	-	-OH	-OH	=O	-OH	-	-OH	=O	=	-	-OH	
Cucurbitacin P	-	-OH	-OH	=O	-OH	-	-OH	=O	-	-	-OH	
Cucurbitacin Q	-	-OH	-OH	=O	-OH	-	-OH	=O	=	-	-OAc	
Cucurbitacin R	-	-OH	=O	=O	-OH	-	-OH	=O	-	-	-OH	
Cucurbitacin S	=	-OH	=O	=O	-	-	-	-	-	-	-	

FIG. 2

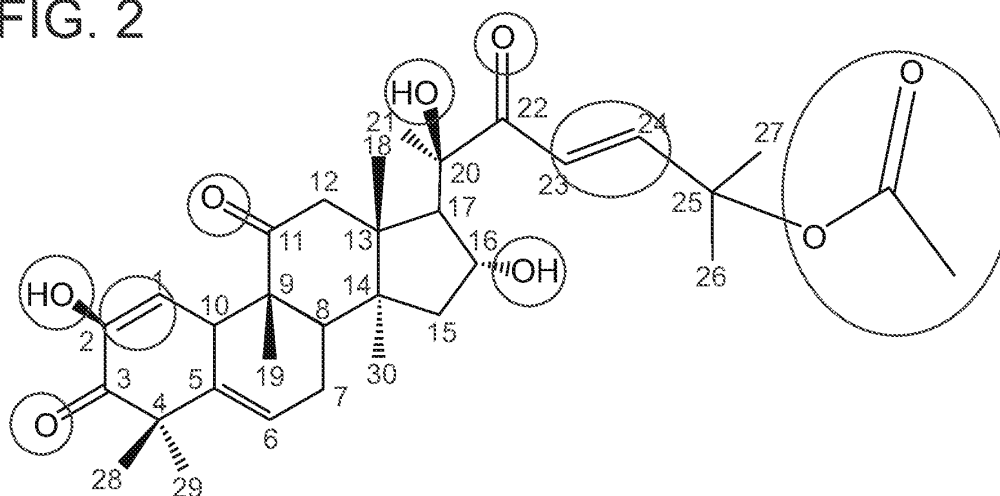


FIG. 3

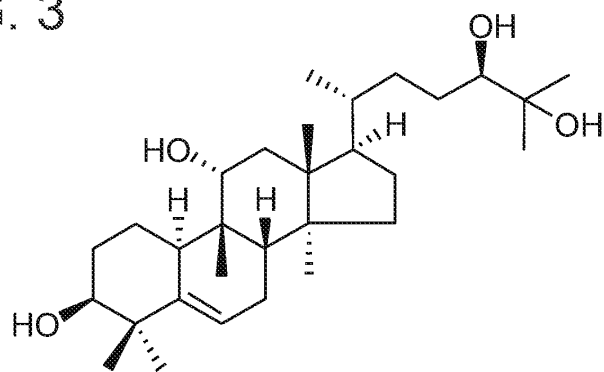
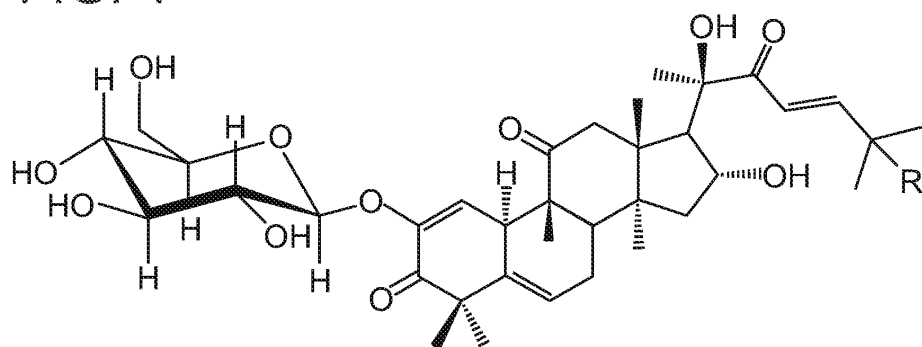


