



Title: Bagazo de anacardo (*Anacardium occidentale* L.) como fuente de fibra-antioxidante y su posible uso en modelos de lipoinflamación

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Introduction

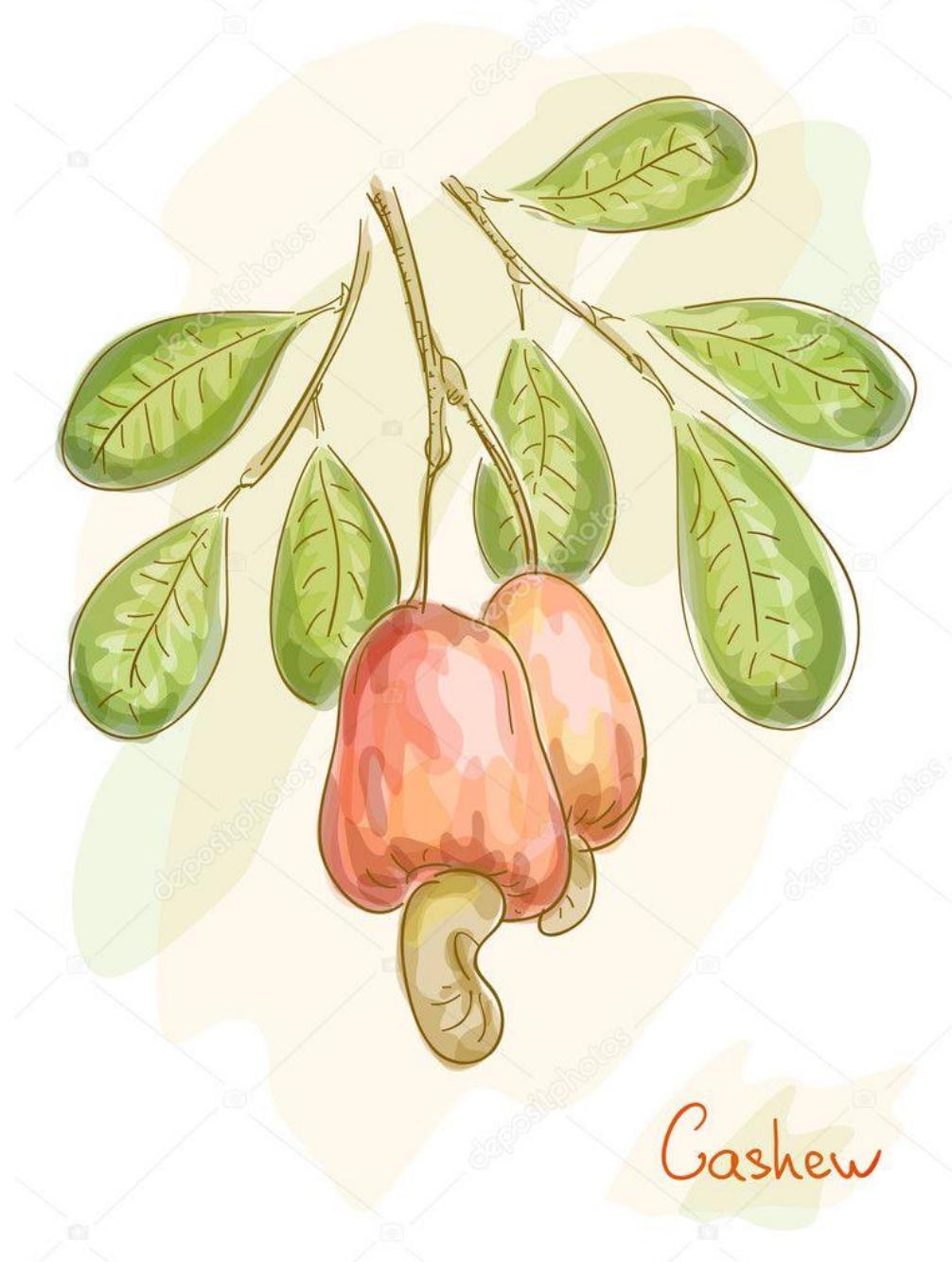
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