

**I Literaturverzeichnis**

- ABBOTT, W. W., J. R. COUCH u. R. L. ATKINSON (1969)  
The incidence of foot-pad dermatitis in young turkeys fed high levels of soybean meal.  
Poultry Science, 48:6, 2186 - 2188
- ALIBARDI, L. (2002)  
Keratinization and lipogenesis in epidermal derivatives of the zebrafinch, *Taeniopygia guttata castanotis* (Aves, Passeriformes, Ploecidae) during embryonic development.  
Journal of Morphology, 251:3, 294 - 308
- AMMERMANN, C. B., D. H. BAKER u. A. J. LEWIS (1995)  
Bioavailability of nutrient for animals: amino acids, minerals, vitamins.  
Academic Press, Inc., San Diego, Chapter G, 410 - 411 u. 420
- ANDERSON, J. O., u. R. E. WARNICK (1970)  
Studies of the need for supplemental biotin in chick rations.  
Poultry Science, 49, 569 - 578
- ARENDS, L. G. (1970)  
Gross and microscopic lesions induced by biotin deficiency in the poul.  
Poultry Science, 49, 1364
- ATUAHENE, Y. O., P. E. BERNIER, W. B. ROUSH u. G. H. ARSCOTT (1984)  
Effect of biotin on dermatitis and hatchability in dwarf and normal size Single Comb White Leghorn type.  
Poultry Science, 63:3, 580 - 582
- BANNISTER, D. W. (1976)  
Hepatic gluconeogenesis in chicks: effect of biotin on gluconeogenesis in biotin-deficiency and fatty liver and kidney syndrome.  
Comparative Biochemistry and Physiology, 53:4, 575 - 579
- BANNISTER, D. W., I. E. O'NEILL u. C. C. WHITEHEAD (1983)  
The effect of biotin deficiency and dietary protein content on lipogenesis, gluconeogenesis and related enzyme activities in chick liver.  
British Journal of Nutrition 50:2, 291 - 302
- BEHNE, M., Y. UCHIDA, T. SEKI, P. ORTIZ DE MONTELLANO, P. M. ELIAS u. W. HOLLERAN (2000)  
Omega-Hydroxyceramides are required for corneocyte lipid envelope (CLE) formation and normal epidermal permeability barrier function.  
The Journal of Investigative Dermatology, 114:1, 185 - 192
- BENTLEY, J. S. (2001)  
Vegetable Diets and Commercial Turkey Nutrition – The Options.  
British United Turkeys Limited, BUT Technological Info
- BERG, C. C. (1998)  
Foot pad dermatitis in broilers and turkeys – prevalence, risk factors and prevention.  
Uppsala, Sweden, Swedish University of Agricultural Sciences, Department of Clinical Chemistry, Dissertation
- BIRKBY, C. S., P. W. WERTZ u. D. T. DOWNING (1982)  
The polar lipids from keratinized tissues of some vertebrates.  
Comparative Biochemistry and Physiology B, 73:2, 239 - 242

- BLAIR, R., u. R. MISIR (1989)  
Biotin bioavailability from protein supplements and cereal grains for growing broiler chickens.  
International Journal for Vitamin and Nutrition Research, 59:1, 55 - 58
- BOECKX, R. L., u. K. DAKSHINAMURTI (1974)  
Biotin-mediated protein biosynthesis.  
Biochemical Journal, 140, 549 - 556
- BONJOUR, J. P. (1984)  
Biotin.  
F. Hofmann LaRoche & Co. Ltd., Basel, Switzerland
- BOUWSTRA, J., G. S. GOORIS, F. E. R. DUBBELAAR, A. M. WEERHEIM, A. P. IJZERMAN u. M. PONEC (1998)  
Role of ceramid 1 in the molecular organization of the stratum corneum lipids.  
Journal of Lipid Research, 39, 186 - 196
- BOUWSTRA, J. A., F. E. DUBBELAAR, G. S. GOORIS u. M. PONEC (2000)  
The lipid organisation in the skin barrier.  
Acta Dermatologica Venerologica Supplements (Stockh), 208, 23 - 30
- BOWSER, P. A., D. H. NUGTEREN, R. J. WHITE, U. M. T. HOUTSMULLER u. C. PROTTEY (1985)  
Identification, isolation and characterizaion of epidermal lipids containing linoleic acid.  
Biochimica et Biophysica Acta, 834, 419 - 428
- BRAGULLA, H., J. REESE u. CH. MÜLLING (1994)  
Histochemical and immunohistological studies of the horn quality of the equine hoof.  
Anatomy, Histology, Embryology, 23, 44 - 45
- BROOM, D. M. (1996)  
Animal welfare defined in terms of attempts to cope with the environment.  
Acta Agriculturae Scandinavica, 27 (Section A, Animal Science Supplement), 22 – 28
- BUDA, S. (2000)  
Effects of biotin on the skin of turkey foot pads.  
World Poultry, 16:12, 47 – 48
- BUDA, S., S. PLATT u. K.-D. BUDRAS (2002 a)  
Sensory nerve endings in the foot pads of turkeys.  
in: H. M. HAFEZ (Hrsg.): Proceedings of the 4<sup>th</sup> International Symposium on Turkey Diseases Berlin, Germany, 15.-18.05.2002, DVG-Verlag, 78 – 82 (ISBN 3-936815-58-5)
- BUDA, S., S. PLATT u. K.-D. BUDRAS (2002 b)  
An ultrastructural study on nerve endings in the foot pads of turkeys.  
Acta Veterinaria Brno, 72, Supplementum 7, 14 (ISSN 0001-7213)
- BUDRAS, K. D., H. GEYER, J. MAIERL u. CH. MÜLLING (1998)  
Anatomy and structure of hoof horn (Workshop report).  
in: C. J. LISCHER u. P. OSSENT (Hrsg.): Proceedings of the 10<sup>th</sup> International Symposium on Lameness in Ruminants. Lucerne, Switzerland, 176 – 179 (ISBN 3-9521627-0-1)
- BYRNE, C., M. HARDMAN u. K. NIELD (2003)  
Covering the limb – formation of the integument.  
Journal of Anatomy, 202, 113 - 124

