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THE NUTRACEUTICALS

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AIMS

1. To refute misconceptions.
2. To collect all the information available about nutraceuticals, specifically about classification and bioavailability.
3. To exemplify the information with an specific nutraceutical.

Nutraceuticals are food components, which provide an extra benefit to human health.
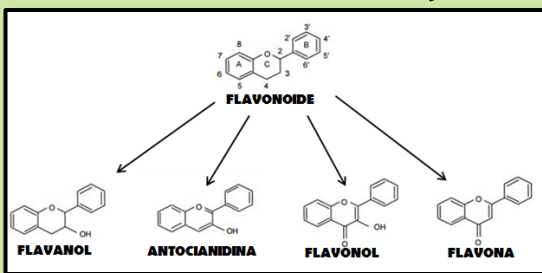
NUTRACEUTICALS ≠ FUNCTIONAL FOODS
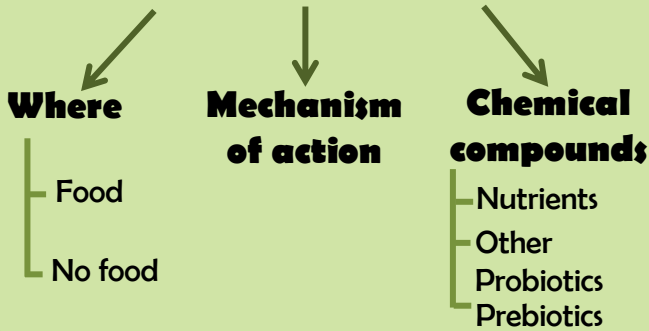
MAJOR CLASSES	SUBCLASSES
Bioaccessibility (B*)	Liberation Solubilization Interactions
Absorption (A*)	Mucus Layer Bilayer permeability Active, tight junctions or efflux transporters
Transformation (T*)	Chemical degradation Metabolism

Table 1. NuBACS classification

CLASSIFICATION

Where
- Food
- No food

Mechanism of action

Chemical compounds
- Nutrients
- Other
- Probiotics
- Prebiotics

INCORPORATION IN FOOD

Limited factors for adding nutraceuticals in food matrices:
➢ Organoleptic changes
➢ Interactions with other components
➢ Degradation in the processing of food
➢ Stability throughout shelf life
➢ Maintain the beneficial effect

ENCAPSULATION

FLAVONOIDS

FLAVONOIDE — FLAVANOL, ANTOCIANIDINA, FLAVONOL, FLAVONA

Antioxidant action

CONCLUSIONS

1. More functional foods = more nutraceuticals
2. There's no law about nutraceuticals
3. Absorption depends on the factors listed at NuBACS classification
4. The encapsulation increases the absorption
5. Flavonoids are the most active nutraceuticals in the world of plants. Important for its antioxidant action.