

Lysosome und Lysosomotropika

Lysosomotropica sind Arzneimittel, die selektiv in die Lysosomen von Zellen eindringen. Lysosomotropica erhöhen in Phagolysosomen den pH – Wert von 4,8 auf 5,3, 5,7 und 6,8.

Lysosomotropic agents are drugs, able to enter selectively the lysosomes of cells. Lysosomotropic agents increase phagolysosomes from pH 4.8 to 5.3, 5.7, and 6.8.

deDuve C. http://www.nobelprize.org/nobel_prizes/medicine/laureates/1974/duve-lecture.pdf

Lysosomotropic compounds

<http://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&cad=rja&uact=8&ved=0CEgQFjAE&url=http%3A%2F%2Fwww.exu.sk%2Fmaterial%2Ftemab%2Fwitek%2FLysosomotropic-surfactants.ppt&ei=kpMpU8iNO4HBtAbYyoCABQ&usq=AFQjCNGV6Pm2jEfHSBtk0x0Z4uPhSGOpaw>

Wattiaux R, Wibo M, Baudhuin P (1963) in Ciba Foundation Symposium on Lysosomes (Churchill, London) 176 - 196

Wattiaux R (1966) Etude Expérimentale de la Surcharge des Lysosomes (Imprimerie J. Duculot, Gembloux) 129 p

de Duve C (1963-1966) in Ciba Foundation Symposium on Lysosomes (Churchill, London, 1963), pp. I - 31; - -, in Injury, Inflammation and Immunity (Williams & Wilkins Company, Baltimore, 1964), pp. 283 - - 311; -, Fed. Proc. 23, 1045 (1964); -- and Wattiaux, R., Ann. Rev. Physiol. 28, 435 (1966)

Trouet A (1969, 1970) Caractéristiques et Propriétés Antigéniques des Lysosomes du Foie (Vander, Louvain) 185 pp; Tulkens, P., Trouet, A, Van Hoof, F, Nature 228, 1282 (1970)

Dingle JT, Fell HB, Eds. (1969, 1973) Lysosomes in Biology and Pathology (North - Holland, Amsterdam - London), Vol. 1 and 2 (1969), Vol. 3 (Dingle, JT, ed. 1973)

Van Hoof F (1972) Les Mucopolysaccharidoses en tant que thésaurismoses lysosomiales (Vander, Louvain) 285 pp.

Hers HG, Van Hoof F (1973) Lysosomes and Storage Diseases (Academic Press, New York)

DeDuve C, DeBarys T, Poole B, Trouet A, Tulkens P, van Hoof F (1974) Commentary: lysosomotropic agents. Biochem Pharmacol 23, 2495–2531 <http://www.ncbi.nlm.nih.gov/pubmed/4606365>

[Raymond A. Firestone](#) , [Judith M. Pisano](#) , [Robert J. Bonney](#) (1979)

Lysosomotropic agents. 1. Synthesis and cytotoxic action of lysosomotropic detergents J. Med. Chem., 22 (9), 1130–1133 DOI: 10.1021/jm00195a026

Toothill C (1981) **Lysosomes in biology and pathology, Lysosomes in applied biology and therapeutics**: Edited by J T Dingle, P J Jacques, I H Shaw. pp 719. North-Holland, Amsterdam. 1979. \$105.25 ISBN 0-7204-0668-4. Biochemical Education [Volume 9, Issue 2](#), page 74, April 1981 Article first published online: 25 JUN 2010 DOI: 10.1016/0307-4412(81)90183-7 <http://onlinelibrary.wiley.com/doi/10.1016/0307-4412%2881%2990183-7/abstract>

Miller DK, Griffiths E, Lenard, J et al. (1983) Cell Killing by Lysosomotropic Detergents. The Journal of Cell Biology. 97, 1841-1851. <http://jcb.rupress.org/content/97/6/1841.full.pdf>

[Miller DK](#), [Griffiths E](#), [Lenard J](#), [Firestone RA](#). (1983) Cell killing by lysosomotropic detergents. J Cell Biol. 97(6), 1841-51. <http://www.ncbi.nlm.nih.gov/pubmed/6196369>

“These findings provide strong support for the idea that lysosomotropic detergents kill cells by disrupting lysosomes from within”.

[Chen GL](#), [Sutrina SL](#), [Frayer KL](#), [Chen WW](#) (1986) Effects of lysosomotropic agents on lipogenesis. *Archives of Biochemistry and Biophysics* 245(1), 66–75
<http://www.sciencedirect.com/science/article/pii/0003986186901906>

Maurin M, Benoliel AM, Bongard P, Raoult D. (1992) Phagosomal alkalization and the bactericidal effect of antibiotics: the *Coxiella burnetii* paradigm. *J Infect Dis.* 166, 1097-1102
<http://www.ncbi.nlm.nih.gov/pubmed/1402021>

“The antimicrobial activity of antibiotics combined with the lysosomotropic agents amantadine (1 microgram/mL), chloroquine (1 microgram/mL), and ammonium chloride (1 mg/mL), which alkalized *Coxiella burnetii*-containing phagolysosomes from pH 4.8 to 5.3, 5.7, and 6.8, respectively, was evaluated”.

Ghigo D, Aldieri E, Todde R et al. (1998) **Chloroquine Stimulates Nitric Oxide Synthesis in Endothelial Cells.** *J. Clin. Invest.* 102(3), 595–605 <http://www.jci.org/articles/view/1052/pdf/render>

Tyteca D, Van Der Smissen P, Van Bambeke FA et al. (2001) **Azithromycin, a lysosomotropic antibiotic**, impairs fluid-phase pinocytosis in cultured fibroblasts. *European Journal of Cell Biology* 80, 466 ± 478 <http://www.facm.ucl.ac.be/Full-texts-FACM/Tyteca-2001-1.pdf>

[Xiong S](#), [Li H](#), [Yu B](#), [Wu J](#), [Lee RJ](#). (2010) Triggering liposomal drug release with a lysosomotropic agent. *J Pharm Sci.* 99(12), 5011-8. doi: 10.1002/jps.22210. <http://www.ncbi.nlm.nih.gov/pubmed/20821395>
“Overall, these results support the potential application of chloroquine to trigger the release of liposomal drugs and ultimately to improve the therapeutic efficacy”.

[Ashfaq UA](#), [Javed T](#), [Rehman S](#), [Nawaz Z](#), [Riazuddin S](#) (2011) Lysosomotropic agents as **HCV entry inhibitors**. *Virology* 8, 163. doi: [10.1186/1743-422X-8-163](https://doi.org/10.1186/1743-422X-8-163) PMID: PMC3090357
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3090357/>

Bramwell KKC, Ma Y, Weis JH, Chen X, Zachary JF, Teuscher C, Weis JJ (2014) **Lysosomal β -glucuronidase** regulates Lyme and rheumatoid arthritis severity. *J Clin Invest.* 124(1), 311–320.
<http://www.jci.org/articles/view/72339>

- ➔ **Xenoautophagie** <http://xerlebnishaft.de/xenoautophagie.pdf>
- ➔ **Komplement, complement** <http://www.xerlebnishaft.de/complement.pdf>
- ➔ **Krebsstammzelltherapie** <http://www.xerlebnishaft.de/krebsstammzelltherapie.pdf>

[Bernt - Dieter Huismans](#), 2013. Letzte Revision Oktober 2016 www.Huismans.click 
Back to top: <http://www.xerlebnishaft.de/lysosomotropika.pdf>