- CAHOON, S. M. u. S. A. SCOTT (1999)  
Multiple mechanisms contribute to the avoidance of avian epidermis by sensory axons.  
*Developmental Biology*, 208:2, 502 – 512
- CHARLES, O. W., u. J. FORTUNE (1977)  
The influence of diet and litter management on foot pad lesions in turkey poults.  
*Poultry Science*, 56:4, 1348 (abstract)
- CHAUHAN, J., u. K. DAKSHINAMURTI (1991)  
Transcriptional regulation of the glucokinase gene by biotin in starved rats.  
*Journal of Biological Chemistry*, 266, 100035 - 100038
- CHAVEZ, E. u. F. H. KRATZER (1972)  
Prevention of foot pad dermatitis in poults with methionine.  
*Poultry Science*, 51:5, 1545 - 1548
- CLARK, S., G. HANSEN, P. MCLEAN, P. BOND, JR., W. WAKEMAN, R. MEADOWS u.  
S. BUDA (2002)  
Pododermatitis in turkeys.  
*Avian Diseases*, 46:4, 1038 - 1044
- COATES, M. E., J. E. FORD u. G. F. HARRISON (1968)  
Intestinal synthesis of vitamins of the B complex in chicks.  
*British Journal of Nutrition*, 22, 493 - 500
- CODERCH, L., O. LOPEZ, A. DE LA MAZA, J. L. PARRA (2003)  
Ceramides and skin function.  
*American Journal of Clinical Dermatology*, 4:2, 107 - 129
- COOPER, K. M., S. KENNEDY, S. MCCONNELL, D. G. KENNEDY u. M. FRIGG (1997)  
An immunohistochemical study of the distribution of biotin in tissue of pigs and chickens.  
*Research in Veterinary Science*, 63:3, 219 - 225
- CORR, S. A., C. C. MCCORQUODALE u. M. J. GENTLE (1998)  
Gait analysis of poultry.  
*Research in Veterinary Science*, 65:3, 233 - 238
- DÄMMRICH, K., u. H. LOPPNOW (1990)  
in: H STÜNZI u. E WEISS (Hrsg.): *Allgemeine Pathologie für Tierärzte und Studierende der Tiermedizin*. 8. Auflage, Kapitel 4.3.7. Pathologie der Verhornung. Verlag Paul Parey, Berlin, Hamburg, 119 – 122
- DAKSHINAMURTI, K., u. S. P. MISTRY, (1962)  
Ascorbic acid synthesis and biotin deficiency.  
*Archives of Biochemistry and Biophysics*, 9, 254 - 257
- DAKSHINAMURTI K., u. S. LITVAK (1970)  
Biotin and protein synthesis in rat liver.  
*The Journal of Biological Chemistry*, 245:21, 5600 - 5605
- DAKSHINAMURTI K., u. J. CHAUHAN (1989)  
Biotin.  
*Vitamins and Hormones*, 45, 337 - 384

- DAWKINS, M. S. (1983)  
Battery hens name their price: consumer demand theory and the measurement of ethological "needs".  
*Animal Behaviour*, 31, 1195 - 1205
- DOBSON, D. C. (1970)  
Biotin requirement of turkey poults.  
*Poultry Science*, 49:2, 546 - 553
- DONALDSON, W. E. (1981)  
Biotin deficiency and lipogenesis in chicks: paradoxical stimulation of lipogenesis by dietary mercury.  
*Nutrition Report International*, 23:1, 95 - 101
- DONALDSON, W. E. (1985)  
Biotin effects on fatty acid synthesis in chicks.  
*Annals New York Academy of Sciences*, 447, 105 - 111
- DOWNING, D. T., M. E. STEWART, P. W. WERTZ, S. W. COLTON, W. ABRAHAM u. J. S. STRAUSS (1987)  
Skin lipids: an update.  
*The Journal of Investigative Dermatology*, 88:3, March Supplement, 2 – 6
- DRESSLER, D. (1980)  
Probleme im Bereich der Zusatzstoff-Analytik.  
*Krafftutter*, 63. Jahrgang, Heft 9 / 10
- DUNCAN, I. J. H. (1996)  
Animal welfare defined in terms of feelings.  
*Acta Agriculturae Scandinavica*, 27 (Section A, Animal Science Supplement), 29 - 35
- EKSTRAND, C., u. B. ALGERS (1997)  
Rearing conditions and foot-pad dermatitis in Swedish turkey poults.  
*Acta Veterinaria Scandinavica*, 38:2, 167 - 174
- EKSTRAND, C., B. ALGERS u. J. SVEDBERG (1997)  
Rearing conditions and foot-pad dermatitis in Swedish broiler chickens.  
*Preventive Veterinary Medicine*, 31, 167 - 174
- EKSTRAND, C., u. T. E. CARPENTER (1998 a)  
Temporal aspects of foot pad dermatitis.  
*Acta Veterinaria Scandinavica*, 39, 229 - 236
- EKSTRAND, C., u. T. E. CARPENTER, (1998 b)  
Spatial aspects of foot pad dermatitis in Swedish broilers.  
*Acta Veterinaria Scandinavica*, 39, 273 - 280
- EKSTRAND, C., T. E. CARPENTER, I. ANDERSSON u. B. ALGERS (1998)  
Prevalence and control of foot pad dermatitis in broilers in Sweden.  
*British Poultry Science*, 39, 318 - 324
- ELIAS, P. M., G. K. MENON, S. GRAYSON, B. E. BROWN u. J. REHFELD (1987)  
Avian sebocytes and marine mammal lipocytes: Structural, lipid biochemical, and functional considerations.  
*The American Journal of Anatomy*, 180, 161 - 177

