9. Literaturverzeichnis

1. AGUERO, M.E. ARON, L., DE LUCA, A.G., TIMMIS, K.N. and CABELLO, F.C. (1984)
   A plasmid-encoded outer membrane protein, TraT enhances resistance of *Escherichia coli* to phagocytosis.
   Infect. Immun., 46, 740-746

2. AHLERS, C., SANDER, I., RYLL, M., GLÜNDER, G. und NEUMANN, U. (2000)
   Das Lehr- und Forschungsgut Ruthe (LFG). Tierärztliche Erfahrungen im Bereich Legehennen in drei verschiedenen Haltungsformen und Ausblick auf zukünftige Perspektiven der Nutzung des LFG.
   59. Fachgespräch „Geflügelkrankheiten“, Hannover, 106-120

3. AMOAKO, K. K., PRYSLIAK, T., POTTER, A. A., COLLINSON, S. K., KAY, W. W. and ALLAN, B. J. (2004)
   Attenuation of an avian pathogenic *Escherichia coli* strain due to a mutation in the rpsL gene.
   Avian Dis., 48, 19-25

4. ARNE, P., MARC, D., BREE, A., SCHOULER, C., DHO-MOULIN, M. (2000)
   Increased tracheal colonisation in chickens without impairing pathogenic properties of avian pathogenic *Escherichia coli* MT78 with a *fimH* deletion.
   Avian Dis., 44, 343-355

5. ARNS, C.W. and HAFEZ, H.M. (1992)
   Swollen head syndom in poultry flocks in Brazil.
   Proceedings of the 41st Western Poultry Disease Conference, Sacramento, Calfornia, 81-83

6. ARP, L.H. (1980)
   Consequences of active or passie immunization of turkeys against *Escherichia coli* O78.
   Avian. Dis., 24, 808-815

7. BAGG, A. and NEILANDS, J.B. (1987)
   Molecular mechanis of regulation of siderophore-mediated iron assimilation.
   Microbiol. Rev., 51, 509-518

8. BALJER,G., HENNEN, H.R.,WIELER, L.H und WEISS, R. (1993)
Zur Prophylaxe und Therapie von bakteriellen Infektionskrankheiten mit Bestands- und tierspezifischen Impfstoffen.
Tierärztl. Umschau, 48, 696-700

9. BARNES , H.J. and GROSS, W.B. (1997)
Colibacillosis.
In: Diseases of Poultry. CALNEK, B.W., BARNES, H.J., BEARD, C.W., MC DAUGALD, L.R. and SAIF, Y.M.
Iowa State University Press, 10th ed., Ames, 131-141

10. BERGFELD, U., DAMME, K., GOLZE, M. und REICHARDT, W. (2002)
Evaluierung alternativer Haltungsformen für Legehennen Gemeinschaftsprojekt der Landesanstalten für Landwirtschaft der Freistaaten Bayern, Sachsen und Thüringen.
In: Alternative Legehennenhaltung. Schriftreihe der Sächsischen Landesanstalt für Landwirtschaft, Heft 8-9

11. BERGMANN, V. (1995)
Hauterkrankungen bei Schlachtgeflügel.
48. Fachgespräch „Geflügelkrankheiten“, Hannover, 5-15

12. BINNS, M.M., MAYDEN, J. and LEVINE, R.P. (1982)
Further characterisation of the complement resistance conferred on *Escherichia coli* by plasmid genes traT of R 100 and *iss* of ColV, I- K94.
Infect. Immun., 35, 654-659

13. BISGAARD, M. and DAM, A. (1981)
Salpingitis in poultry. II. Prevalence, bacteriology, and possible pathogenesis in egg-laying chickens.
Nord Vet. Med. Vol., 33, 81-9

14. BÖHLAND, K. (1999)
Aktuelle Geflügelkrankheiten im Zusammenhang mit alternativen Haltungssystemen: Praxiserfahrungen.
54. Fachgespräch „Geflügelkrankheiten“, Hannover, 5-8