FIG. 4



1: R= OAc, Cucurbitacin E glucoside
2: R= OH, Cucurbitacin I glucoside

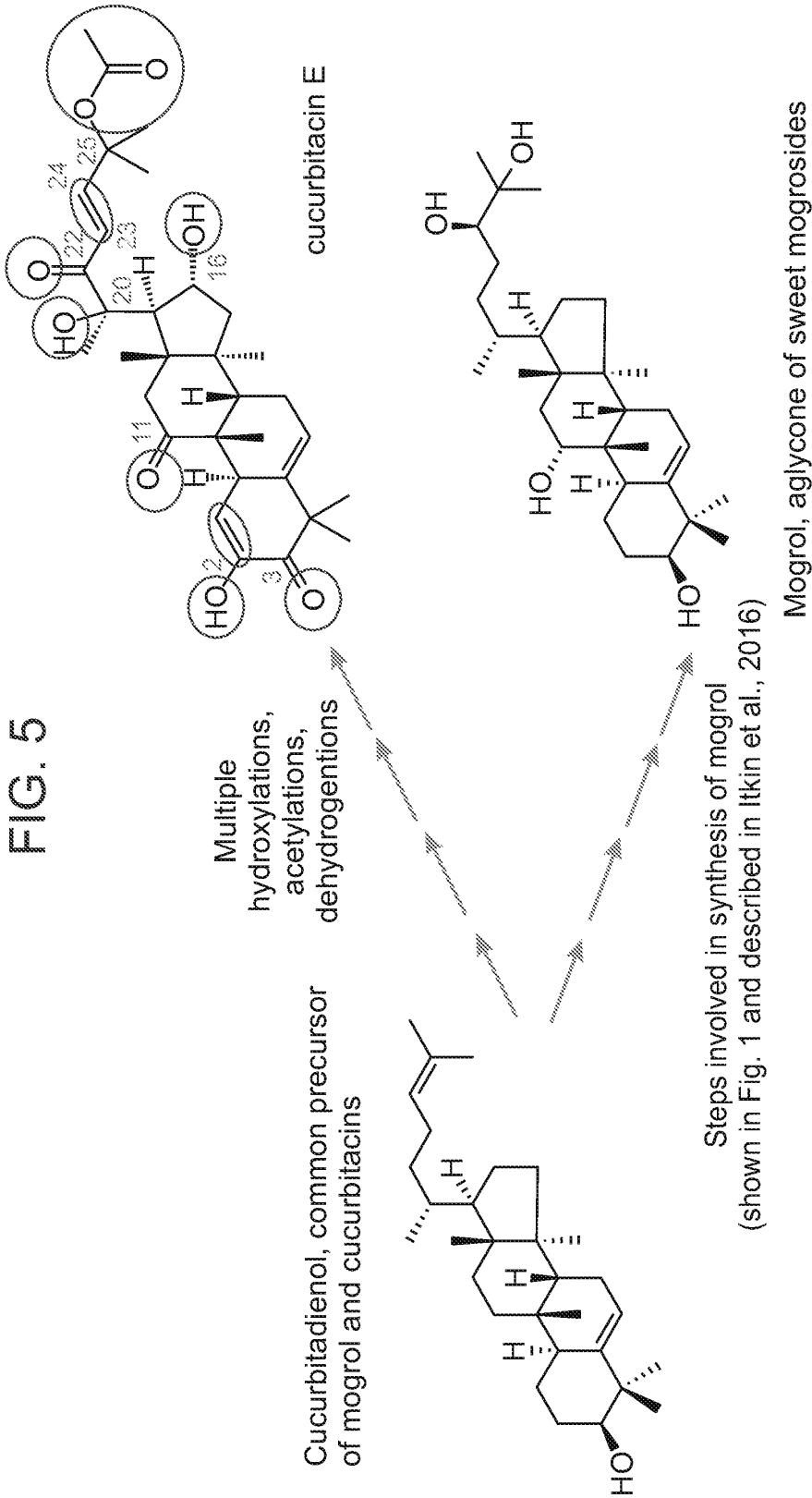


FIG. 6

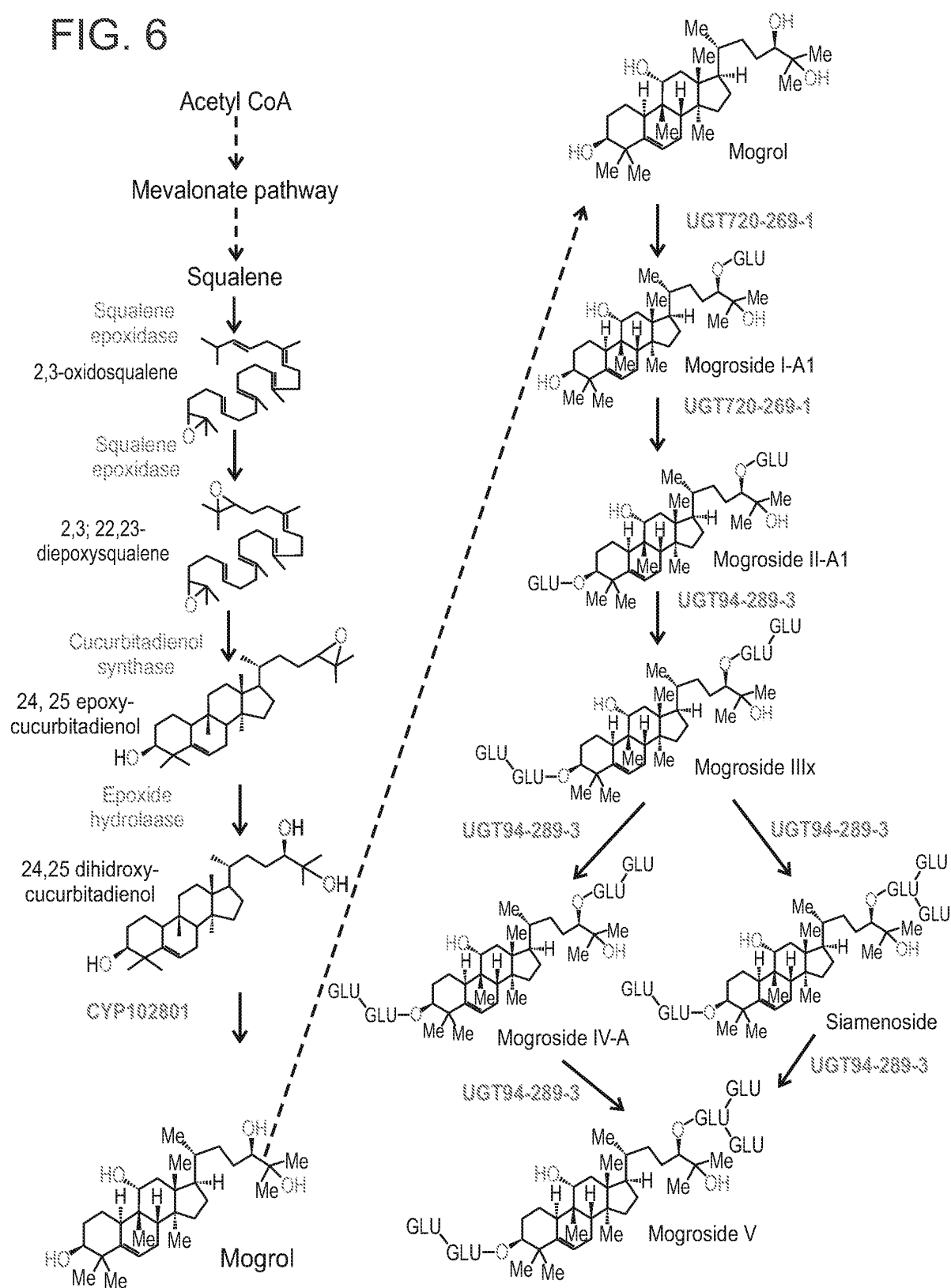


FIG. 7A

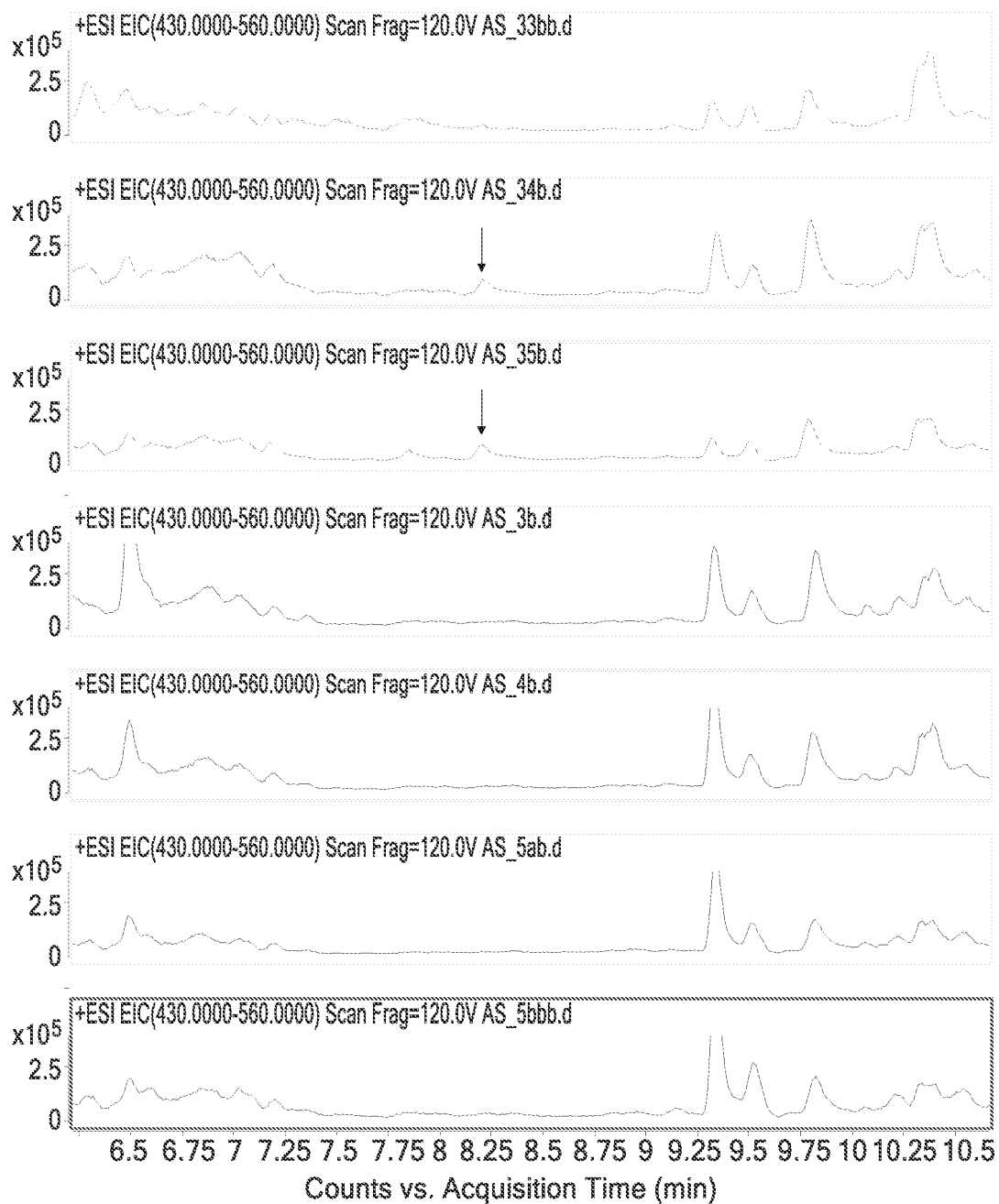


FIG. 7B

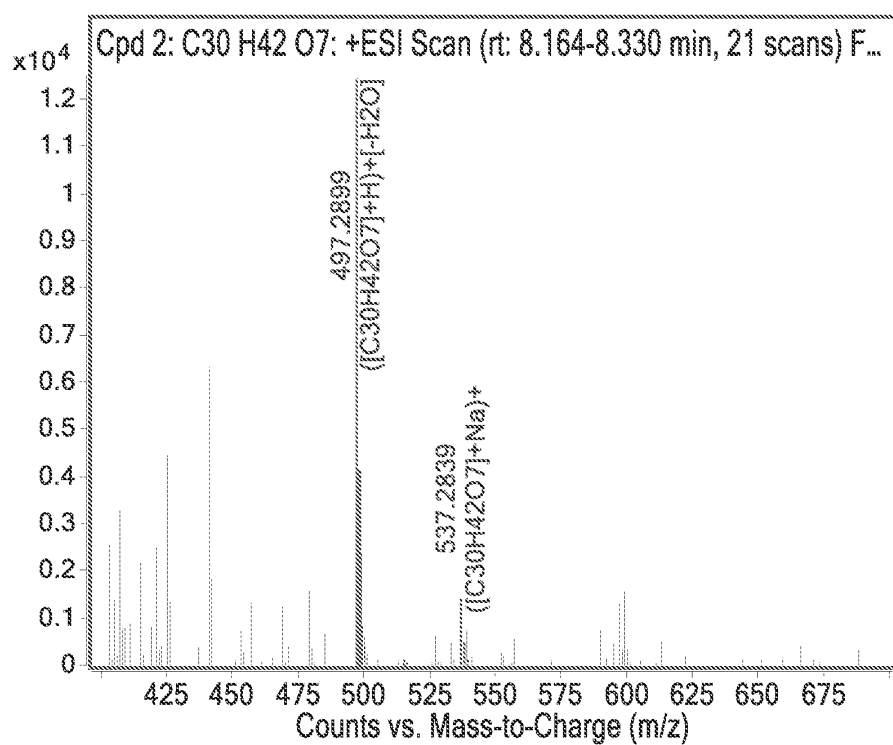


FIG. 7C

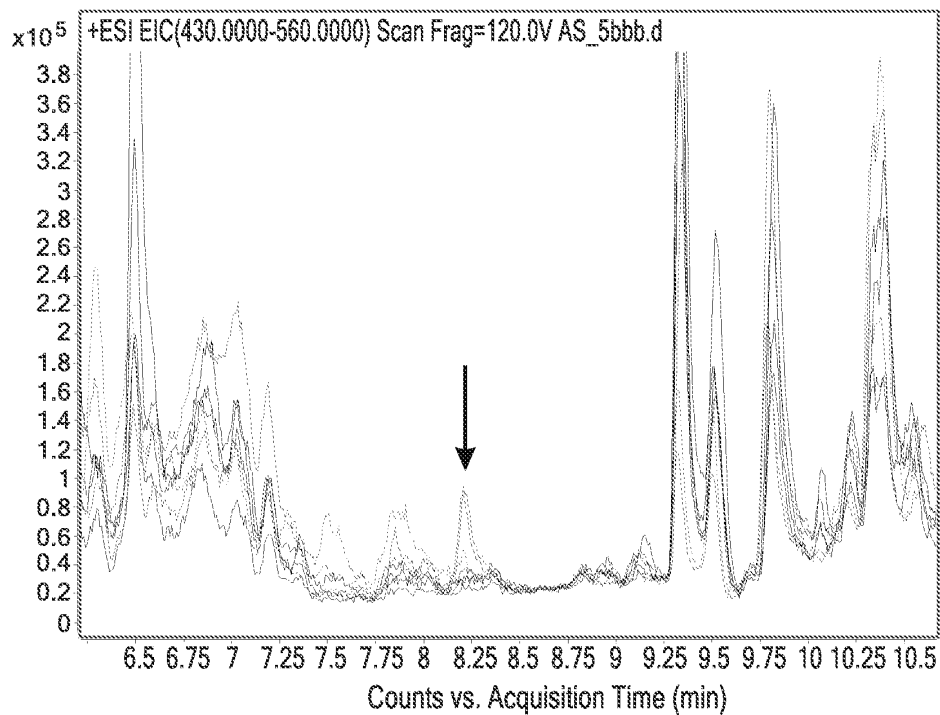
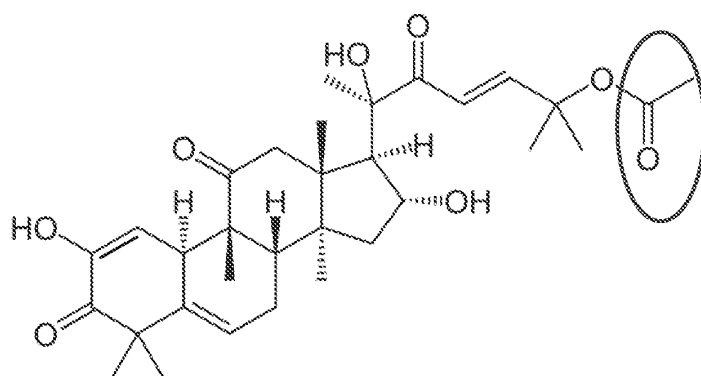