- ELIAS, P. M., u. G. K. MENON (1991)  
Structural and lipid biochemical correlates of the epidermal permeability barrier.  
Advances in Lipid Research, 24, 1 - 26
- ELIAS, P. M., M. FARTASCH, D. CRUMRINE, M. BEHNE, Y. UCHIDA u. W. M. HOLLERAN (2000)  
Origin of the corneocyte lipid envelope (CLE): Observations in Harlequin Ichthyosis and cultured human keratinocytes.  
The Journal of Investigative Dermatology, Letters to the Editor, 115:4, 765 - 769
- ELLERBROCK, S. (2000)  
Beurteilung verschiedener Besatzdichten in der intensiven Putenmast unter besonderer Berücksichtigung ethologischer und gesundheitlicher Aspekte.  
Hannover, Tierärztliche Hochschule, Institut für Tierhygiene und Tierschutz, Dissertation
- FEINGOLD, K. R. (1991)  
The regulation and role of epidermal lipid synthesis.  
Advances Lipid Research, 24, 57 - 82
- FORSLIND, B. A. (1994)  
Domain mosaic model of the skin barrier.  
Acta Dermatologica Venerologica, 74, 1 - 9
- FORSLIND, B. A., S. ENGSTRÖM, J. ENGBLOM u. L. NORLÉN (1997)  
A novel approach to the understanding of human skin barrier function.  
Journal of Dermatological Sciences, 14, 115 - 125
- FRIEDRICH, W. (1987)  
Handbuch der Vitamine, Kapitel 10: Biotin.  
Verlag Urban und Schwarzenberg, München, Wien, Baltimore, 486 - 519
- FRIGG, M. (1976)  
Bioavailability of biotin in cereals.  
Poultry Science, 55:6, 2310 - 2318
- FRIGG, M., u. G. BRUBACHER (1976)  
Biotin deficiency in chicks fed a wheat-based diet.  
International Journal for Vitamin and Nutrition Research, 46:3, 314 - 321
- FRIGG, M., u. H. WICK (1977)  
Effect of graded biotin levels in the diet on liver pyruvate carboxylase of chicks fed and libitum and after starvation.  
International Journal for Vitamin and Nutrition Research, 47:1, 57 - 61
- FRIGG, M., u. J. TORHORST (1980)  
Histological and cytological alterations in the skin of biotin-deficient chicks.  
Research in Veterinary Science, 28:1, 17 - 24
- FRIGG, M. (1984)  
Available biotin content of various feed ingredients.  
Poultry Science, 63:4, 750 - 753
- FRITSCHÉ, A., G. A. Mathis u. F. R. Althaus (1991)  
Pharmakologische Wirkungen von Biotin auf Epidermiszellen.  
Schweizer Archiv für Tierheilkunde, 133, 277 - 283

- GAZDZINDKI, P (2001)  
Leg problems in turkeys – Conclusion  
In: Cuddy – The Feather File, Summer 2001
- GRAFE, F., W. WOHLRAB, R. H. NEUBERT u. M. BRANDSCH (2003)  
Transport of biotin in human keratinocytes.  
The Journal of Investigative Dermatology, 120, 428 - 433
- GRUBAUER, G., K. R. FEINGOLD u. P. M. ELIAS (1987)  
Relationship of epidermal lipogenesis to cutaneous barrier function.  
Journal of Lipid Research, 28, 746 - 752
- GYÖRGY, P. (1967)  
Biotin.  
in: P. GYÖRGY u. W. N. PEARSON (Hrsg.): The Vitamins–Chemistry, Physiology, Pathology, Methods. Chapter 10, 7:2, Academic Press, New York, 303-313
- HAFEZ, H. M. (1995)  
Strukturwandel in der Wirtschaftsgeflügelproduktion und der tierärztlichen Tätigkeit.  
Deutsche Tierärztliche Wochenschrift, 102:7, 265 - 268
- HALATA, Z., M. GRIM u. K. I. BAUMAN (2003)  
Friedrich Sigmund Merkel and his „Merkel Cell“, morphology, development, and physiology: Review and new results.  
The Anatomical Record Part A, 271A, 225 – 239
- HARMS, R. H., u. C. F. SIMPSON (1975)  
Biotin deficiency as a possible cause of swelling and ulceration of foot pad.  
Poultry Science, 54:5, 1711 – 1713
- HARMS, R. H., B. L. DAMRON u. C. F. SIMPSON (1977)  
Effect of wet litter and supplemental biotin and/or whey on the production of foot pad dermatitis in broilers.  
Poultry Science, 56:1, 291 – 296
- HARMS, R. H., u. C. F. SIMPSON (1977)  
Influence of wet litter and supplemental biotin on foot pad dermatitis in turkey poults.  
Poultry Science, 56:6, 2009 - 2012
- HARMS, R. H., u. C. F. SIMPSON (1980)  
Do you need supplemental biotin in your poultry feed?  
Feedstuffs, USA, 52:51, 16, 24
- HARMS, R. H., u. B. SIMPSON (1982)  
Relationship of growth depression from salt deficiency and biotin intake to foot pad dermatitis of turkey poults.  
Poultry Science, 61:10, 2133 - 2135
- HARRIS, I. R., A. M. FARRELL, R. A. MEMON, C. GRUNFELD, P. M. ELIAS u. K. R. FEINGOLD (1998)  
Expression and regulation of mRNA for putative fatty acid transport related proteins and fatty acyl CoA synthase in murine epidermis and cultured human keratinocytes.  
The Journal of Investigative Dermatology, 111, 722 – 726