15. BOUILANNE, M. (2003)
Evolution and aging of cellulitis lesions in experimantally-infected broiler chickens using a non-invasivetechnique.
Factsheet#101.www.poultryindustryconcil.ca/Factsheets/Factsheets/fact101.htm
Rev.26.06.03

16. CHAFFER, M., B. SCHWATSBURD and HELLER, E.D. (1997)
Vaccination of turkey poults against pathogenic *Escherichia coli.*
Avian Path., 26, 377-390

17. CHAPMAN, P. A., SIDDONS, C. A., GERDAN MALO, A. T. and HARKIN, M. A. (1997)
A 1-year study of *Escherichia coli* O157 in cattle, sheep, pigs and poultry.
Epidemiol. Infect., 19, 245-250

18. CHEN, K., GUO, W., CHENG, F., LIN, C., LIN, J. and DONG, X. (2000)
Investigation on *E. coli* O157 in Fujian, China.
Zhonghua Yu Fang Yi Xue Za Zhi, 34, 156-158

19. CHIPPERFIELD, J.R. and RATLEDGE, C. (2000)
Salicylic acid is not a bacterial sidophore: a theoretical study.
Biometrals., 13, 165-168

20. CLOUD S.S., ROSENBERG, J.K., FRIES, P.A., WILSON, R.A., and ODOR, E.M. (1985)
In vitro and in vivo characterization of avian *Escherichia coli*. I. Serotypes, metabolic activity, and antibiotic sensitivity
Avian Dis., 29, 1184-1093

21. CONRATHS, F.J., WERNER, O., METHNER, U., GEUE, L., SCHULZE, F., HÄHNEL, I., SACHSE, K., HOTZEL, H., SCHUBERT, E., MELZER, F., METTENLEITER, T.C. (2005)
Konventionelle und alternative Haltungssysteme für Geflügel –Infektionsmedizinische Gesichtspunkte-
Berl. Münch. Tierärztl. Wschr., 118, 186-204

22. CRESPO, R., WALKER, R. L., NORDHAUSEN, R., SAWYER, S. J. and MANALAC, R. B. (2001)
Salpingitis in Pekin ducks associated with concurrent infection with *Tetratrichomonas sp.* and *Escherichia coli*.
J. Vet. Diagn. Invest., 13, 240-245

23. CZIOREK, E., DHO M., HERPAY, M. GADO,I. and MILCH, H. (1990)
Association of virulence markers with animal pathogenicity of *Escherichia coli* in different models.
Acta Microbiol. Hung, 37, 207-217

24. DEB, R.J. and HARRY, E.G. (1976)
Laboratory trials with inactivated vaccines against *Escherichia coli* O78:K80 infections in fowls.
Res. Vet. Sci., 20, 131-138

25. DEB, R.J. and HARRY, E.G. (1978)
Laboratory trials with inactivated vaccines against *Escherichia coli* O2:K1 infections in fowls.
Res. Vet. Sci., 24, 308-313

26. DELICATO, E. R., DE BRITO, B. G., GAZIRI, L. C., VIDOTTO, M. C. (2003)
Virulence-associated genes in *Escherichia coli* isolates from poultry with colibacillosis.
Vet. Microbiol., 94, 97-103

27. DESZO E.L., STEENBERGEN, S.M., FREEDBERG, D.I. and VIMR, E.R. *Escherichia coli* K1 polysialic acid *O*-acetyltransferase gene, *neuO*, and the mechanism of capsule form variation involving a mobile contingency locus.
http://www.pnas.org/cgi/search?fulltext=0407428102

28. DIAS DA SIVEIRA, W., FERREIRA, A., BROCCHI, M., MARIA DE HOLLANDA, L., PESTANA DE CASTRO, A., TATSUMI YAMADA, A. and LANCELLOTTI, M. (2002) Biological characteristics and pathogenicity of avian *Escherichia coli* strains.
Vet. Microbiol., 85, 47-53

29. DHO, M. and LAFONT, J.P. (1984)
Adhesive properties and iron uptake ability in *Escherichia coli* lethal and nonlethal for chicks.
Avian Dis., 28, 1017-1025