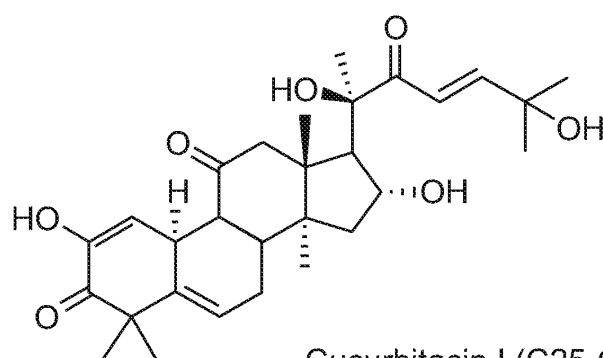


FIG. 7D



Cucurbitacin E (C25-acetyl)



Cucurbitacin I (C25-OH)

FIG. 8

Fusaro et al, EMBO Rep 2006

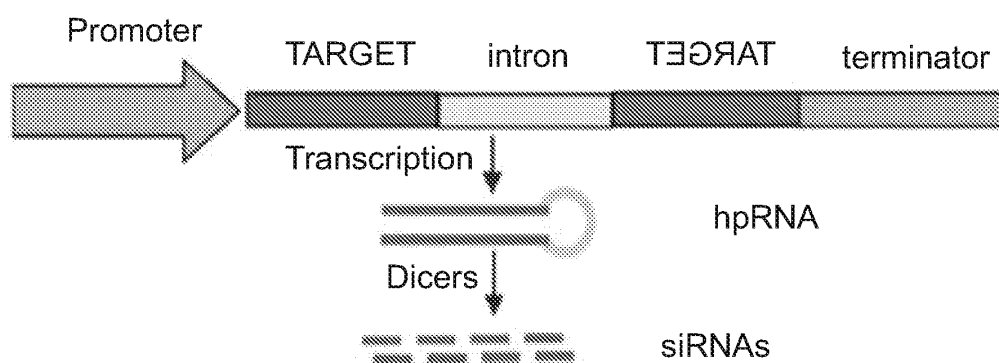


FIG. 9A

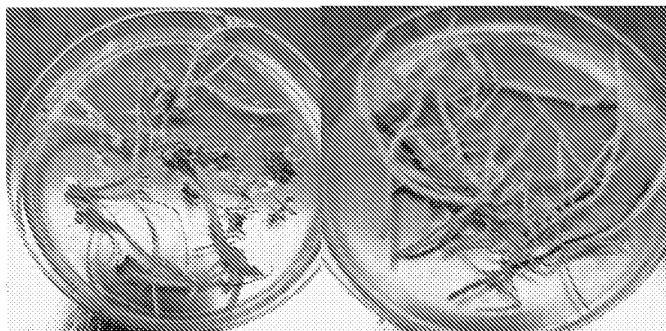


FIG. 9B

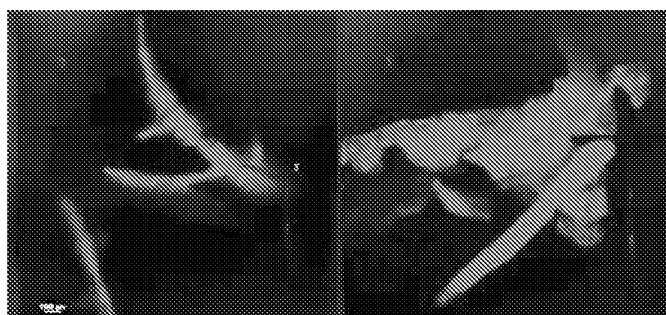


FIG. 10

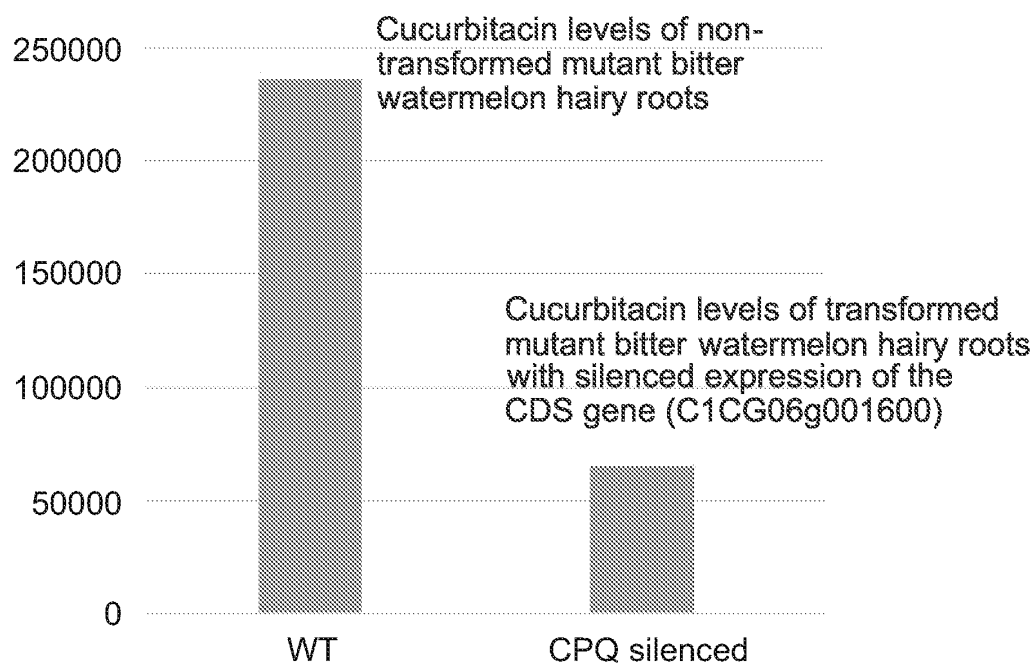
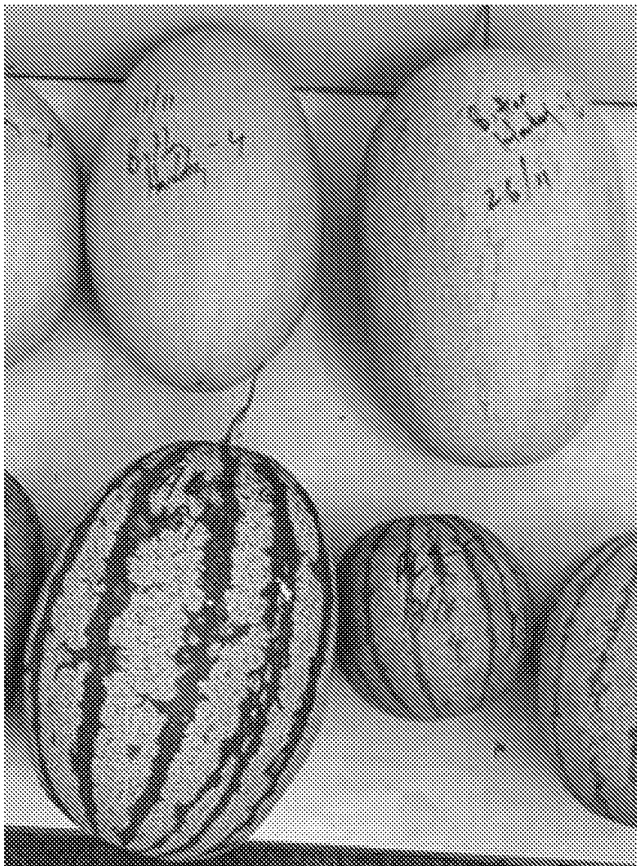