- HARRISON, R. (1988)  
Special Address.  
Applied Animal Behaviour Science, 20, 21 – 27
- HARTHE, C., u. B. CLAUSTRAT (2003)  
A sensitive and practical competitive radioassay for plasma biotin.  
Annals of Clinical Biochemistry, 40, 259 - 263
- HASHIMOTO, K. (2000)  
Regulation of keratinocyte function by growth factors.  
Journal of Dermatological Science, 24 Suppl. 1, S46 – S50
- HIRAO, T., M. DENDA u. M. TAKAHASHI (2001)  
Identification of immature cornified envelopes in the barrier-impaired epidermis by characterization of their hydrophobicity and antigenicities of the components.  
Experimental Dermatology, 10, 35 - 44
- HODGES, M. (1974)  
The Histology of the Fowl. Chapter 1: The integumentary system.  
Academic Press Inc. (London) Ltd., 1 - 14
- HUANG, R. T. C. (1978)  
Cell adhesion mediated by glycolipids.  
Nature, 276, 624 - 626
- HUSCHKA, C. (1998)  
Untersuchungen zur Wirkung von Biotin auf humane Keratinozyten und zur Modulation der Biotinpenetration in humane Haut.  
Halle-Wittenberg, Martin-Luther-Universität, Mathematisch-Naturwissenschaftlich-Technische Fakultät, Dissertation
- IDÉ, C., u. B. L. MUNGER (1978)  
A cytologic study of Grandry corpuscle development in chicken toe skin.  
Journal Comparative Neurology, 179:2, 301 - 324
- JENSEN, L. S., u. R. MARTINSON (1969)  
Requirement of turkey poults for biotin and effect of deficiency of incidence of leg weakness in developing turkeys.  
Poultry Science, 48, 222 - 230
- JODAS, S., u. H. M. HAFEZ (2000)  
Litter management and related diseases in turkeys.  
World Poultry, 16:12, 30 - 34
- KARTENBECK, J., u. W. W. FRANZ (1993)  
in: T. KREIS u. R. VALE (Hrsg.): Guidebook of the cytoskeletal and motor proteins, Cytokeratins. University Press, Oxford, 145 – 148
- KING, A. S. (1985)  
in: SPEARMAN, R. I. C. u. HARDY, J. A. (Hrsg.): Form and Function in Birds, Integument. Vol. 3, Academic Press Inc. Ltd., London, 1 - 56

- KÖNIG, H. E., S. REESE u. CH. MÜLLING (2001)  
in: H. E. KÖNIG u. H. G. LIEBICH (Hrsg): Anatomie und Propädeutik des Geflügels. Kapitel 17: Allgemeine Körperdecke (Integumentum commune). Schattauer Verlag, Stuttgart, New York, 221 – 232
- KÖSTER, A., K. MEYER, CH. MÜLLING, J. R. SCAIFE, M. BIRNIE u. K. D. BUDRAS (2002)  
Effects of biotin supplementation on horn structure and fatty acid pattern in the bovine claw under field conditions.  
12th International Symposium on Lameness in Ruminants, 9. – 13. January 2002, Orlando, Florida, USA, 263 - 265
- KORTE, B. (1987)  
Ein Beitrag zur Entwicklung der Klaue des Schafes mit besonderer Berücksichtigung der Hornbildung.  
Berlin, Freie Universität, Fachbereich Veterinärmedizin, Dissertation
- KRATZER, F. H., J. L. BUENROSTRO u. B. A. WATKINS (1985)  
Biotin-related abnormal fat metabolism in chickens and its consequences.  
in: DAKSHINAMURTI, K, H. N. BHAGAVAN (Hrsg.): Biotin, 447, Academy of Science, New York, 401 – 402
- KRISTIC, R. V. (1976)  
Ultrastruktur der Säugetierzelle.  
Springer-Verlag, Berlin, Heidelberg, New York
- KRUEGER, K. K., R. L. ATKINSON, J. R. COUCH u. W. F. KRUEGER (1976)  
Biotin and early poult growth.  
Poultry Science, 55:2, 495 - 501
- KÜSTER, W., B. MELNIK, H. TRAUPE u. H. HAMM (2003)  
Lipid composition of outer Stratum corneum in hereditary palmoplantar keratodermas.  
Dermatology, 206, 131 – 135
- LAMPE, M. A., A. L. BURLINGAME, J. A. WHITNEY, M. L. WILLIAMS, B. E. BROWN, E. ROITMAN u. P. M. ELIAS (1983)  
Human stratum corneum lipids: characterization and regional variation.  
Journal of Lipid Research, 24, 120 - 130
- LANDMANN, L. (1980)  
Lamellar granules in mammalian, avian, and reptile epidermis.  
Journal of Ultrastructure Research, 72, 245 - 263
- LANDMANN, L. (1986)  
Epidermal permeability barrier: transformation of lamellar granule-disks into intercellular sheets by a membrane-fusion process, a freeze-fracture study.  
The Journal of Investigative Dermatology, 87:2, 202 - 209
- LANDMANN, L. (1988)  
The epidermal permeability barrier.  
Anatomy and Embryology, 178, 1 - 13
- LAVKER, R. M. (1975)  
Lipid synthesis in chick epidermis.  
Journal Investigative Dermatology, 65:1, 93 - 101



