

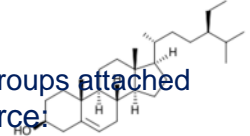
Polyphenole: Cholesterin, Resveratrol, Taxifolin, Silibinin, Anthocyane u.a. Phenole

„**Polyphenole** sind aromatische Verbindungen, die zwei oder mehr direkt an einen aromatischen Ring gebundene Hydroxygruppen enthalten und zu den sekundären Pflanzenstoffen gerechnet werden“. Quelle: <http://de.wikipedia.org/wiki/Polyphenole> aromatisch = duftend

Cholesterin ist ein wichtiger Bestandteil der Plasmamembran von Tieren und Menschen. Bakterien borgen sich das Cholesterin ihrer Membranen u.a. in Lipid Rafts von ihrem Wirt.

β-Sitosterin ist als Cyclopentanoperhydrophenanthren ein **Phytosterin**, das dem Cholesterin der Tiere und des Menschen ähnlich ist.

"**Polyphenols** are aromatic compounds which contain two or more hydroxyl groups attached directly to an aromatic ring and are considered secondary metabolites". Source: <http://en.wikipedia.org/wiki/Polyphenols> aromatic = fragrant



Cholesterol is an important component of the plasma membrane of animals and humans. Bacteria borrow the cholesterol of their membranes, among others. In lipid rafts from their host.

B-sitosterol is a cyclopentanoperhydrophenanthrene, a phytosterol which is similar to the cholesterol of animals and humans.

Steroidhormone – wie die Nebennierenrinden- und Geschlechtshormone (Cyclopentanoperhydrophenanthrene, Cholesterin-Derivate) der Tiere und des Menschen. Steroid hormones - such as the adrenal cortical and sex hormones (cyclopentanoperhydrophenanthrene, cholesterol derivatives) of animals and humans.

Mineralokortikoide – wie Aldosteron, Glucocortikoide – wie Cortisol, Dehydroepiandrosteron (DHE), Oestrogene – wie Oestradiol, Gestagene – wie Progesteron, Androgene – wie Testosteron

Polyphenole, polyphenols

Cholesterin

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Huismans BD (1973) **Serumlipidwerte und Lipid-Elektrophoresen in einer Gefäßklinik.** Die Med. Welt 42,1594

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PMCID: PMC3542181 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3542181/>

« We show that the spirochetes can acquire cholesterol from plasma membranes of epithelial cells. In addition, through fluorescent and confocal microscopy combined with biochemical approaches, we demonstrated that *B. burgdorferi* labeled with the fluorescent cholesterol analog BODIPY-cholesterol or ³H-labeled cholesterol transfer both cholesterol and cholesterol-glycolipids to HeLa cells. The transfer occurs through two different mechanisms, by direct contact between the bacteria and eukaryotic cell and/or through release of outer membrane vesicles. Thus, two-way lipid exchange between spirochetes and host cells can occur. This lipid exchange could be an important process that contributes to the pathogenesis of Lyme disease. »

[Huang Z](#), [London E](#). (2016) **Cholesterol lipids and cholesterol-containing lipid rafts in bacteria.** [Chem Phys Lipids](#). pii: S0009-3084(16)30036-6. doi: 10.1016/j.chemphyslip.2016.03.002. [Epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/26964703>

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Han, B. H. et al. (2017) **Effect of Statin Treatment vs Usual Care on Primary Cardiovascular Prevention Among Older Adults The ALLHAT-LLT Randomized Clinical Trial**. JAMA Internal Medicine. [Cited 2017 May 22] doi:10.1001/jamainternmed.2017.1442 <http://www.acc.org/latest-in-cardiology/journal-scans/2017/05/23/14/26/effect-of-statin-treatment-vs-usual-care-on-primary>

[Samanta D](#), [Mulye M](#), [Clemente TM](#), [Justis AV](#), [Gilk SD](#) (2017) **Manipulation of Host Cholesterol by Obligate Intracellular Bacteria**. *Front Cell Infect Microbiol.* 7, 165. doi: 10.3389/fcimb.2017.00165. eCollection 2017. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5418226/>
«Despite having diverse lifestyles, the obligate intracellular bacterial pathogens *Chlamydia*, *Coxiella*, *Anaplasma*, *Ehrlichia*, and *Rickettsia* all target cholesterol during host cell colonization as a potential source of membrane, as well as a means to manipulate host cell signaling and trafficking. ... Once a pathogen gains entrance to the intracellular space, it can manipulate host cholesterol trafficking pathways to access nutrient-rich vesicles or acquire membrane components for the bacteria or bacteria-containing vacuole. To acquire cholesterol, these pathogens specifically target host cholesterol metabolism, uptake, efflux, and storage. «