FIG. 11



	Cucurbitacin levels by HPLC	bHLH transcription factor CICG01G003370 expression in anthesis stage fruit (FPKM)
Bitter Hawkesbury	100 µg/gfw	30
Non-Bitter Hawkesbury	<1 µg/gfw	<1

FIG. 12A

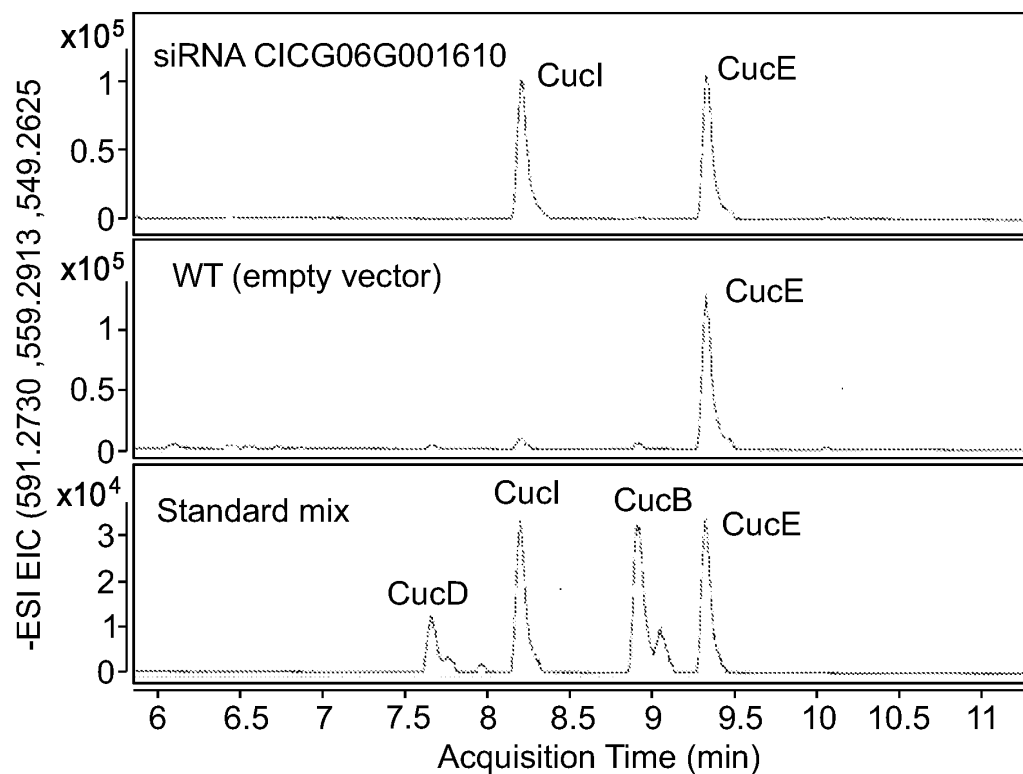


FIG. 12B

CucE ms spectrum (neg ESI)

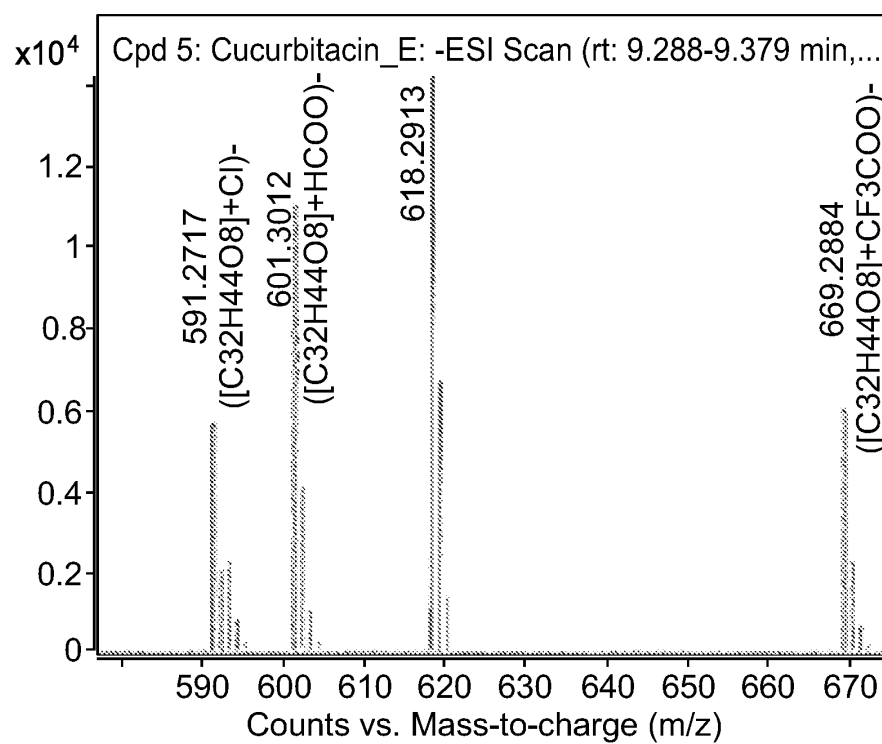


FIG. 12C

Cucl ms spectrum (neg ESI)