30. DHO-MOULIN, M. and FAIRBROTHER, J.M. (1999)
Avian pathogenic *Escherichia coli* (APEC).
Vet. Res., 30, 299-316

31. DORN, P. (1971)
Coli-Infektion – Coli-Ruhr
In: Handbuch der Geflügelkrankheiten, Peter Dorn (Hrsg.)
Verlag Eugen Ulmer, Stuttgart, 129-133

32. DOZOIS, C.M., FAIRBROTHER, J.M., HAREL, J. and BOSSE, M. (1992)
pap-and pil-related DNA sequences and other virulence determinantes associated with *Escherichia coli* isolated from septicemic chickens and turkeys.
Infect. Immun., 60, 2648-2656

33. DOZOIS, C.M., CHANTELOUP, N., DHO-MOULINN,M., BREE, A., DESAUTELES, C., and FAIRBROTHER, J.M. (1994)
Bacteriaal colonization and in vivo expressionof F1 (f1) fimbrial antigens in chickens experimentelly infected with pathogenic *Escherichia coli.*
Avian Dis., 38, 231-239.

34. DOZOIS, C.M., POURBAKHSH, S.A. and FAIRBROTHER, J.M., (1995)
Expression of P and type 1 (F1) fimbriae in pathogenic *Escherichia coli* from poultry.
Vet. Microbiol., 45, 297-309

35. DOZOIS, C.M., DHO-MOULIN, M., BREE, A., FAIRBROTHER, J.M., DESAUTELS, C., and CURTISS, R., 3rd (2000)
Relationship between the Tsh autotransporter and pathogenicity of avian *Escherichia coli* and localization and analysis of the Tsh genetic region.
Infect. Immun., 68, 4145-4154

36. DROUAL, R. and CHIN, R.P. (1996)
Synovitis, osteomyelitis and green liver in turkey associated with *E. coli.*
Avian Dis., 40, 417-24

37. ELFALDIL, A. A., VAILLANCOURT, J.-P. and MEEK, A. H. (1996)
Farm Management risc factors associated with cellulitis in broiler chickens in southern Ontario.
Avian Dis., 40, 699-706

38. EL TAYEB, A. B. and HANSON, R. P.(2002)
Interactions between *Escherichia coli* and Newcastle disease virus in chicken.
Avian Dis., 46, 660-667

39. EWERS, C., JANSSEN, T., und WIELER, L.H. (2003)
Aviäre pathogene *Escherichia coli* (APEC)
Berl. Münch. Tierärztl. Wschr. 116, 381-395

40. EWERS, C., JANSSEN, T., KIESSLING, S., PHILIPP, H.C. and WIELER, L.H. (2004)
Molecular epidemiology of avian pathogenic *Escherichia coli* (APEC) isolated from colisepticemia in poultry.
Vet. Microbiol., 104, 91-101

41. EWERS, C., JANSSEN, T., KIESSLING, S., PHILIPP, H.C. and WIELER, L.H. (2005)
Rapid detection of virulence assiciated genes in avian phathogenic *Escherichia coli* by multiplex polymerase chain reaction.
Avian Dis., 49, 269-273

42. FABRICANT, J. and LEVINE, P.P. (1962)
Experimental production of complicated Chronic Respiratory Disease Infektion (“AIR SAC” DISEASE).
Avian Dis., 6, 13-23

43. FINKELSTEIN R.A., SCIORTINO C.V. and MC INTOSH, M.A. (1983)
Role of iron in microbe-host interactions.
Rev. Infect. Dis., 5 , 759-777

44. FRIES, R., BERGMANN, V. und FEHLHABER, K. (2001)
Tiefe Dermatitis.
In: Praxis der Geflügelfleischuntersuchungen, FRIES, R., BERGMANN, V., FEHLHABER, K., (Hrsg.)
Schlütersche GmbH & Co. KG Verlag und Druckerei, Hannover, 151-152