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[Escobedo G](#), [Roberts CW](#), [Carrero JC](#), [Morales-Montor J](#) (2005) **Parasite regulation by host hormones: an old mechanism of host exploitation?** *Trends Parasitol.* 21(12), 588-93. Epub 2005 Oct 19. DOI: <http://dx.doi.org/10.1016/j.pt.2005.09.013> <https://www.ncbi.nlm.nih.gov/pubmed/16236553> [References](#)

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- ➔ **Immunstimulation (Inosin)** <http://www.kabilahsystems.de/immunsti.pdf>

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Phenole, phenols

Resveratrol

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[Alessandra DL](#), [Giuseppe A](#), [Egidio L](#) et al. (2012) Resveratrol inhibits epstein barr virus lytic cycle in burkitt's lymphoma cells by affecting multiple molecular targets. *Antiviral Res.* pii: S0166-3542(12)00200-8. doi: 10.1016/j.antiviral.2012.09.003. [Epub ahead of print] <http://www.ncbi.nlm.nih.gov/pubmed/22985630>

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Taxifolin und andere Flavonoide

Taxifolin ist ein Flavanolol. Taxifolin wirkt chemopräventiv antioxidativ, antiinflammatorisch, antibakteriell und antithrombogen. Taxifolin ist nicht mutagen wirksam.

<http://de.wikipedia.org/wiki/Taxifolin> <http://en.wikipedia.org/wiki/Taxifolin>
<http://de.wikipedia.org/wiki/Flavonoide> flavus (lat.) = gelb

Weinges K (1959) Stereochemische Zusammenhänge in der Gruppe der Flavonoide. Justus Liebigs Annalen der Chemie [627\(1\)](#), 229–236

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Cystus052

https://www.google.de/search?q=cystus052+borreliose&hl=de&btnG=Google+Search&qws_rd=ssl

Silymarin, Silibinin, milk thistle

Silibinin wird gelegentlich mit β -Lactam-Antibiotika kombiniert, das die antidotische Wirkung von Silibinin unterstützen soll. Quelle: <http://de.wikipedia.org/wiki/Silibinin>

Legalon[®] SIL ([Madaus](#)) (D, CH), Silimarit[®] ([Bionorica](#))

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“The active complex of MT is a lipophilic extract from the seeds of the plant and is composed of three isomer flavonolignans (silybin, silydianin, and silychristin) collectively known as silymarin. Silybin is a component with the greatest degree of biological activity and makes up 50% to 70% of silymarin.... Silymarin acts as an antioxidant by reducing free radical production and lipid peroxidation, has antifibrotic activity and may act as a toxin blockade agent by inhibiting binding of toxins to the hepatocyte cell membrane receptors. In animals, silymarin reduces liver injury caused by acetaminophen, carbon tetrachloride, radiation, iron overload, phenylhydrazine, alcohol, cold ischaemia and Amanita phalloides. Silymarin has been used to treat alcoholic liver disease, acute and chronic viral hepatitis and toxin-induced liver diseases.”

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Ibuprofen, Diclofenac u.a.

Vorsicht mit Cox-2 Entzündungshemmern bei Personen mit Herzinsuffizienz

„...die COX-2 Hemmer und der nicht-selektive Entzündungshemmer Diclofenac, erhöhten ... die Morbidität und die Mortalität ...“. Bender N (2017)

https://www.infomed.ch/screen_template.php?articleid=1516&screenissueid=251

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Zang, Z, Cherryholmes, G, Mao, A, Marek, C, Longmate J, Kalos, M, St Amand, RP Shivley JE (2008) **High plasma levels of MCP-1, and Eotaxin provide evidence for an immunological basis of Fibromyalgia.** J of Ex Bio Med 233(9), 1171-80. doi: 10.3181/0712-RM-328. <http://www.ncbi.nlm.nih.gov/pubmed/18535166>
« High levels of MCP-1 (P<0.001) and eotaxin (P<0.01) were found in patients and family members compared to controls. Patients (56/92) treated with the single agent guaifenesin (>3 months) had higher levels of eotaxin than those not treated (P<0.01). ... Furthermore, the chemokine profile associated with FMS has direct effects on the migration of eosinophils and monocytes in the presence of mast cells, and skeletal muscle itself may secrete»

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Guaifenesin

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Storms W, Farrar JR (2009) **Guaifenesin in rhinitis.** Curr Allergy Asthma Rep, 9(2), 101-6 [Pubmed](#)

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➔ **Guaifenesin Therapie (2016)** <http://www.guaifenesin.de/index.html#>

- <http://www.fibromyalgie-quaifenesin.info/de/start/>
- ➔ **Fibromyalgie** http://www.erlebnishaft.de/chronic_fatigue.pdf
 - ➔ **Biofilm Lyse** <http://www.xerlebnishaft.de/quorum.pdf>
 - ➔ **Biofilme** <http://www.erlebnishaft.de/biofilmmed.pdf>
 - ➔ **Pflanzliche Antimikrobiotika** <http://www.kabilahsystems.de/pflanzlicheantimikrobiotika.pdf>

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