

BIOAVAILABILITY OF BIOACTIVE FOOD INGREDIENTS— BIBLIOMETRIC INSIGHTS ON CURRENT RESEARCH FOCUSED ON THE ROLE AND APPLICATION OF BILE ACIDS

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10,098 results on
improving food
bioavailability



19 mentioning bile
acids



1 research suggest
bile acid improve
food ingredient
bioavailability

Aim

- Bile acids participate in the complex mechanism of solubilization and absorption of lipid molecules in the intestines
- Used as supplementation and investigated as drug carriers
- Use as food additive unfamiliar
- examine the publication records of research on improved bioavailability of food compounds
- search for the applications of the bile acids and their derivatives in the field of food science technology

Material and methods

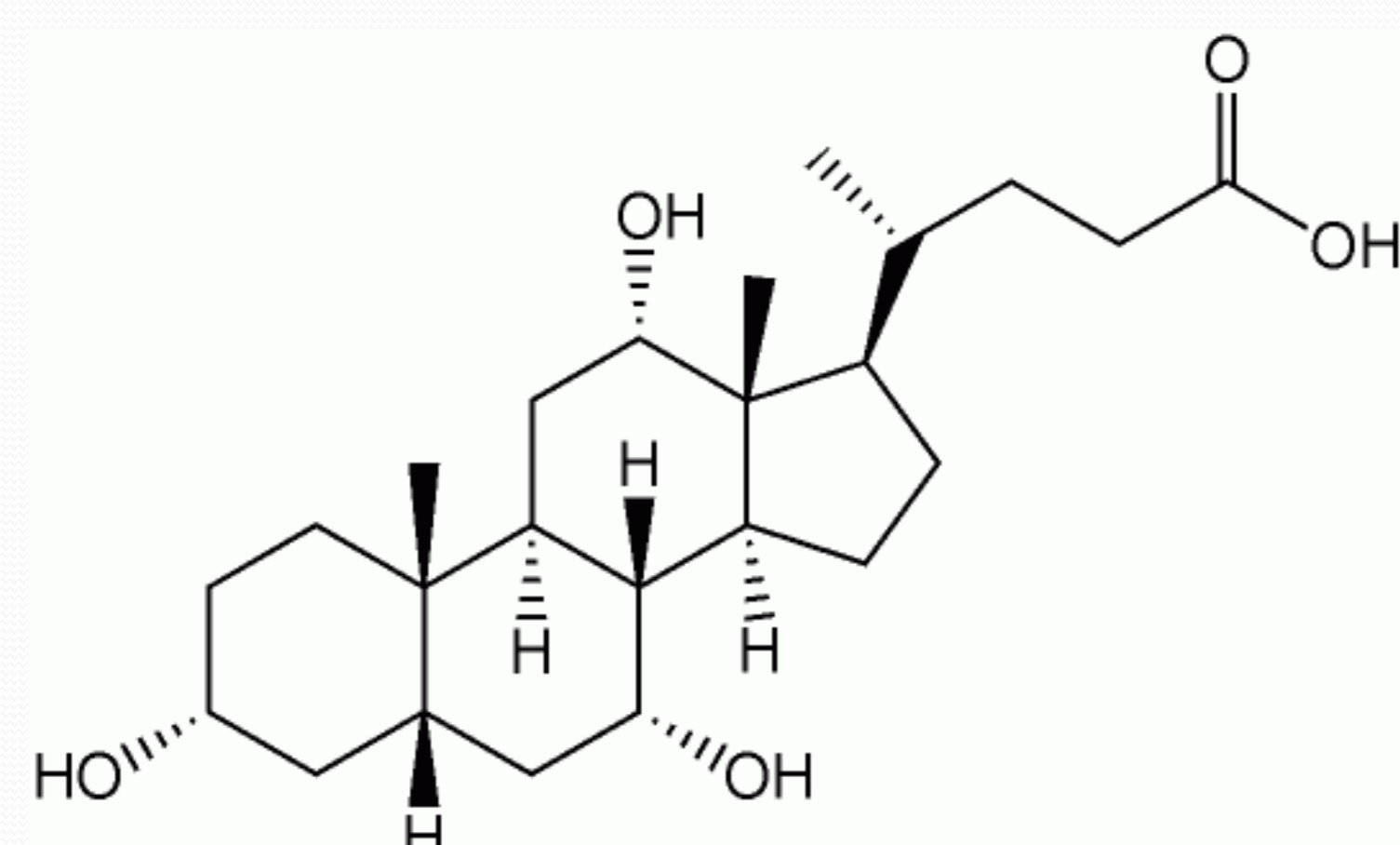
- Literature search was done in August 2021 using the Web of Science (WOS) online database (Clarivate Analytics, Philadelphia, PA, USA):
Topic = (food OR nutrient* OR dietary OR nutraceutic*) AND (bioavailability OR bioaccessibility OR liberation OR absorption)
- WOS category Food Science Technology
- Further limitation: Title= *cholic OR bile acid