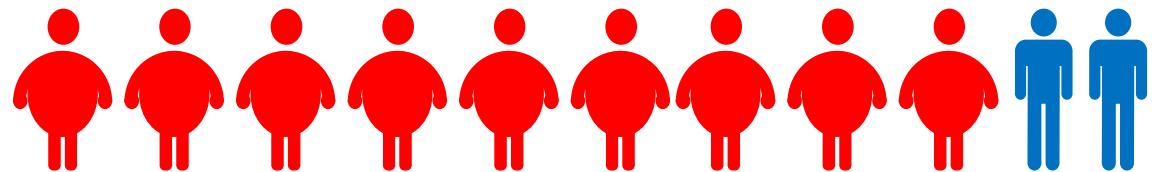
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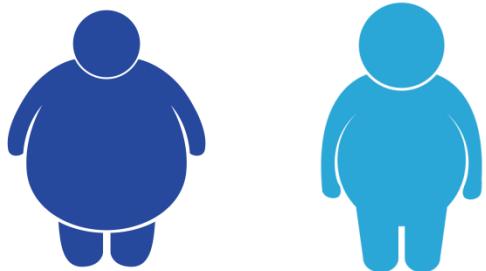
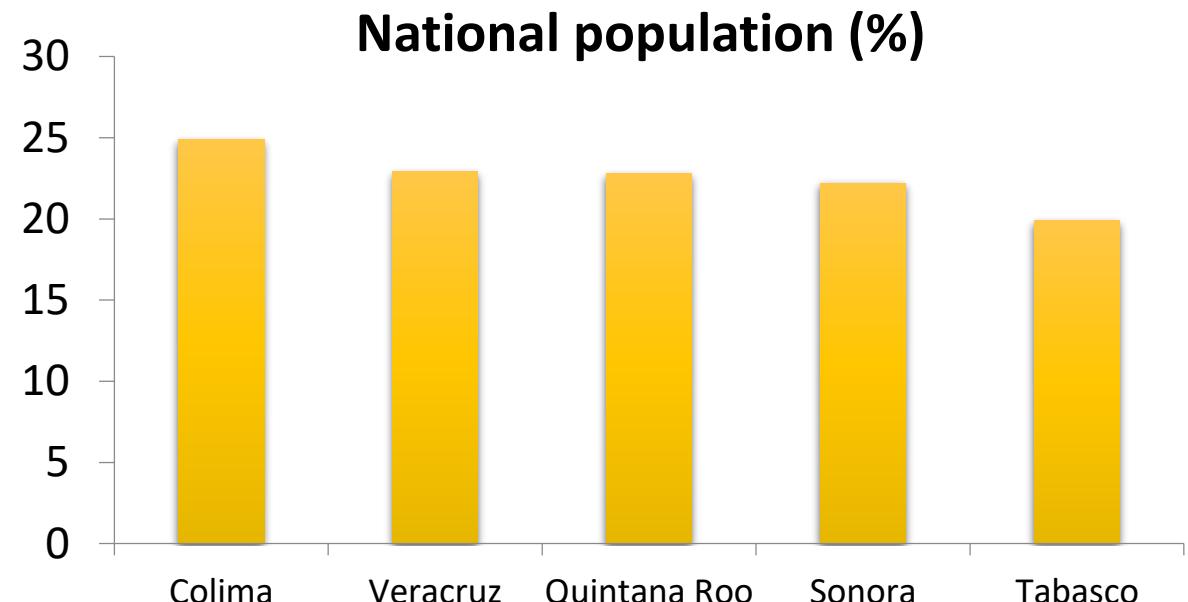