- LAVKER, R. M. (1976)  
Membrane coating granules: The fate of the discharged lamellae.  
Journal of Ultrastructure Research, 55, 79 - 86
- LEIBETSEDER, J. (1996)  
Ernährungsbedingte Erkrankungen der Haut bei Hund und Katze.  
Wiener Tierärztliche Monatsschrift, 83, 19 - 30
- LEWIS, B., S. RATHMAN, R. MCMAHAN (2001)  
Dietary biotin intake modulates the pool of free and protein-bound biotin in rat liver.  
Journal of Nutrition, 131, 2310 - 2315
- LIMAT, A., T. SUORMALA, T. HUNZIKER, E. R. WAELTI, L. R. BRAATHEN  
u. R. BAUMGARTNER (1996)  
Proliferation and differentiation of cultured human follicular keratinocytes are not  
influenced by biotin.  
Archives of Dermatological Research, 288, 31 - 38
- LÖHNERT, A., S. WURM u. S. ÜBERSCHÄR (1996)  
Ergebnisse der pathologisch-anatomischen Befunderhebung an Gliedmaßen und  
Wirbelsäule.  
Deutsche Tierärztliche Wochenschrift, 103, 92 - 97
- LOGANI M. K., D. B. NHARI, P. D. FORBES u. R. E. DAVIES (1977)  
Diester waxes from skin lipids of the feet of biotin depleted and biotin supplemented  
turkey poults.  
Lipids, 12:7, 626 - 628
- LUCAS, A. M., u. P. R. STETTENHEIM (1972)  
Agriculture Handbook 362. Avian Anatomy.  
Integument Part I, Chapter 1 - Topographic anatomy.  
Integument Part II, Chapter 9 – Microscopic structure of skin and derivatives.  
US Government Printing Office, 64 – 72
- MACHELEIDT, O., H. W. KAISER u. K. SANDHOFF (2002)  
Deficiency of epidermal protein-bound  $\omega$ -Hydroxyceramides in atopic dermatitis.  
The Journal of Investigative Dermatology, 119, 166 - 173
- MADISON, K. C., D. C. SWARTZENDRUBER, P. W. WERTZ u. D. T. DOWNING (1987)  
Presence of intact intercellular lipid lamellae in the upper layers of the stratum corneum.  
The Journal of Investigative Dermatology, 88:6, 714 - 718
- MARTRENCHAR, A., E. BOILLETOT, D. HUONNIC u. F. POL (2002)  
Risk factors for foot-pad dermatitis in chicken and turkey broilers in France.  
Preventive Veterinary Medicine, 52, 213 - 226
- MATOLTSY, A. G. (1969)  
Keratinization of the avian epidermis - an ultrastructural study of the newborn chick skin.  
Journal of Ultrastructural Research, 29:5, 438 - 458
- MATOLTSY, A. G. (1976)  
Keratinization.  
The Journal of Investigative Dermatology, 67, 20 – 25

- MC EWAN JENKINSON, D., P. S. BLACKBURN (1968)  
The distribution of nerves, monoamine oxidase and cholinesterase in the skin of poultry.  
Research in Veterinary Science, 9, 429 - 434
- MEGURO, S., Y. ARAI, Y. MASUKAWA, K. UIE u. I. TOKIMITSU (2000)  
Relationship between covalently bound ceramides and transepidermal water loss (TEWL).  
Archives of Dermatological Research, 292, 463 - 468
- MENON, G. K., B. E. BROWN u. P. M. ELIAS (1986)  
Avian epidermal differentiation: role of lipids in permeability barrier formation.  
Tissue Cell, 18:1, 71 - 82
- MENON, G. K., S. Y. HOU u. P. M. ELIAS (1991)  
Avian permeability barrier function reflects mode of sequestration and organization of stratum corneum lipids: reevaluation utilizing ruthenium tetroxide staining and lipase cytochemistry.  
Tissue and Cell, 23:4, 445 - 456
- MENON, G. K., P. F. MADERSON, R. C. DREWES, L. F. BAPTISTA, L. F. PRICE u. P. M. ELIAS (1996)  
Ultrastructural organization of avian stratum corneum lipids as the basis for facultative cutaneous waterproofing.  
Journal of Morphology, 227:1, 1 - 13
- MISIR, R., u. R. BLAIR (1988)  
Biotin bioavailability of protein supplements and cereal grains for starting turkey poults.  
Poultry Science, 67:9, 1274 - 1280
- MOCK, D. M., N. I. MOCK, S. B. JOHNSON u. R. T. HOLMAN, (1988)  
Effects of biotin deficiency on plasma and tissue fatty acid composition: evidence for abnormalities in rats.  
Pediatric Research, 24:3, 396 - 401
- MOCK, D. M. (1990)  
Evidence for a pathogenic role of omega 6 polyunsaturated fatty acid in the cutaneous manifestation of biotin deficiency.  
Journal of Pediatric and Gastroenterological Nutrition, 10:2, 222 – 229
- MOCK, D. M., u. M. I. MALIK (1992)  
Distribution of biotin in human plasma: most of the biotin is not bound to protein.  
American Journal of Clinical Nutrition, 56, 427 - 432
- MOCK, D. M. (1999)  
Biotin status: Which are valid indicators and how do we know?  
Journal of Nutrition, 129, 498 - 503
- MOCK D. M., u. N. E. MOCK (2001)  
Lymphocyte Propionyl-CoA Carboxylase is an early and sensitive indicator of biotin deficiency in rats, but urinary excretion of 3-Hydroxypropionic acid is not.  
Journal of Nutrition, 132, 1945 - 1950
- MONK, J. (1998)  
Nutritional, management factors can interfere with development.  
in: Cuddy, The Feather File – Bone growth, Herbst 1998