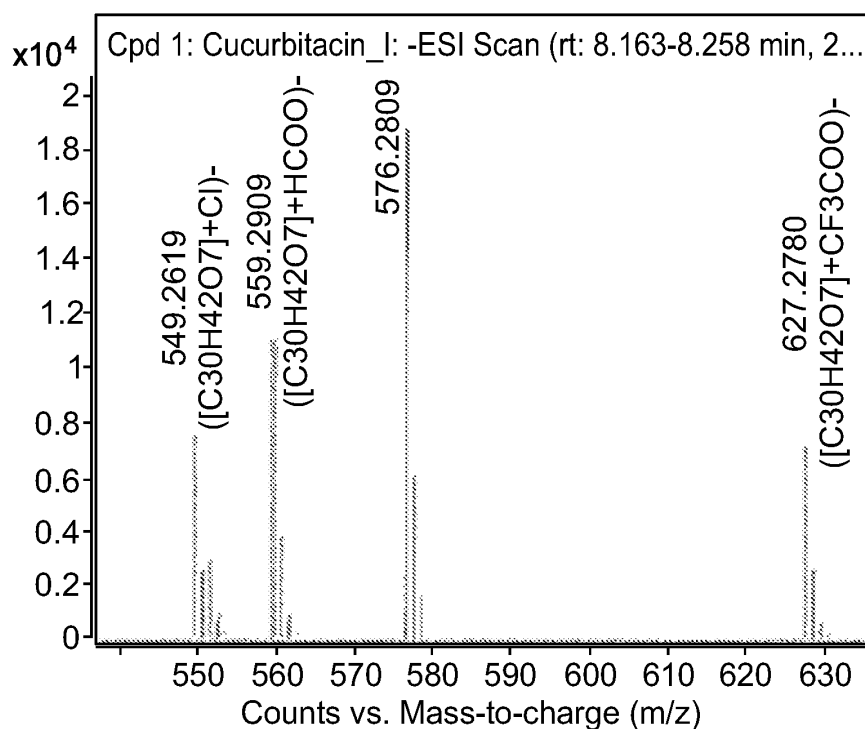


FIG. 12D

Cucl product spectrum from silenced samples

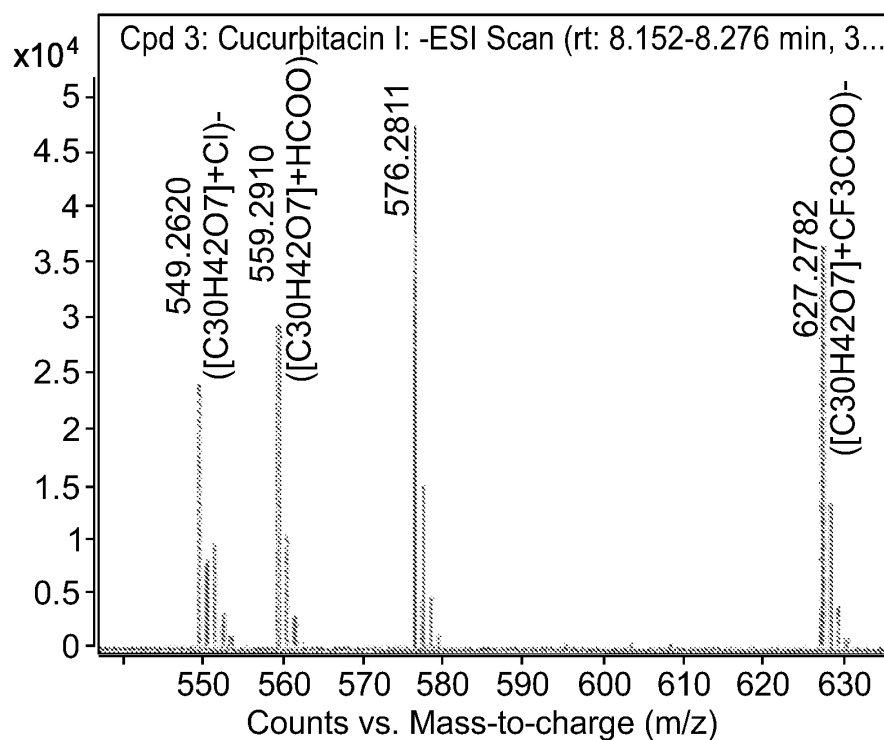
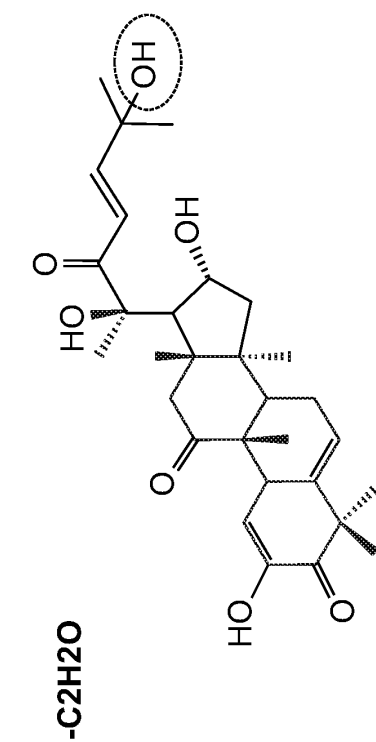
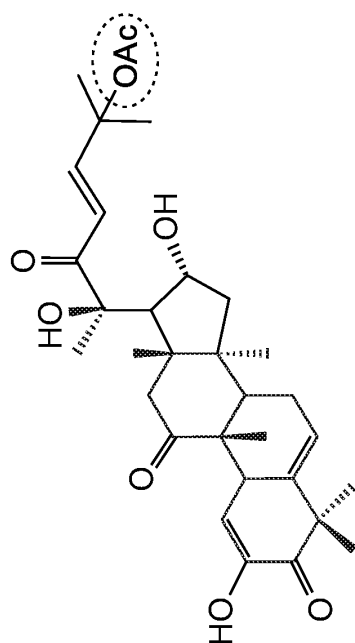