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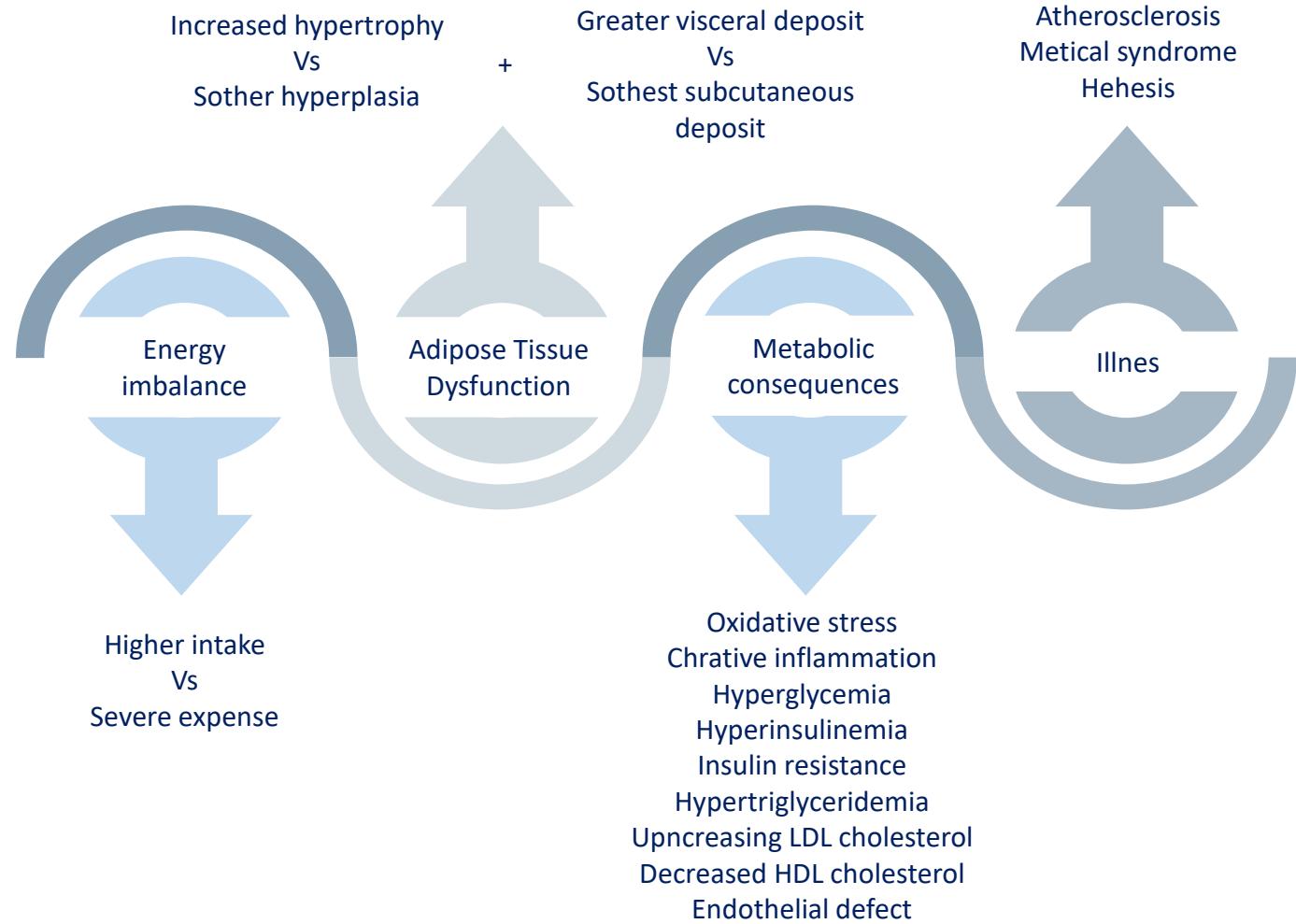
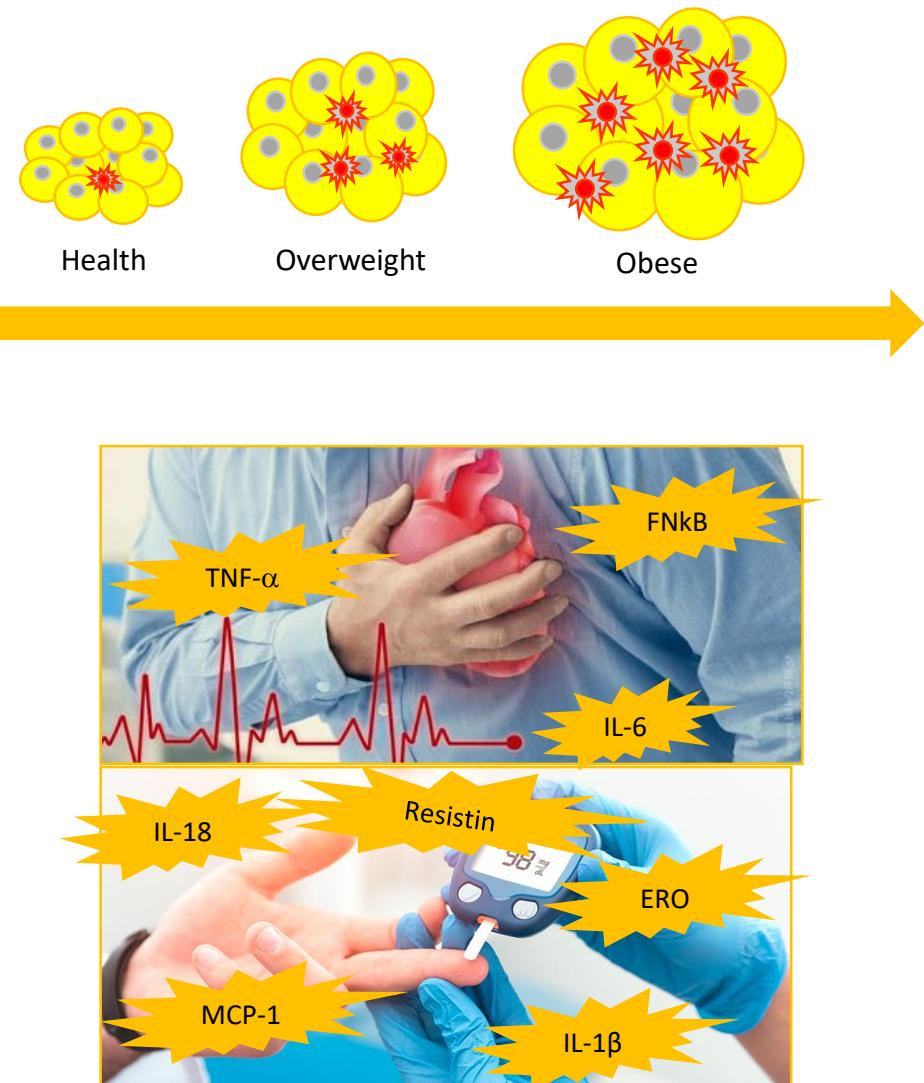


