

## Action of *Mangifera indica* leaf extract on acne-prone skin through sebum harmonization and targeting *C. acnes*

### SUPPLEMENTARY DATA

#### Characterization of phytomarkers in *Mangifera indica* extract by HPLC-UV

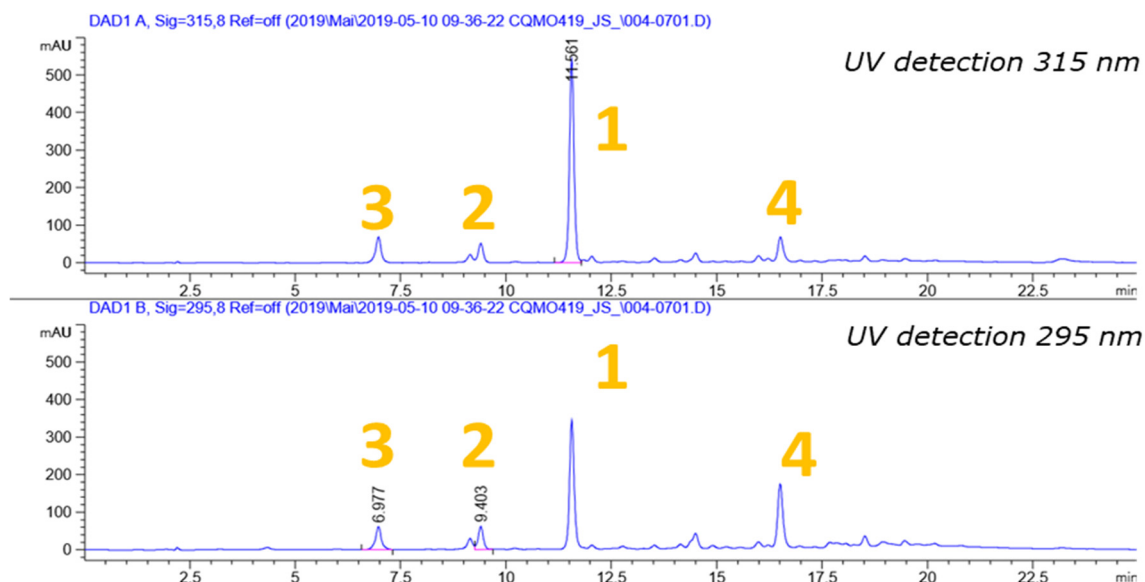


Figure S1: HPLC-UV chromatograms of *Mangifera indica* extract at 315 and 295 nm.

The compounds 1,2,3 and 4 were identified as follows:

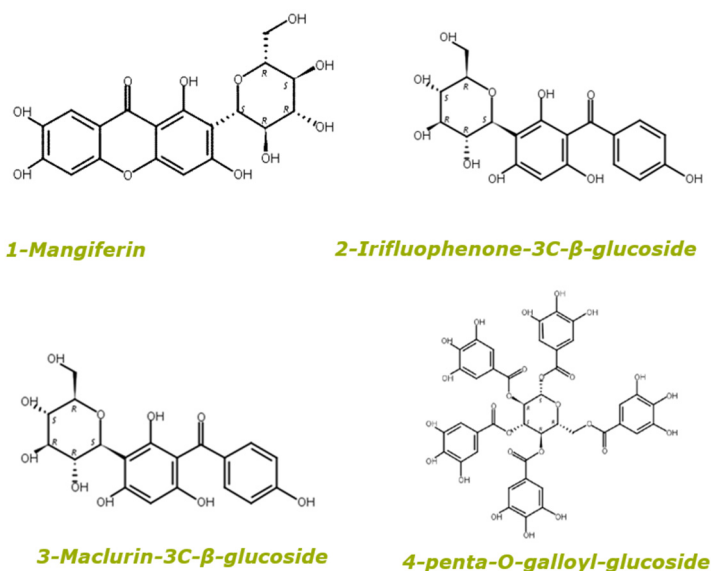


Figure S2: chemical structure of the 4 main phytomarkers

The amount of the four main phytochemicals, which have been quantified in different batches as follows:

Batch	Mangiferin content (in ppm)	Iriflophenone-C-glucoside content (in ppm)	Maclurin-C-glucoside content (in ppm)	penta-O-galloyl-glucoside (in ppm)
a	1961.0	65.6.0	834.5	958.0
b	1896.0	434.3	278.2	816.0

### ***Inverse docking***

*Table S1: Results for maclurin analysis*

Category	Name	Score	Consequence
<b>Transcription factor / receptor</b>	RXR alpha	7.1674	Modulation of lipogenesis
	Nuclear receptor ROR-alpha	7.1393	
	Glucocorticoid receptor	7.4371	
	Insulin receptor	7.7369	
	IGF1	8.7891	
	PPAR $\gamma$	7.7828	
	PPAR $\delta$	7.275	
<b>Enzyme</b>	Farnesyl pyrophosphate synthase	10.7054	Direct impact on specific proteins of sebum
	FAD synthetase	7.5232	
	Cholesterol oxidase	7.5104	
	Fatty acid oxidation complex subunit alpha	7.0973	
	Squalene synthase	7.0912	

### ***Inverse docking***

*Table S2: Results for iriflophenone analysis*

Category	Name	Score	Consequence
<b>Transcription factor / receptor</b>	PPAR $\gamma$	9.4758	Modulation of lipogenesis
	PPAR $\alpha$	7.0902	
	PPAR $\delta$	7.0194	
	Retinoic acid receptor $\beta$	7.6238	

	Insulin receptor	7.3242	
	RXR $\alpha$	7.1998	
<b>Enzyme</b>	FAD synthetase	8.4401	Direct impact on specific proteins of sebum (squalene ++)
	Squalene synthase	8.5685	
	Cholesterol oxidase	8.3317	
	Farnesyl pyrophosphate synthase	9.0946	
	Farnesyltransferase/geranylgeranyltransferase type-1 subunit alpha	7.7084	
	Farnesyltransferase, CAAX box, alpha	7.4005	

**Supplementary Figure S3:**

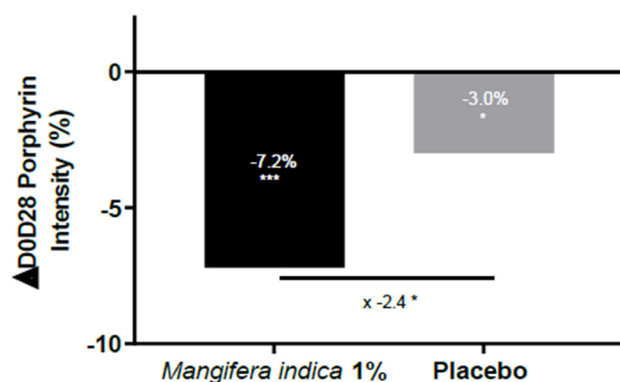


Figure S3: Porphyrin intensity analysis by VISIA® CR 2.3 on Caucasian volunteers (cheek and nose areas) after 28 days of application of cream containing *M. indica* at 1% or placebo.