FIG. 12E



Cucurbitacin I C30H42O7



Cucurbitacin E C32H44O8

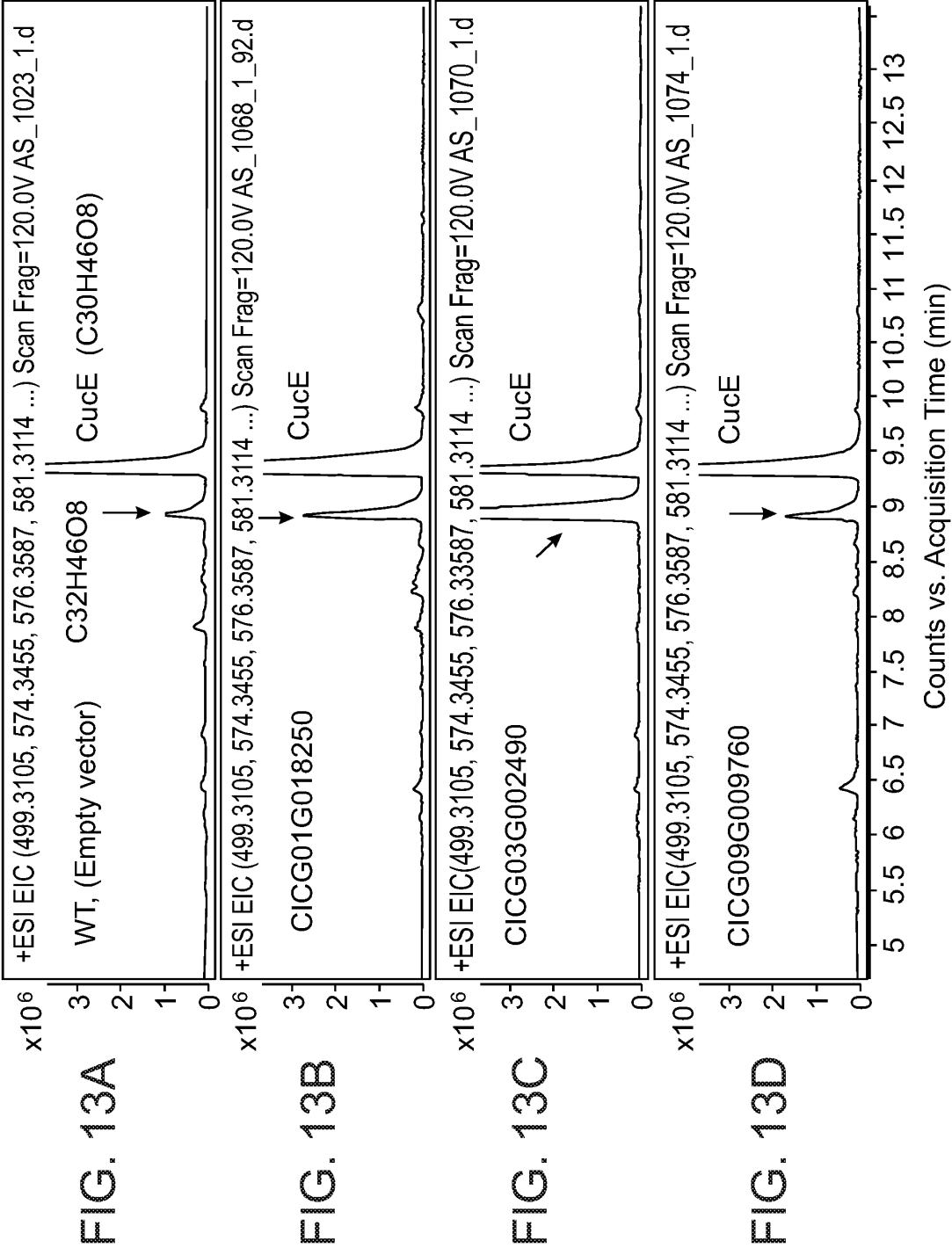


FIG. 13E

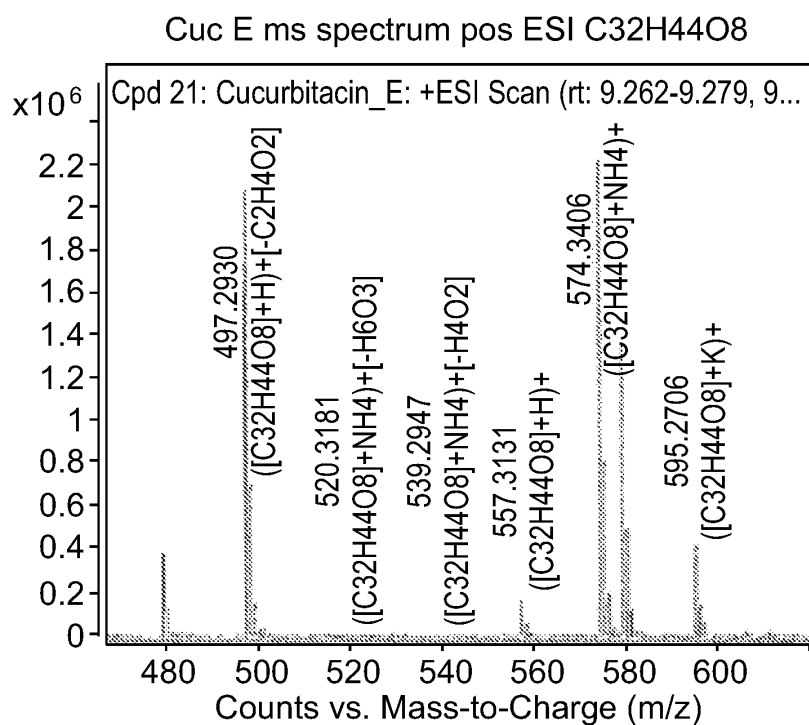


FIG. 13F

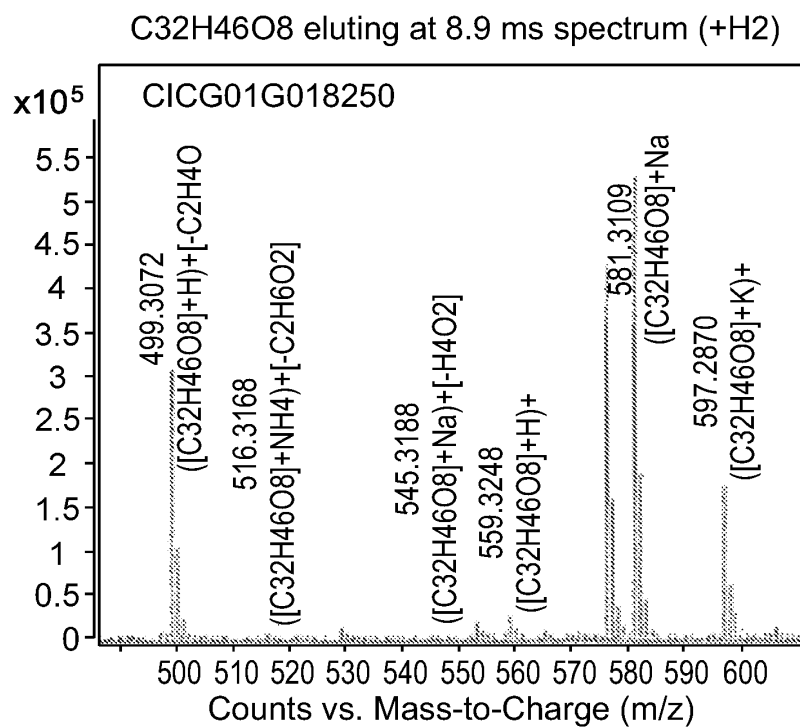


FIG. 13G

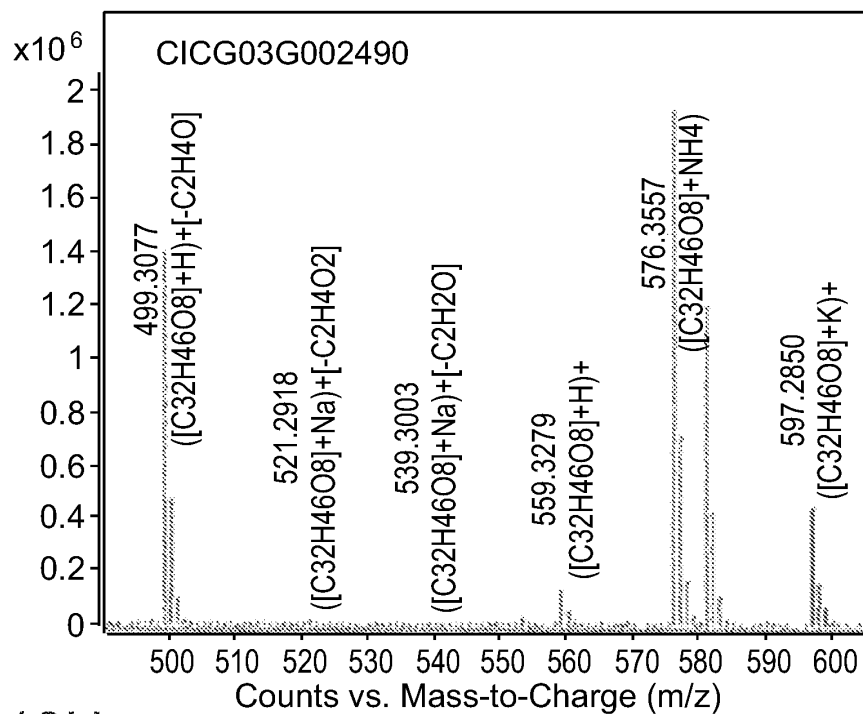
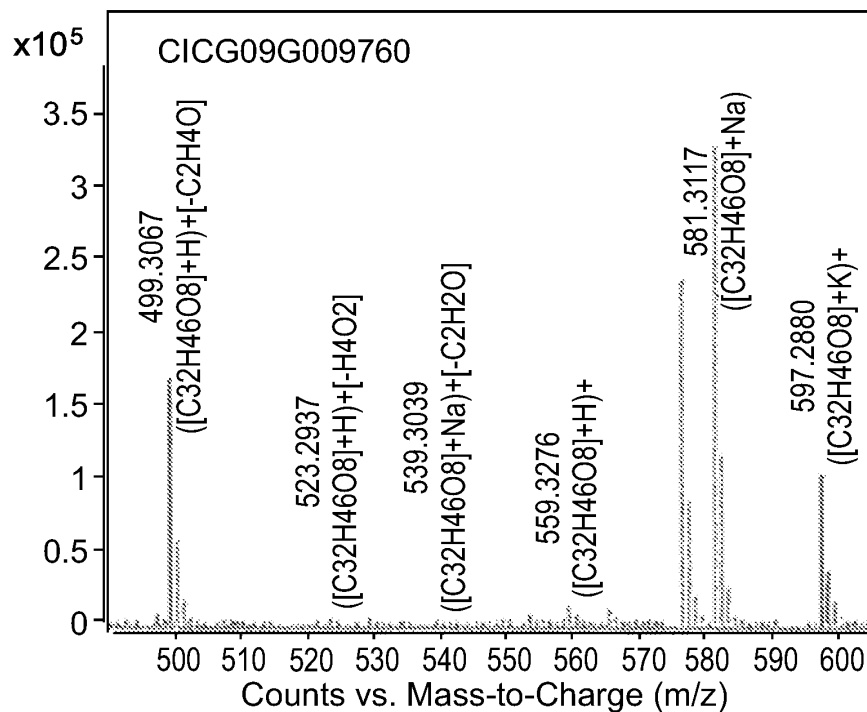