75.2% of the population in Mexico is overweight or obese.



IMC (Kg/m ²)	CLASSIFICATION
18 – 24.9	Health
± 25 – 29.9	Overweight
± 30 – 34.9	Obesity

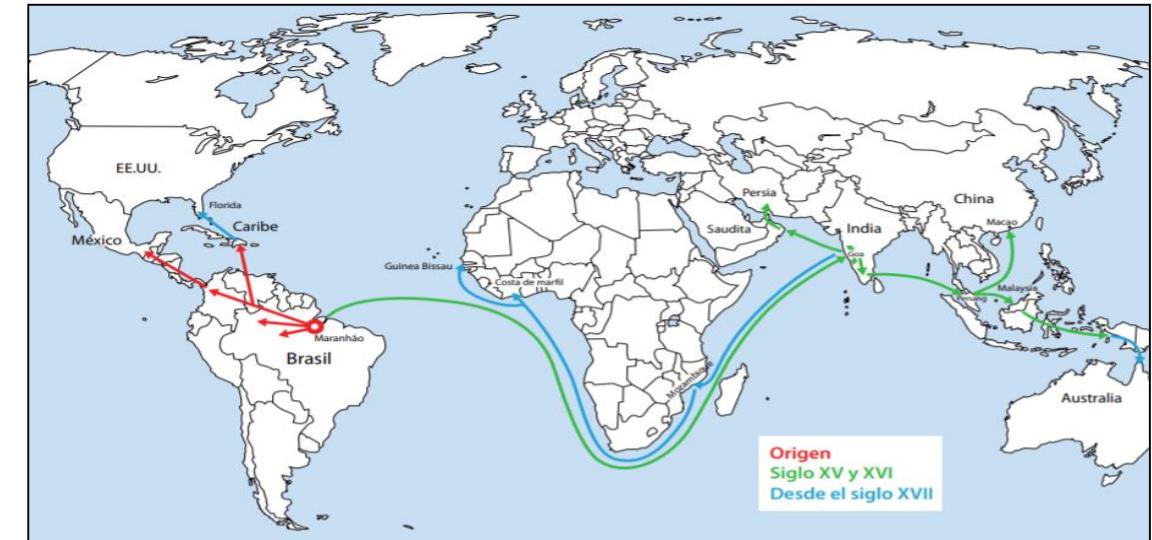
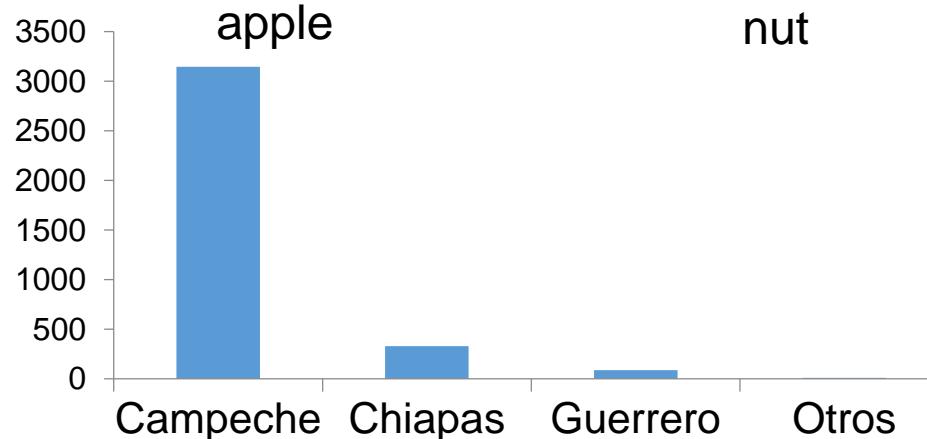
Introduction



Introduction

Anacardium occidentale L.

(Anacardo, Marañón, Cashew, Cajul
among others things)



Physico-chemical characterization of natural bagasses of cashew (*Anacardium occidentale* L.)

pH	4.01
Vitamin C (mg/100g)	200
Soluble solids (Brix)	12
Reducing sugars (mg/100g)	6.84
Total sugars (mg/100g)	7.68
Proteins (%)	1.83
Lípids (%)	0.38
Fibers(%)	33.10
Moisture (%)	78.76

Methodology

DESCRIPTION	RESULTS
100g of cashew bagasse is microwaved to 390 W for 12 min and crushed in a mill.	Total phenolic compounds 777 ± 0.018 mg EAG/100g % inhibition (ABTS): 75.5 ± 0.5 Carotenoids: 909 ± 0.03 µg/100g
The bagasse was extracted by pressing, sounded to later be dried by tray.	Higher vitamin C (1984 mg EAG/100g) compared to non-sonicated samples.
Bagasse came into contact with 50% ethanol for different times in a 2:1 to 50°C ratio in an agitator.	A period of 80 minutes was adequate to achieve the highest total phenolic content in the extracts (636 mg EAG/100g).
Freeze-dried cashew pulp at -50°C	Antocianins: 7.62 ± 0.76 mg/100g b.s (pulp) y 14.74 ± 0.29 mg/100g b.s (peel and pulp remains) Yellow flavonoids : 44.91 ± 4.43 mg/100g b.s (cáscara y restos de pulpa) Total phenolics: 5286.49 ± 250.34 mg EAG/100g b.s (pulpa) y 6588.41 ± 370.32 mg GAE/100g b.s (peel and pulp remains)