- MOSKOWITZ, M., u. D. K. S. CHENG (1985)  
Stimulation of growth factor production in cultured cells by biotin.  
in: K. DAKSHINAMURTI u. H. N. BHAGAVAN (Hrsg.): Biotin. 447, New York Academy of Science New York, 212– 221
- MÜLLING, CH. K. (1993)  
Struktur, Verhornung und Hornqualität in Ballen, Sohle und weisser Linie der Rinderklaue und ihre Bedeutung für Klauenerkrankungen.  
Berlin, Freie Universität, Institut für Veterinär-Anatomie, Dissertation
- MÜLLING, CH. K., H. H. BRAGULLA, S. REESE, K. D. BUDRAS u. W. STEINBERG (1999)  
How structures in bovine hoof epidermis are influenced by nutritional factors.  
Anatomy Histology Embryology, 28, 103 – 108
- MURILLO, M. G., u. L. S. JENSEN (1976)  
Sulfur amino acid requirement and foot pad dermatitis in turkey poultts.  
Poultry Science, 55, 554 - 562
- NAIRN, M. E., u. A. R. A. WATSON (1972)  
Leg weakness of poultry – a clinical and pathological characterisation.  
Australian Veterinary Journal, 48, 645 - 656
- NATIONAL RESEARCH COUNCIL (1994)  
Nutrient Requirements of Poultry – Overview.  
9<sup>th</sup> Revised Edition, National Academy Press
- NICOLAIDES, N. (1974)  
Skin lipids: their biochemical uniqueness.  
Science, 186, 19 – 26
- NORLEN, L. (2001)  
Skin barrier formation: The membrane folding model.  
The Journal of Investigative Dermatology, 117:4, 823 – 829
- OBINATA, A., Y. AKIMOTO, Y. OMOTO u. H. HIRANO (2002)  
Expression of *Hex* homeobox gene during skin development: Increase in epidermal cell proliferation by transfectin the *Hex* to the dermis.  
Develop. Growth Differ., 44, 281 - 292
- ODLAND, G. F., u. K. HOLBROCK (1981)  
The lamellar granules of the epidermis.  
Current Problems in Dermatology, 9, 29 - 49
- PATEL, M. S., u. S. P. MISTRY (1968)  
Effect of sorbitol, fructose, succinate, aspartate, glutamate and fat on growth and survival time of biotin-deficient rats.  
Journal of Nutrition, 96, 409 – 414
- PLATT, S., P. BREUER, S. BUDA u. K. D. BUDRAS (2003)  
An ultrastructural study of the reticulate scales based on the occurrence of foot pad lesions in turkeys.  
Der 25. Kongress der Deutschen Veterinärmedizinischen Gesellschaft, 03. - 04.04.2003, Berlin, DVG-Verlag, 113 – 117 (ISBN 3-936815-65-8)

- PRASAD, P. D., H. WANG, R. KEKUDA, T. FUJITA, Y. J. FEI, L. D. DEVOE, F. H. LEIBACH u. V. GANAPATHY (1998)  
Cloning and functional expression of a cDNA encoding a mammalian sodium-dependent vitamin transporter mediating the uptake of pantothenate, biotin, and lipoate.  
The Journal of Biological Chemistry, 273:13, 7501 - 7506
- PREUSS, F., u. K. DONAT (1987)  
Anleitung zur Ganztierpräparation des Huhnes.  
Copyright by K. Donat, 19
- PROUD, V. K., W. B. RIZZO, J. W. PATTERSON, G. S. HEARD u. B. WOLF (1990)  
Fatty acid alterations and carboxylase deficiencies in the skin of biotin-deficient rats.  
American Journal of Clinical Nutrition, 51, 853 - 858
- RICHARDSON, H. (1960)  
Embedding in Epoxy resin for ultrathin sectioning in electron microscopy.  
Stain Technology, 35, 313 - 323
- RODRÍGUEZ-MELÉNDEZ, R., M. E. PÉREZ-ANDRADE, A. DÍAZ, A. DEOLARTE, I. CAMACHO-ARROYO, I. CICERÓN, I. IBARRA u. A. VELÁZQUEZ (1999)  
Differential effects of biotin deficiency and replenishment on rat liver pyruvate and propionyl-CoA carboxylases and on their mRNAs.  
Molecular Genetics and Metabolism, 66, 16 - 23
- ROLAND, D. A., u. H. M. EDWARDS (1971)  
Effect of essential fatty acid deficiency and type of dietary fat supplementation on biotin-deficient chicks.  
Journal of Nutrition, 101, 811 – 818
- ROMEIS, B. (1989)  
Mikroskopische Techniken, 17. Auflage  
Urban and Schwarzenberg, München, Wien, Baltimore
- RUSHEN, J., u. A. M. B. DE PASSILLE (1992)  
The scientific assessment of the impact of housing on animal welfare: a critical review.  
Canadian Journal of Animal Science, 72, 721 – 743
- SAID, H. M. (1999)  
Cellular uptake of biotin: Mechanism and regulation.  
The Journal of Nutrition, 129, 490S – 493S
- SAWYER, R. H., u. K. F. CRAIG (1977)  
Avian scale development. Absence of an “epidermal placode” in reticulate scale morphogenesis.  
Journal of Morphology, 154, 83 - 94
- SAWYER, R. H., u. T. K. BORG (1979)  
Avian scale development.  
VI. Ultrastructure of the keratinizing cells of reticulate scales.  
Journal of Morphology, 161, 111 – 122

