



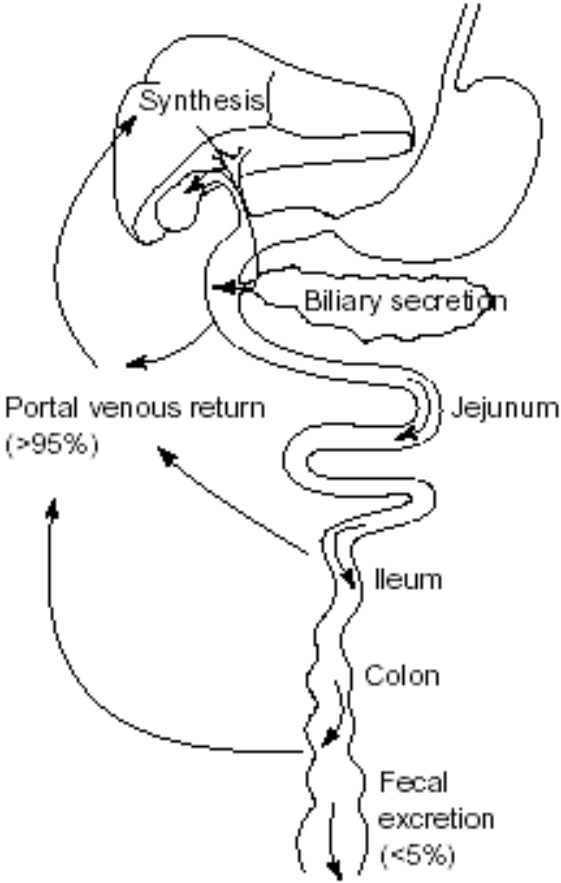
INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

Choleretics, cholelitholytics

= drugs for enhancement of biliary secretion or for dissolving of gallstones respectively

.

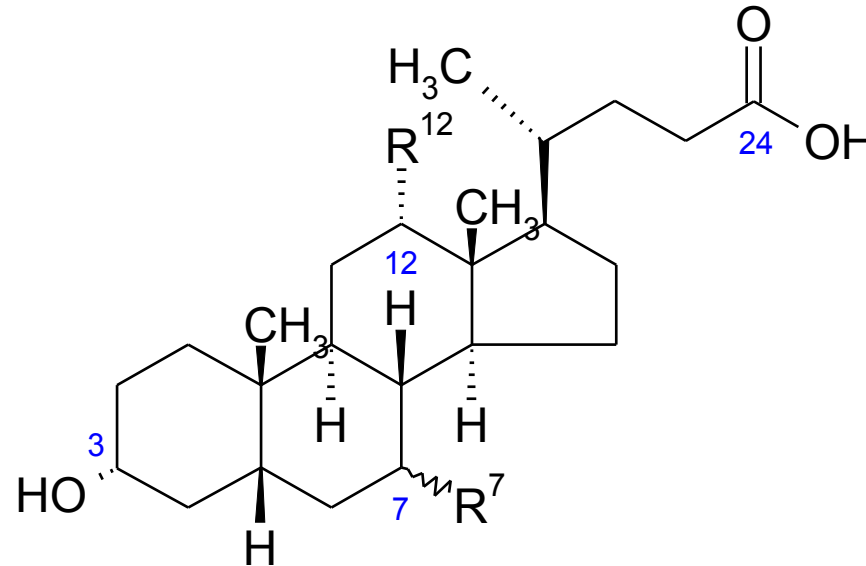
Functions of bile (gall): emulsifies fats and facilitates their enzymatic hydrolysis



Enterohepatal circulation of billiary acids

Billiary acids

- derivatives of cholan or cholan-24-oic acid respectively



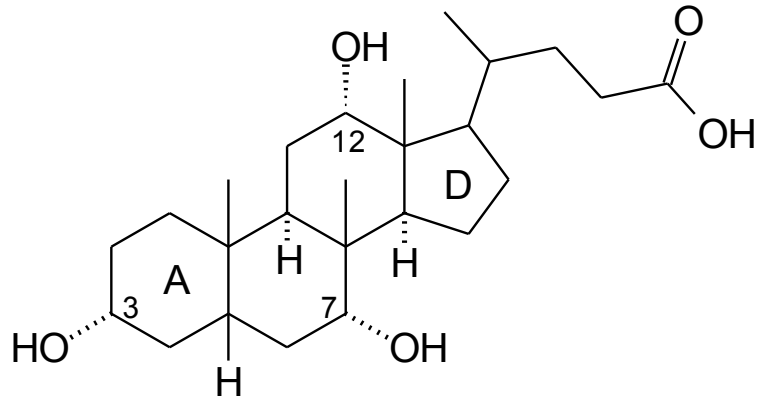
R ⁷	R ¹²
α-OH	-OH
other ones	
α-OH	-H
β-OH	-H
cholelithiasis	

cholic acid – the most frequent one, raw material for synthesis of

chenodeoxycholic acid syn. **chenodiol** [USAN]

ursodeoxycholic acid syn. **ursodiol** [USAN] – drug for cholesterol
Ursofalk[®], Ursosan^{®e}