FIG. 13H



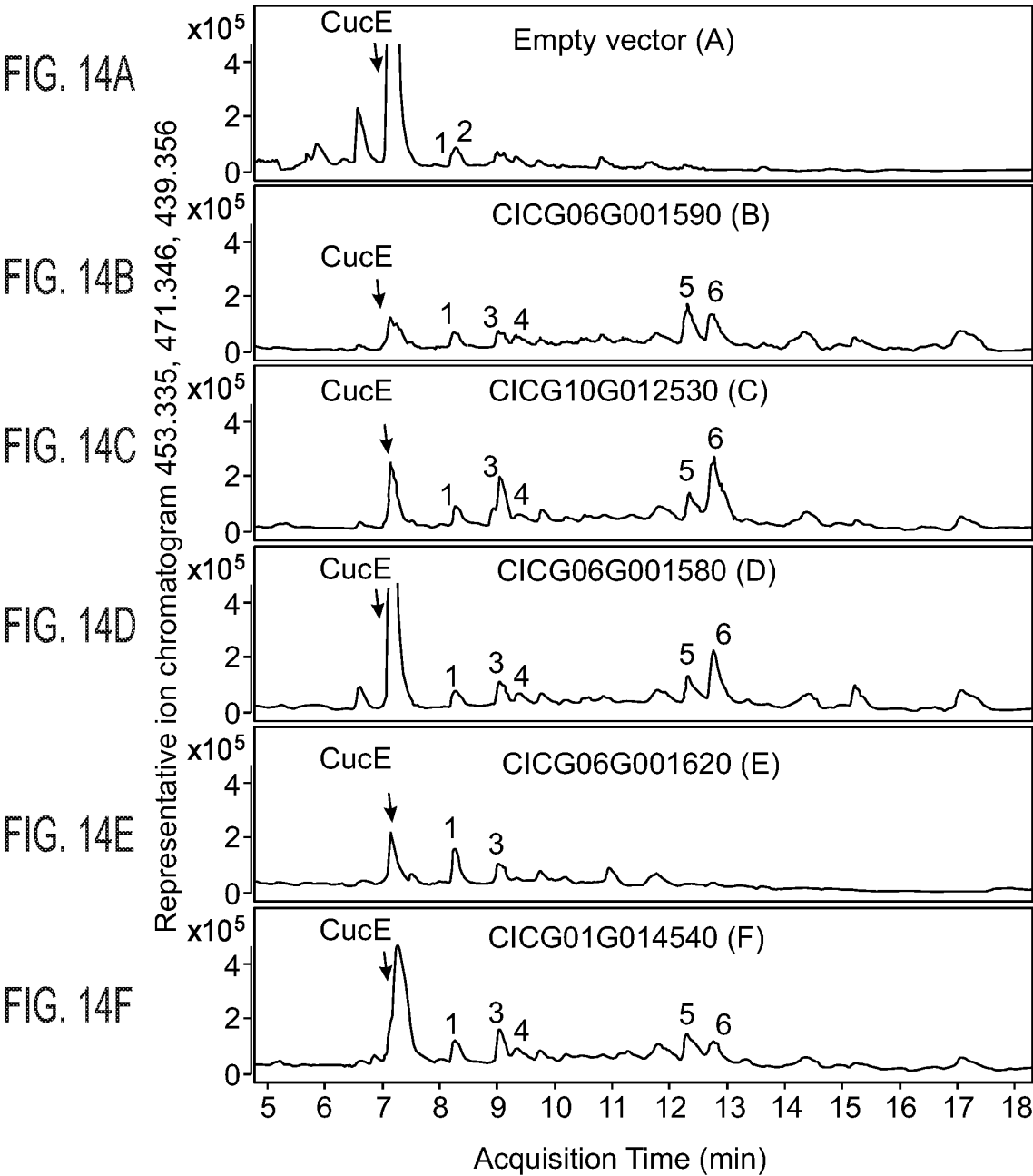


FIG. 14G

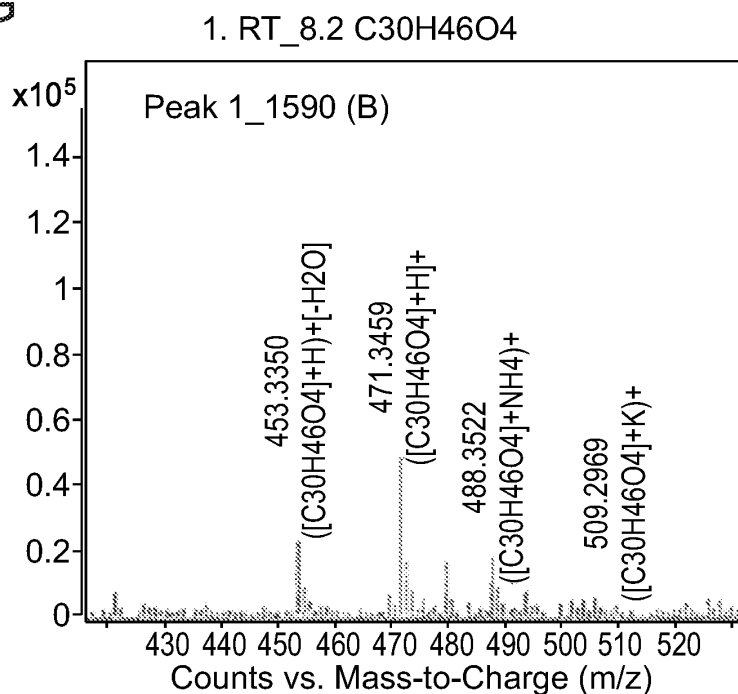


FIG. 14H

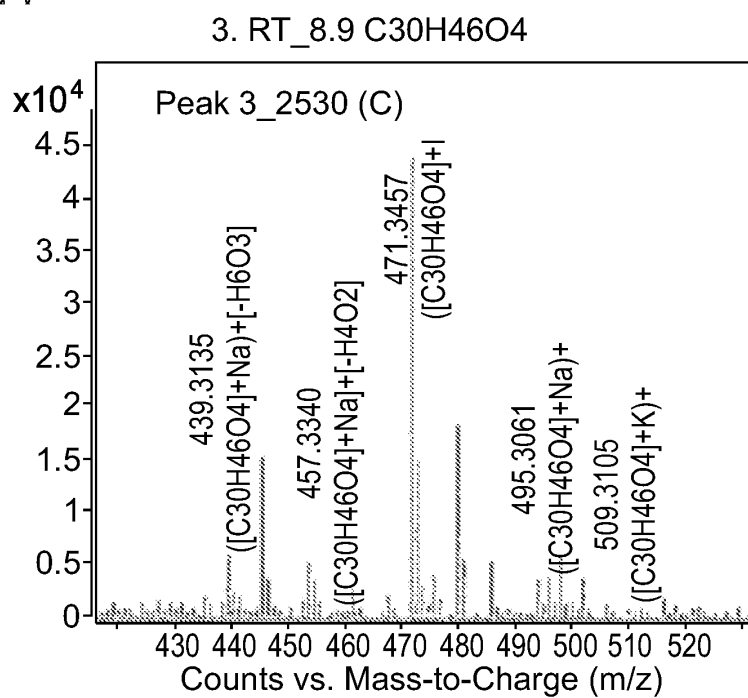


FIG. 14I

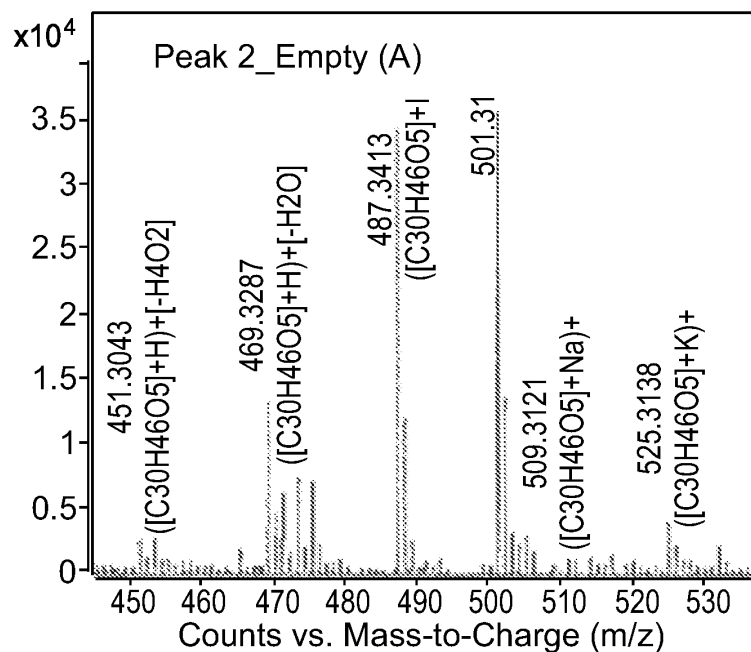
2. RT_8.3 C₃₀H₄₆O₅

FIG. 14J

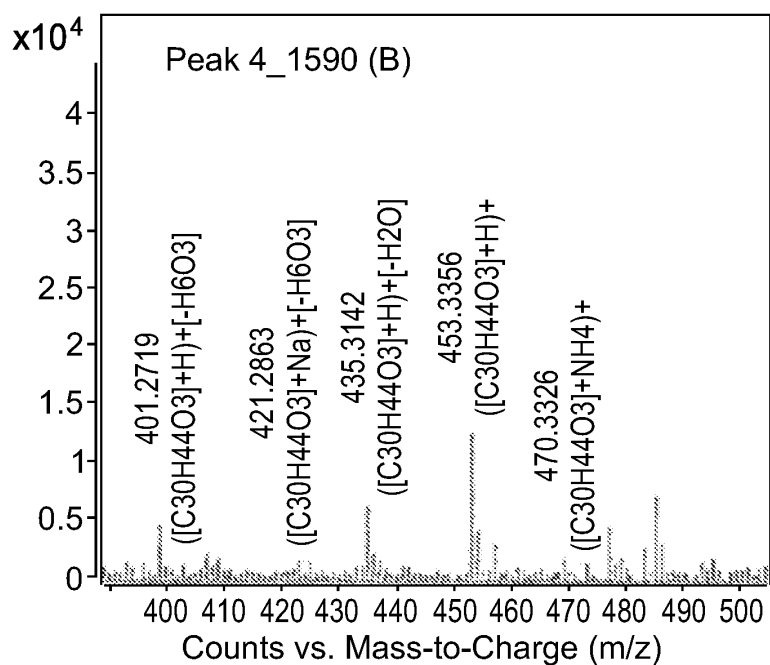
4. RT_9.4 C₃₀H₄₄O₃

FIG. 14K