- SAWYER, R. H., L. W. KNAPP, M. O'GUIN (1982)  
The skin of birds: Epidermis, Dermis and Appendages  
in: J. BREITER-HAHN, A. G. MATOLLTSY u. K. SYLVIA RICHARDS: Biology of the Integument: 2 Vertebrates. Springer-Verlag, Berlin, Heidelberg, New York, Tokyo 194 - 238
- SCHALLER, G., M. KALDHUSDAL u. A. LYSAKER (1998)  
Skin lesions in Norwegian turkeys: Declassification costs, pathology and possible reasons.  
in: H. M. HAFEZ (Hrsg.): Proceedings of the 1<sup>st</sup> International Symposium on Turkey Disease, Berlin, 19. – 21.02.1998, DVG-Verlag, 39 – 42
- SCHMUTH, M., G. YOSIPOVITCH, M. L. WILLIAMS, F. WEBER, H. HINTNER, S. ORTIZ-URDA, K. RAPPERSBERGER, D. CRUMRINE, K. R. FEINGOLD u. P. M. ELIAS (2001)  
Pathogenesis of the permeability barrier abnormality in epidermolytic hyperkeratosis.  
The Journal of Investigative Dermatology, 117, 837 - 847
- SCOTT, M. L. (1981)  
Importance of biotin for chickens and turkeys.  
Feedstuffs, 53:8, 59 - 67
- SINGH, N., u. K. DAKSHINAMURTI (1988)  
Stimulation of guanylate cyclase and RNA polymerase H activities in HeLa cells and fibroblasts by biotin.  
Molecular and Cellular Biochemistry, 79, 47 - 55
- SPEARMAN, R. I. C. (1966)  
The keratinization of epidermal scales, feathers and hairs.  
Biological Reviews of the Cambridge Philosophical Society, 41:1, 59 - 96 Review
- SPEARMAN, R. I. C., u. J. A. HARDY (1985)  
Form and Function in Birds. Integument. Bd. 3  
Academic Press Inc. Ltd., London, 1 – 14
- SPENCE, J. T., u. A. P. KOUDELKA (1984)  
Effects of biotin upon the intracellular level of cGMP and the activity of glucokinase in cultured rat hepatocytes.  
The Journal of Biological Chemistry, 259:10, 6393 - 6396
- SQUIER, C. A., P. COX u. P. W. WERTZ (1991)  
Lipid content and water permeability of skin and oral mucosa.  
The Journal of Investigative Dermatology, 96:1, 123 - 126
- STEINERT, P. M. (2000)  
The complexity and redundancy of epithelial barrier function.  
The Journal of Cell Biology, 151:2, F5 – F7
- SWARTZENDRUBER, D. C., P. W. WERTZ, K. C. MADISON, u. D. T. DOWNING (1987)  
Evidence that the corneocyte has a chemically bound lipid envelope.  
The Journal of Investigative Dermatology, 88:6, 709 – 13
- SWARTZENDRUBER, D. C., P. W. WERTZ, D. J. KITKO, K. C. MADISON u. D. T. DOWNING (1989)  
Molecular models of the intercellular lipid lamellae in mammalian stratum corneum.  
The Journal of Investigative Dermatology, 92 (2), 251 – 7

- TERROINE, T. (1954)  
Important protection against biotin deficiency by several oxidation-reduction systems.  
Archives des Sciences Physiologiques, 8, 61 - 89
- UCHI, H., H. TERAU, T. KOGA u. M. FURUE (2000)  
Cytokines and chemokines in the epidermis.  
Journal of Dermatological Sciences, 24 Suppl. 1, S29 – S38
- VENABLE, J. H., u. R. COGGESHALL (1965)  
A simplified lead citrate stain for use in electron microscopy.  
Journal of Cell Biology, 25, 407 – 408
- VESLEY, D. L. (1982)  
Biotin enhances guanylate cyclase activity.  
Science, 216, 1329 - 1330
- VESLEY, D. L., H. C. WORMSER u. H. N. ABRAMSON (1984)  
Biotin analogs activate guanylate cyclase.  
Molecular and Cellular Biochemistry, 60, 109 - 114
- VIELHABER, G., S. PFEIFFER, L. BRADE, B. LINDNER, T. GOLDMANN, E. VOLLMER, U. HINTZE,  
K. P. WITTERN u. R. WEPF (2001)  
Localization of ceramide and glucosylceramide in human epidermis by immunogold  
electron microscopy.  
The Journal of Investigative Dermatology, 117, 1126 - 1136
- VOLLMERHAUS, B., u. F. SINOWATZ (1992)  
Abstammung des Nutzgefüglers  
in: R. NICKEL, A. SCHUMMER, E. SEIFERLE (Hrsg.): Lehrbuch der Anatomie der Haustiere,  
Band 5: Anatomie der Vögel. 2. Auflage, Verlag Paul Parey, Berlin, Hamburg, 1 – 12
- WÄSE, K. (1999)  
Untersuchung über die gesunde Haut von Masthühnern und ihren Veränderungen bei  
einem experimentellen Biotinmangel.  
Berlin, Freie Universität, Institut für Veterinär-Anatomie, Dissertation
- WANG, G., C. EKSTRAND u. J. SVEDBERG (1998)  
Wet litter and perches risk factors for the development of foot pad dermatitis in flour-  
housed broilers in Sweden.  
British Poultry Science, 39, 191 - 197
- WATKINS, B. A., u. F. H. KRATZER (1987)  
Tissue lipid fatty acid composition of biotin-adequate and biotin-deficient chicks.  
Poultry Science, 66:2, 306 - 313
- WATKINS, B. A. (1989)  
Levels of dihomo- $\gamma$ -linolenate are depressed in heart phosphatidylcholine and  
phosphatidylethanolamine in the biotin deficient chick.  
Poultry Science, 68:5, 198 - 205
- WATKINS, B. A., u. C. C. WHITEHEAD (1991)  
Hydrogenated oil decreases tissue concentration of n-6 polyunsaturated fatty acids and  
may contribute to dyschondroplasia in broilers.  
British Poultry Science, 32:5, 1109 - 1119