Results and Discussion

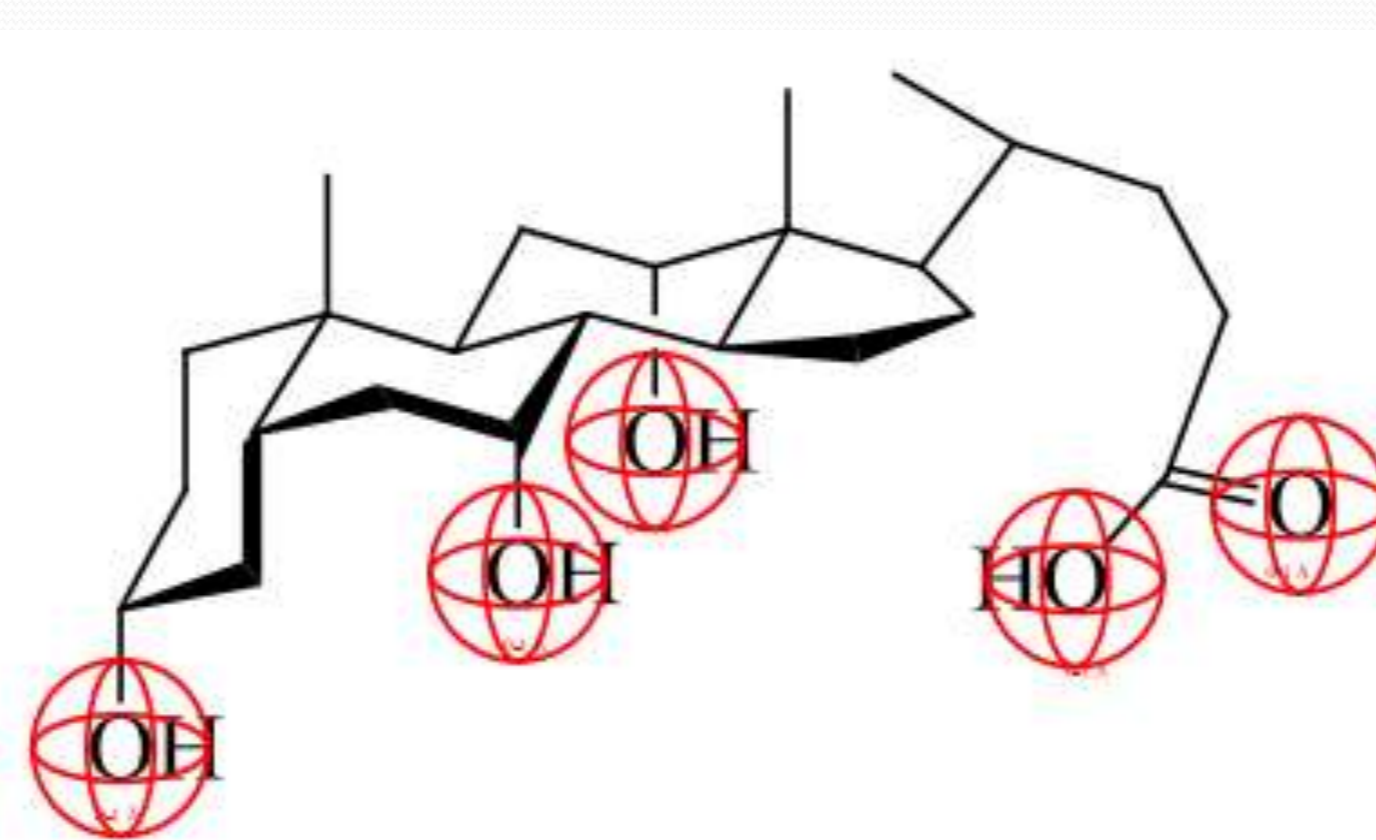
- 10,098 publications in the period from 1994 to 2021
- increasing trend in the annual number of publications
- maximum in 2020 (1171 publications)
- China, USA, Spain, India and Brazil
- Funding agencies: National Natural Foundation of China (8%), European Commission (4%) and National Council for Scientific and Technological Development, Brazil (3%).
- Limitation: Title= *cholic OR bile acid, gave 19 results, from 2004 to 2021
- most publications (4) published in 2020
- Seven publications examined the role of fiber-enriched foods in bile acid binding, while others evaluated the effects of food ingredients on bile acid transporters, synthesis, gene expression, or effects on intestinal microbiota.
- one study suggested improvement of polyphenols bioavailability due to bile acids binding.

Conclusion

This study showed that the research on food compound bioavailability is current, while the application of the bile acid micellar systems as food additives is not widely recognized and gives space for development by implementing the knowledge gained in field of drug delivery.



Cholic acid



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