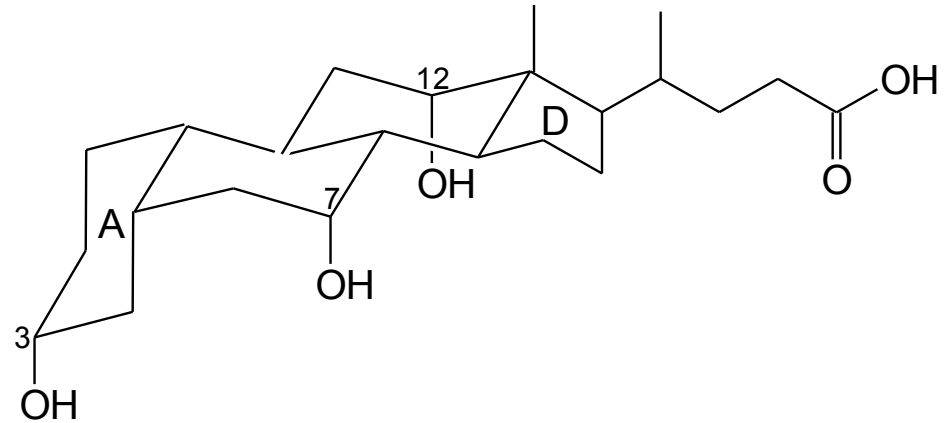
Cholic acid and its stereochemistry



cis/trans/trans

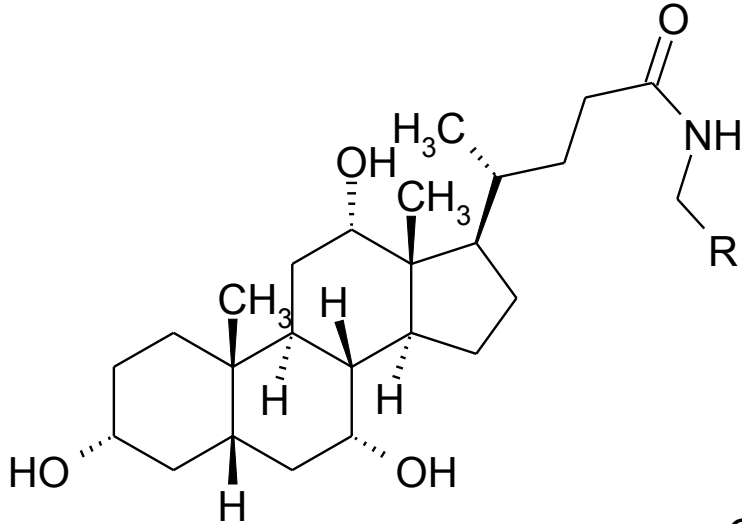
cholic acid

3α , 7α , 12α -trihydroxycholane-24-oic acid



3α -OH, e: easily esterificable 7α -OH and 12α -OH a: easily oxidable

Billiary acids conjugates

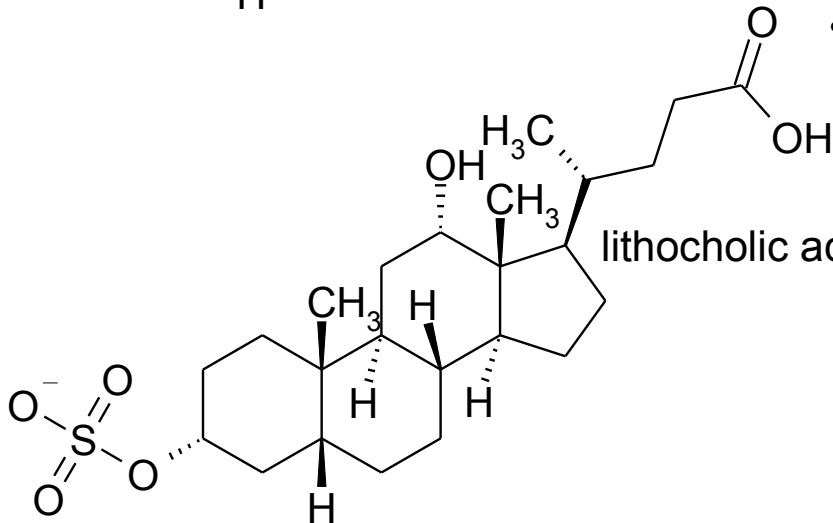


Conjugates formed by reaction of carboxyl with amino group of a suitable amino acid are effective as fats emulsifiers in the form of Na^+ salt

R = $-\text{COOH}$ **glycocholic acid** (conjugate with glycine)

R = $-\text{CH}_2\text{SO}_3\text{H}$ **taurocholic acid** (conjugate with taurine, i.e. 2-aminoethanesulfonic acid)

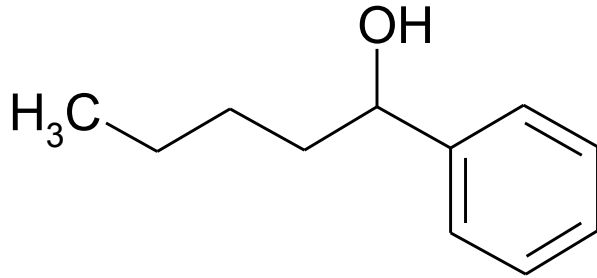
• other billiary acids are coonjugated similarly



lithocholic acid 3-sulfate – methabolic endproduct of cholic acid

Synthetic cholagogues

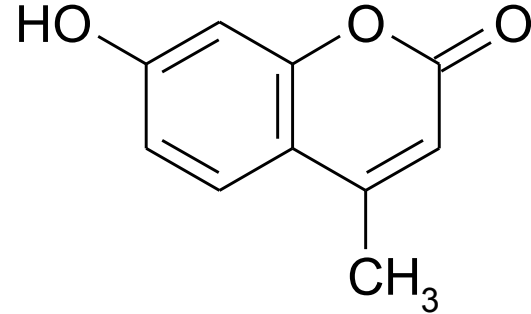
- stimulate secretion of biliary acid conjugates



1-phenylpentane-1-ol

fenipentol

- stimulates also secretion of pancreatic enzymes
- Febichol® cps.



7-hydroxy-4-methyl-2*H*-chromene-2-one

hymecromone

- also spasmolytic
- Isochol® drg.