- WEISS, E. (1990)  
in: H STÜNZI u. E WEISS (Hrsg.): Allgemeine Pathologie für Tierärzte und Studierende der Tiermedizin. 8. Auflage, Kapitel 7.7.2. Die chronische proliferative Entzündung. Verlag Paul Parey, Berlin, Hamburg, 257 – 260
- WERTZ, P. W., u. D. T. DOWNING (1982)  
Glycolipids in mammalian epidermis: Structure and function in the water barrier.  
*Science*, 217, 1261 - 1262
- WERTZ P. W., u. D. T. DOWNING (1983 a)  
Acylglucosylceramides of pig epidermis: structure determination.  
*Journal of Lipid Research*, 24, 753- 758
- WERTZ P. W., u. D. T. DOWNING (1983 b)  
Ceramide of pig epidermis: structure determination.  
*Journal of Lipid Research*, 24, 759 – 765
- WERTZ, P. W., W. ABRAHAM, L. LANDMANN u. D. T. DOWNING (1986 a)  
Preparation of liposomes from stratum corneum lipids.  
*The Journal of Investigative Dermatology*, 87, 583 – 584
- WERTZ, P. W., P. M. STOVER, W. ABRAHAM u. D. T. DOWNING (1986 b)  
Lipids of chicken epidermis.  
*Journal of Lipid Research*, 27:4, 427 - 435
- WERTZ, P. W., P. M. STOVER u. D. T. DOWNING (1986 c)  
A survey of polar and nonpolar lipids from epidermis and epidermal appendages of the chicken (*Gallus domesticus*).  
*Comparative Biochemistry and Physiology B*, 84:2, 203 - 206
- WERTZ, P. W., D. C. SWARTZENDRUBER, D. J. KITKO, K. C. MADISSON u. D. T. DOWNING (1989)  
The role of the corneocyte lipid envelopes in cohesion of the stratum corneum.  
*The Journal of Investigative Dermatology*, 93, 169 - 172
- WERTZ, P. W. (1997)  
Integral lipids of hair and stratum corneum.  
*Experientia Supplement (EXS)*, 78, 227 – 37
- WERTZ, P. W. (2000)  
Lipids and barrier function of the skin.  
*Acta Derm Venereol Suppl (Stockh)*, 208, 7 – 11
- WHITE, H. B., C. C. WHITEHEAD u. J. ARMSTRONG (1987)  
Relationship of biotin deposition in turkey eggs to dietary biotin and biotin-binding proteins.  
*Poultry Science*, 66:7, 1236 - 1241
- WHITEHEAD, C. C., u. D. W. BANNISTER (1978)  
Blood pyruvate carboxylase (EC 6.4.1.1) activity as a criterion of biotin status in chickens and turkeys.  
*British Journal of Nutrition*, 39:3, 547 - 556

- WHITEHEAD, C. C., u. D. W. BANNISTER (1981)  
Aspects of metabolism related to the occurrence of skin lesions in biotin-deficient chicks.  
British Poultry Science, 22:5, 467 - 472
- WHITEHEAD, C. C., u. C. J. RANDALL (1982)  
Interrelationship between biotin, choline and other B-vitamins and occurrence of fatty liver  
and kidney syndrome and sudden death syndrome in broiler chickens.  
British Journal of Nutrition, 48:1, 177 - 184
- WHITEHEAD, C. C. (1988)  
Biotin in animal nutrition.  
F. Hoffmann LaRoche & Co. Ltd., Basel, Switzerland
- WHITEHEAD, C. C. (2001)  
Update on vitamin and trace mineral requirements for poultry.  
[www.afma.co.za](http://www.afma.co.za)
- WRENCH, R., J. A. HARDY, R. I. C. SPEARMAN (1980)  
Sebokeratocytes of avian epidermis – with mammalian comparison.  
in: The Skin of Vertebrates. Linnean Society Symposium Series, Number 9, Academic  
Press Inc. (London) , 47 – 56
- F. Hoffmann LaRoche & Co. AG, Basel, Switzerland (2000)  
Biotin.  
[www.roche.com/vitamins](http://www.roche.com/vitamins)
- ZELTINGER, J., u. R. H. SAWYER (1991)  
Avian scale development. XIII. Epidermal germinative cells are committed to appendage-  
specific differentiation and respond to patterned cues in the dermis.  
Developmental Biology, 144:2, 335 - 352
- ZEMPLINI, J., u. D. M. MOCK (2000)  
Marginal biotin deficiency is teratogenic.  
Proceedings of the Society for Experimental Biology and Medicine, 223, 14 - 21
- ZEMPLINI, J., u. D. M. MOCK (2001)  
Biotin homeostasis during the cell cycle.  
Nutrition Research Reviews, 14, 45 - 63