45. FROMMER, A. , FREIDLIN, J.P., BOCK, R.R., LEITNER, G., CHAFFER, M. and HELLER, E.D. (1994)
Experimental vaccination of young chicken with a live, non-pathogenic strain of *Escherichia coli*.
Avian Path., 23, 425-433

46. GAZDZINSKI, P. und BARNES, J. (2004).
Venereal colibacillosis (acute vaginitis) in turkey breeder hens.
Avian Dis., 48, 681-685

47. GERRITS, E. (1959)
Die Hygiene.
In: Geflügelkrankheiten, K. Fritsche und E. Gerrits, (Hrsg.)
Verlag Paul Parey, Berlin und Hamburg, 1-9

48. GIBBS, P.S., MAURER, J.J., NOLAN, L.K. and WOOLEY, R.E. (2003)
Prediction of chicken Embryo lethalithy with the avian *Escherichia coli* traits complement resistance, colicinV production, and presence of the increased serum survival gene cluster *(iss).*
Avian Dis., 47, 370-379

49. GLÜNDER, G. (1990)
Dermatitis in broilers caused by *Escherichia coli*: isolation of *Escherichia coli*, reproduction of the disease with *Escherichia coli* O 78:K 80 and conclusions.
Zentralbl. Veterinarmed. B., 37, 383-391

50. GOMIS, S. M., GOODHOPE, R., KUMOR, L., CADDY, N., RIDDELL, C., POTTER, A. A. and ALLAN, B. J. (1997)
Isolation of *Escherichia coli* from cellulitis and other lesions of the same bird in broilers at slaughter.
Can. Vet. J., 38, 159-162

51. GOMIS, S. M., GOMIS, A. I., HORADAGODA, N. U., WIJEWARDENE, T. G., ALLAN, B. and J., POTTER, A. A. (2000)
Studies on cellulitis and other disease syndromes caused by *Escherichia coli* in broilers in Sri Lanka.
Trop. Anim. Health. Prod., 32, 341-351

52. GOPHNA, U., OELSCHLAEGER, T. A., HACKER, J. and RON, E. Z. (2001)
Yersinia HPI in septicemic *Escherichia coli* strains isolated from diverse hosts.
FEMS Microbiol. Lett. , 196, 57-60

53. GOREN, E. (1985)
Een “nieuwe ziekte” bij de kip diagnostische bevindingen.
Tijdschr. Diergeneeskd., 110, 1076-1077

54. GOREN, E. (1991)
Colibacillosis in poultry: etiology, pathology and therapy.
Tijdschr. Diergeneeskd., 116, 1122-1129.

55. GRAZTL, E. (1968)
Kolibazillose des Geflügels.
In: Spezielle Pathologie und Therapie der Geflügelkrankheiten, Gratzl, E. und Köhler, H. (Hrsg.)
Ferdinand Enke Verlag, Stuttgart, 395-512

56. GROSS, W.B. (1994)
Diseases due to *Escherichia coli* in poultry.
In: *Escherichia coli* in domestic animals and humans, Gyles, C.L. (ed.)
CAB Inter-national, Wallingford, UK, 237-259

57. GYIMAH, J.E. and PANIGRAHY, B. (1985)
Immunogenicity of an *Escherichia coli*, serotype O1 pili vaccine in chickens.
Avian Dis., 29, 1078-1083

58. GYIMAH, J.E., PANIGRAHY, B. and WILLIAMS, J.D. (1986).
Immunogenicity of an *Escherichia coli* multivalent pilus vaccine in chickens.
Avian Dis., 30, 687-689

59. HAAS,B. (1994)
Entwicklung eines Biotin-Sterptavidin-amplifizierten enzymgebundenen Immuno-adsorptionssystems zum Nachweis von Antikörpern gegen *Campylobacter jejuni* und *coli* beim Huhn.
Tierärztl. Hochsch., Institut für. Geflügelkrankheiten, Dissertation, Hannover

60. HACKER, J. (1992)
Role of fimbrial adhesins in the pathogenesis of *Escherichia coli* infections.
Can. J. Microbiol., 38, 720-727