Results

Cashew apple extract inhibition of fat storage and insulin resistance in the diet-induced obesity mouse model (Beejmohun *et al.*, 2015)



3.5 liters of a 50:50 (v/v) water-ethanol solution for 2 h at 50 °C



Estándar diet
(ND) (n= 9)



High fat diet(HFD)



HFD-CAE (200mg/kg de p.c)



During for 8 weeks

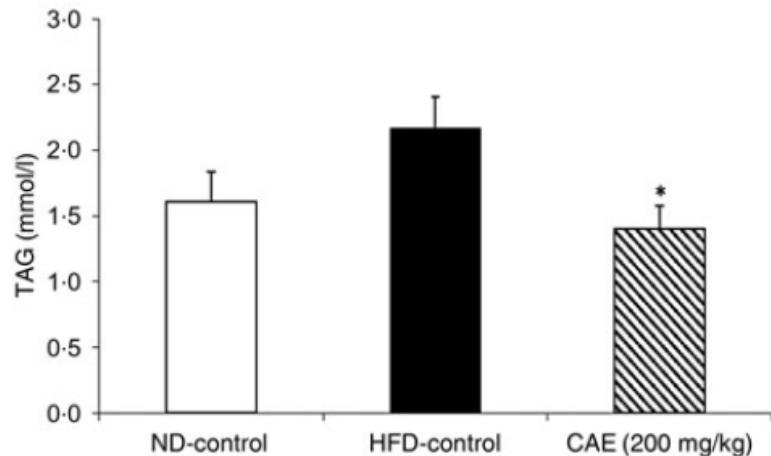
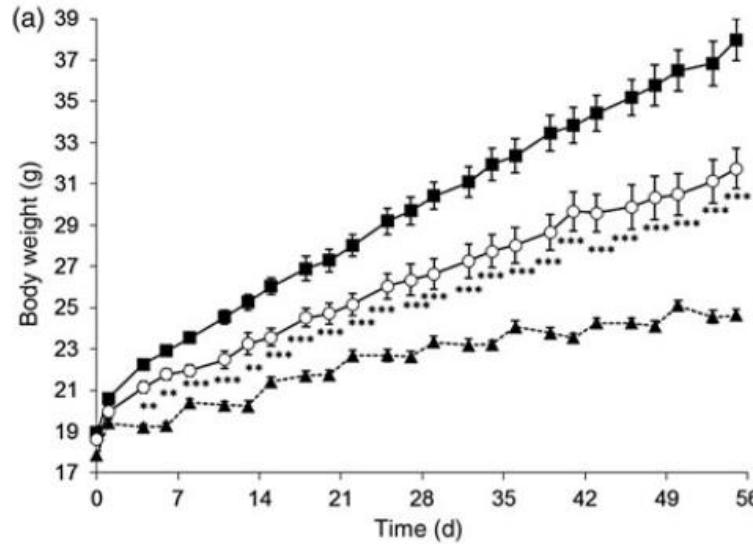


Table 2. Composition of the normal diet (ND) and the high-fat diet (HFD)

	ND	HFD
Energy		
Energy from proteins (%)	23	17
Energy from carbohydrates (%)	66	29
Energy from fat (%)	11	54
Gross energy (kJ/g)	18.0	24.0
Metabolisable energy (kJ/g)*	15.0	20.9
Crude nutrients		
Proteins (%)	20.8	20.7
Starch (%)	46.8	16.9
Sugar (%)	10.8	16.6
Fibre (%)	5.0	5.0
Fat (tallow) (%)	4.2	30.7
Saturated fat (%)	0.7	14.9
Monounsaturated fat (%)	1.1	12.4
Polyunsaturated fat (%)	2.4	1.4
Cholesterol (%)	–	0.009

* Metabolisable energy was calculated with the Atwater factors.

Conclusions

Lack of information on the fiber-antioxidant interrelation that could generate the consumption of cashew bagasse in in vivo models.

There are foods with high nutritional values that are unnoticed and that could have an impact on the health of the consumer.

The study of various natural sources for the treatment of diseases opens a large field of study where the natural benefit is clarified from a scientific and proven perspective.



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