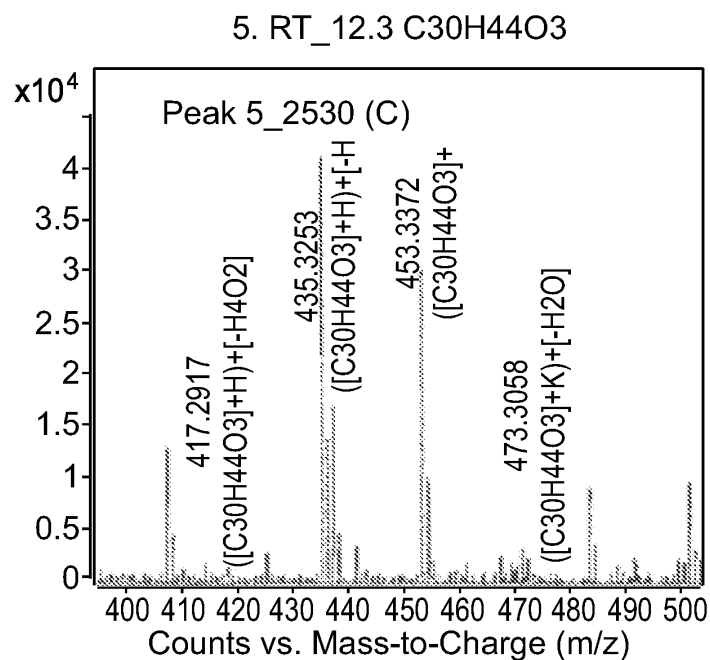
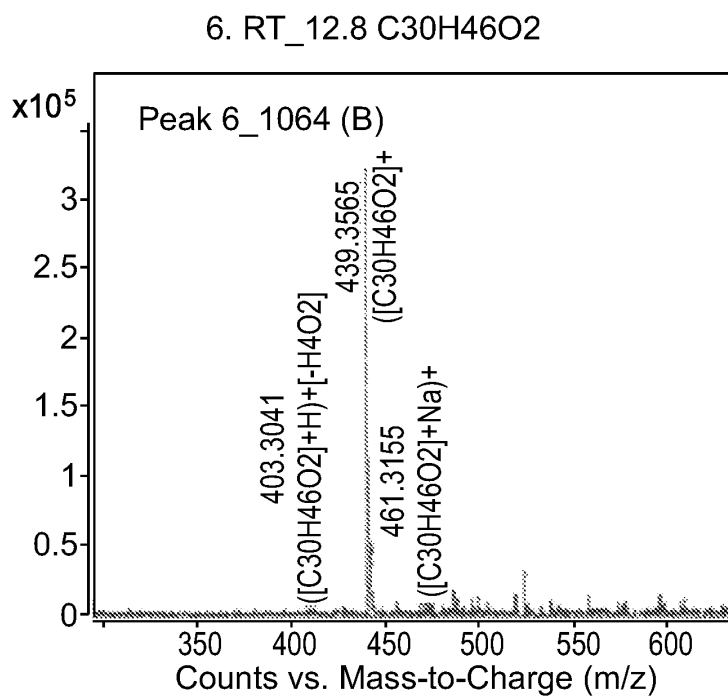


FIG. 14L



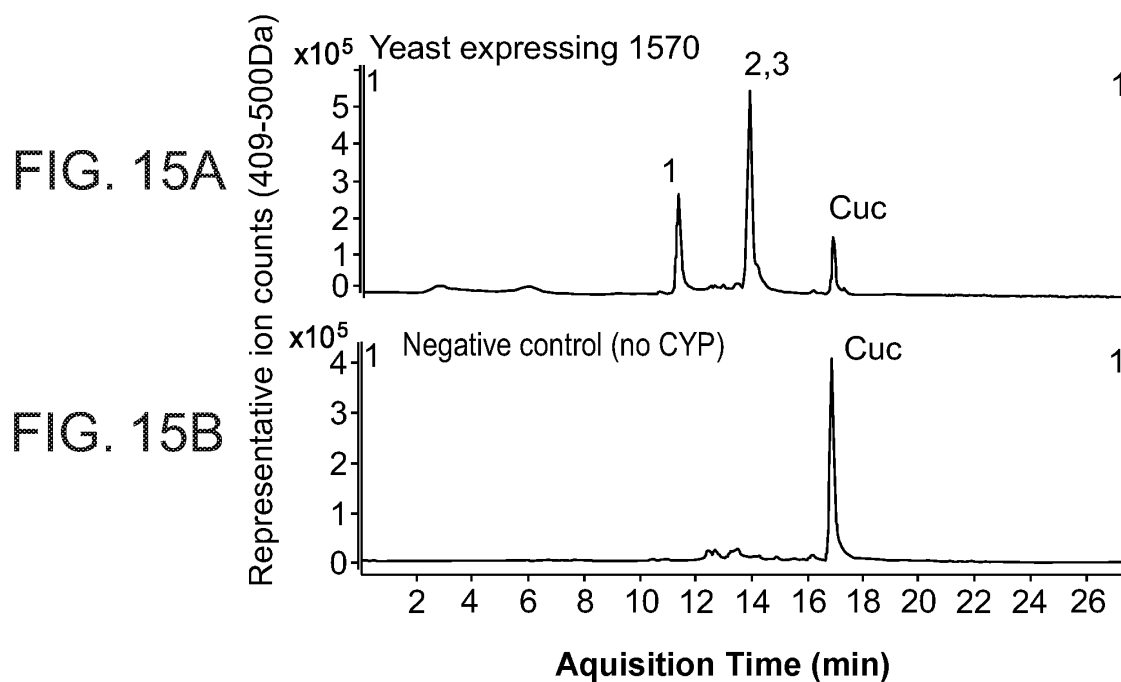


FIG. 15C

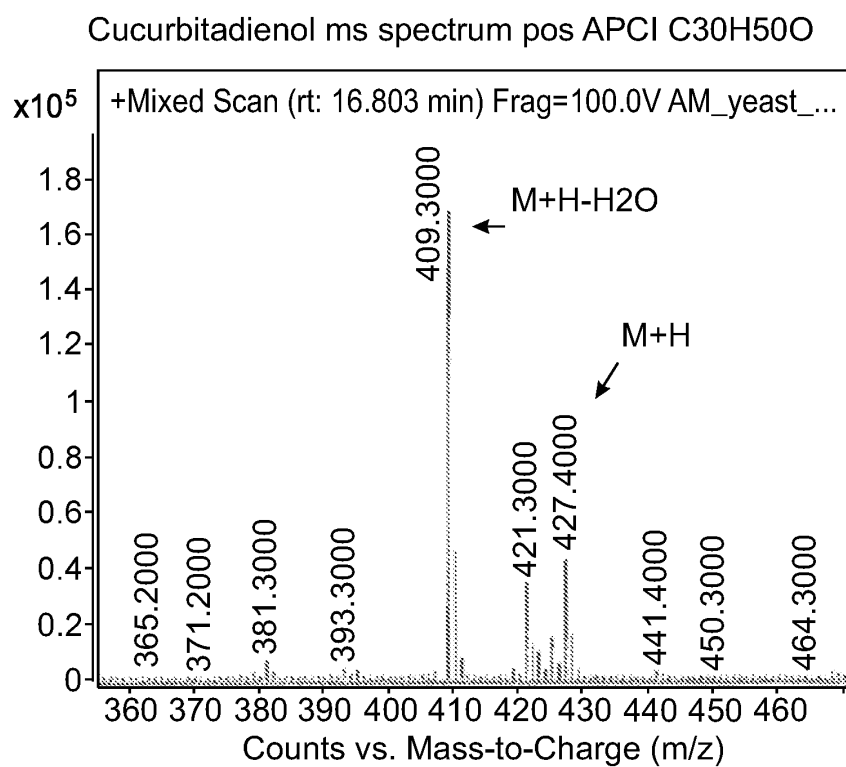


FIG. 15D

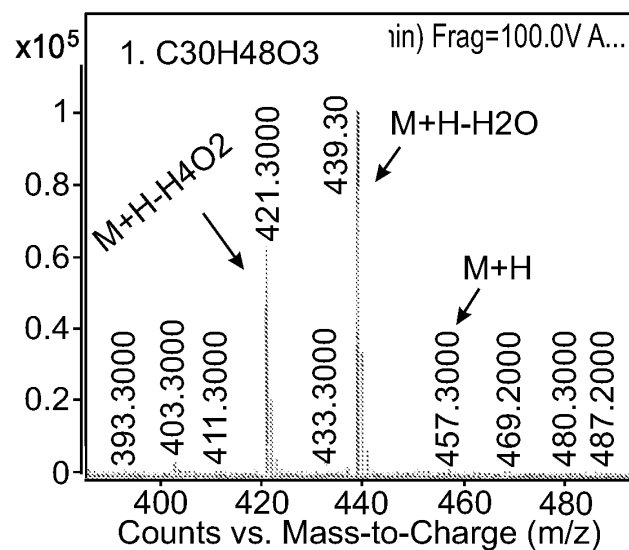


FIG. 15E

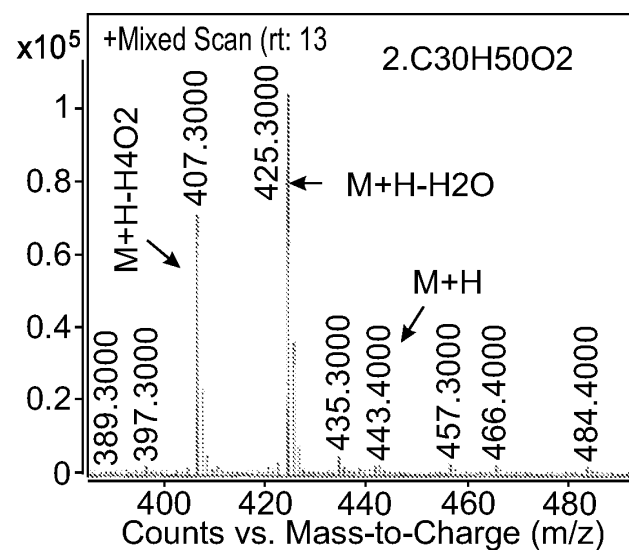


FIG. 15F