61. HAFEZ, M.H., MAZAHERI, A., PRUSAS, C., BÖHLAND, K., PÖPPEL, M. und SCHULZE, D. (2001)
Aktuelle Geflügelkrankheiten bei Legehennen im Zusammenhang mit alternativen Haltungssystemen.
Tierärztl. Praxis (G) 29, 168-174

62. HAFEZ, M.H. (1994)
Rhinotracheitis der Puten (TRT) und Swollen Head Syndromder Hühner (SHS). Ein Beitrag zur Klinik, Ätiologie, Epidemiologie und Bekämpfung.
Ludwig-Maximilian-Universität , Institut für. Geflügelkrankheiten, Habilitationsschrift, München

63. HAFEZ, H.M. and LÖHREN, U. (1990)
Swollen Head Syndrom: Clinical observations and Serology in West Germany.
Dtsch. Tierärztl. Wschr., 97, 322-324

64. HANSON, M.S. SLAUGHTER, C. and HANSEN, E.J. (1992)
The hbpA gene of *Haemophilus influencae* type bencodes a heme-binding lipoprotein conserved among heme-dependent *Haemophilus* species.
Infect. Immun., 60, 2257-2266

65. HARRY, E.G. and HAMSLEY, L.A. (1965)
The relationship between environmental contamination with septicaemia strains of *Escherichia coli* and their incidence in chickens.
Vet. Rec., 77(9), 241-245

66. HELLER, E.D., LEITNER, G., DRABKIN, N. und MELAMED, D. (1990)
Passive immunization against of chicks against *Escherichia coli.*
Avian Path., 19, 345-354

67. HEINRICHS, D.E., YETHON, J.A. and WHITFIELD, C. (1998)
Molecular basis for structural diversity in the core regions of the lipopolisaccharides of *Escherichia coli* and *Salmonella enteritica*.
Mol. Microbiol., 30, 221-232

68. HIGGINS, D.A. (1996)
Comperative Immunology of Avian species.
In: Poultry Immunology Vol. 24, Davison, T.F., T.R. Morris u. L.N. Payne, (ed.)
Carfax Publishing Company, Oxford, 149-205

69. HOOP, R. (2002)
Escherichia coli-Infektion des Huhnes.
DGS Magazin Woche 40, 38-40

70. HORNE, S.M., PFAFF-MCDONOUGH, S.J., GIDDINGS, C.W. and NELSON, L.K. (2000)
Cloning and sequencing of the *iss* gene from a virulent avian *Escherichia coli*.
Avian Dis., 44, 179-184

71. HUFF, G. R., HUFF, W. E., RATH, N. C. and BALOG, J. M. (2000)
Turkey osteomyelitis complex.
Poult. Sci., 79, 1050-1056

72. HUFF, W. E., HUFF, G. R., RATH, N. C., BALOG, J. M. and DONOGHUE, A. M. (2002).
Prevention of *Escherichia coli* infection in broiler chickens with a bacteriophage aerosol spray.
Poult. Sci., 81, 1486-1491

73. IGBOKWE, I. O., SALAKO, M. A.,RABO, J. S. and HASSAN, S. U. (1996)
Outbreak of infectious bursal disease associated with acute septicaemic colibacillosis in adult prelayer hens.
Rev. Elev. Med. Vet. Pays. Trop., 49, 110-113

74. JANSSEN, T., SCHWARZ, C., PREIKSCHAT, P., VOSS, M., PHILIPP, H.C. and WIELER, L.H. (2001)
Virulenc-associated genes in avian pathogenic *Escherichia coli* (APEC) isolated from internal organs of poultry having died from colibacillosis.
Int.J. Med. Microbiol., 291, 371-378

75. JANSSEN,T. (2002)
Molekulare epidemiologische Untersuchungen aviärer pathogener *Escherichia coli* (APEC)- Wildstämme und Etablierung einer Multiplex-PCR.
Freie Universität Berlin, Institut für Geflügelkrankheiten, Dissertation

76. JOHNSON, J.R., STELL, A.L., SCHEUTZ, F., O´BRYAN, T.T., RUSSO, T.A., CARLINO, U.B., FASCHING, C., KAVLE, J., VAN DIJK, L., and GAASTRA, W. (2000)
Analysis of the F antigen-specific papA alleles of extraintestinalpathogenic *Escherichia coli* using a novel multiplex PCR-based assey.
Infect. Immunol., 68, 1587-1599

77. JOHNSON, T.J., GIDDINGS, C.W., HORNE, S.M., GIBBS, P.S., WOOLEY, R.E., SKYBERG, J., OLAH, P., KERCHER, R., SHERWOOD, J.S., FOLEY, S.L. and NOLAN, L.K. (2002)
Location of increased serum survival gene and selected virulence traits on a conjugative R plasmid in an avian *Escherichia coli* isolate.
Aviian Dis., 46, 342-352

78. JOHNSON, T.J., SIEK, K.E., JOHNSON, S.J. and NOLAN, L.K. (2006)
DNA sequence of a ColV plasmid and prevalence of selected plasmid-encoded virulence genes among avian *Escherichia coli* strains.
Journ. of Bacteriolog., 188, 745-758

79. JUNGBÄCK, C. (2000)
Bestandsspezifische Impfstoffe: Kriterien und Anforderungen.
58. Fachgespräch „Geflügelkrankheiten“, 16-21

80. JUNBÄCK, C. und LEMKE, I. (2003)
Anwendung von Impfstoffen.
In: Tierärztliche Impfpraxis, Selbitz, H.J. und Moos, M. (Hrsg.)
Enke Verlag, Stuttgart, 14-21

81. KARIUKI, S., GILKS, C., KIMARI, J., OBANDA, A., MUYODI, J., WAIYAKI, P. and HART, C. A. (1999)
Genotype analysis of *Escherichia coli* strains isolated from children and chickens living in close contact.
Appl. Environ. Microbiol., 65, 472-476

82. KARIUKI, S., GILKS, C., KIMARI, J., MUYODI, J., GETTY, B. and HART, C. A. (2002)
Carriage of potentially pathogenic *Escherichia coli* in chickens.
Avian Dis., 46, 721-724

83. KARIYAWASAM, S., B.N. WILKIE, D.B.HUNTER and GYLES, C.L. (2002)
Systemic and Mucosal Antibody Response to Selected Cell Surface Antigens of Avian Pathogenic *Escherichia coli* in Experimentally Infected Chickens.
Avian Dis., 46, 668-678

84. KARIYAWASAM, S., B.N. WILKIE and GYLES, C.L. (2004a)
Construction, characterization, and evaluation of the vaccine potential of three genetically defined mutants of avian pathogenic *Escherichia coli*.
Avian Dis., 48, 287-299

85. KARIYAWASAM, S., B.N. WILKIE and GYLES, C.L. (2004b)
Resistance of broiler chickens to *Escherichia coli* respiratory tract infection induced by passively transferred egg-yolk antibodies.
Vet. Microbiol., 98, 273-284

86. KIETZMANN, M. und LÜDERS, H. (2005)
Prophylaxe, Diagnose und Therapie.
In: Kompendium der Geflügelkrankheiten, Siegmann und Neumann (Hrsg.)
Schlütersche mbH & Co. KG, Hannover, 96-108

87. KOSTAKIOTI, M. and STATHOPOULOS, C. (2004)
Functional analysisof Tsh autotransporter from an avian pathogenic *Escherichia coli* strain.
Infect. Immun., 72, 5548-5554

88. KRÜGER, A. (2005)
Ein Ernstes Problem in der Junghühnermast: Tiefe Dermatitis.
Tierärztl. Umsch., 60, 377-382

89. KWAGA, J.K.P., ALLAN, B.J., VAN DEN HURK, J.V., SEIDA, H. and POTTER, A.A. (1994)
A carAB mutant of avian pathogenic *Escherchia coli* serotyp O2 is attenuated and effective as a live oral vaccine against colibacillosis in turkeys.
Infect. Immun., 62, 3766-3772

90. LE BOUGUENEC, C. and BERTIN, Y. (1999)
AFA and F17 adhesins produced by pathogenic *Escherichia coli* strains in domestic animals.
Vet. Res., 30, 317-342

91. LEITNER, G. MELAMED,D., DRABKIN, N. and HELLER E.D. (1990)
An enzyme-linked immunosorbent assay for detection of antibodies against *Escherichia coli*: association between indirect hemagglutination test and survival.
Avian Dis., 34, 58-62

92. LI, G., LATURNUS, C., .EWERS, C. and WIELER, L. H. (2005)
Identification of genes required for avian *Escherichia coli* septicemia by signature-tagged mutagenesis.
Infect. Immun., 73, 2818-2827

93. LIANG-TAKASAKI, C.J., MAKELA, P.H. and LEIVE, L. (1982)
Phagocytosis of bacteria by macrophages: changing the carbohydrate of lipopolysaccharide alters interaction with complement and macrophages
J.Immunol., 128, 1229-1235

94. LINTERMANS, P. F., POHL, P., BERTELS, A., CHARLIER, G., VANDEKERCKHOVE, J., VAN DAMME, J., SCHOUP, J., SCHLICKER, C., KORHONEN, T., DE GREVE, H., et al. (1988)
Characterization and purification of the F17 adhesin on the surface of bovine enteropathogenic and septicemic *Escherichia coli*.
Am. J. Vet. Res. , 49, 1794-1799

95. MAJO, N., GIBERT, X., VILAFRANCA, M., O'LOAN, C. J., ALLAN, G. M., COSTA, L., PAGES, A. and RAMIS, A. (1997)
Turkey rhinotracheitis virus and *Escherichia coli* experimental infection in chickens: histopathological, immunocytochemical and microbiological study.
Vet. Microbiol. , 57, 29-40

96. MAURER, J.J., BROWN, T.P., STEFFENS, W.L. and THAYER, S.G. (1998)
The occurrence of ambient temperature-regulated adhesins, curli, and the temperature-sensitive hemagglutinin *tsh* among avian *Escherichia coli*.
Avian Dis., 42, 106-118

97. MCPEAKE, S. J., SMYTH, J. A. and BALL, H. J. (2005)
Characterisation of avian pathogenic *Escherichia coli* (APEC) associated with colisepticaemia compared to faecal isolates from healthy birds.
Vet. Microbiol., 110, 245-53

98. MELAMED, D., LEITNER, G. and HELLER, E.D. (1991)
A vaccine against avian colibacillosis based on ultrasonic inactivation of *Escherichia coli.*
Avian Dis., 35, 17-23

99. MELLATA, M., DHO-MOULIN, M., DOZOIS, C. M., CURTISS, R., 3RD, LEHOUX, B., FAIRBROTHER, J. M. (2003a)
Role of avian pathogenic *Escherichia coli* virulence factors in bacterial interaction with chicken heterophils and macrophages.
Infect. Immun., 71, 494-503

100. MELLATA, M., DHO-MOULIN, M., DOZOIS, C. M., CURTISS, R., 3RD, BROWN, P. K., ARNE, P., BREE, A., DESAUTELS, C., FAIRBROTHER, J. M. (2003b)
Role of virulence factors in resistance of avian pathogenic *Escherichia coli* to serum and in pathogenicity.
Infect. Immun., 71, 536-540

101. MESSIER, S., QUESSEY, S., ROBINSON, Y., DEVRIES, L.A., HOMMEZ, J. and FAIRBROTHER, J.M. (1993)
Focal dermatitis and cellulitis in broiler chickens: bacteriological and pathological findings.
Avian Dis., 37, 839-844

102. MITRA, M., PRAMANIK, A. K., BHATTACHARYYA, H. M., BASAK, D. K. and CHATTERJEE, A., ROY, P. (2004)
Spontaneous colibacillosis in infectious bursal disease-affected broiler flocks.
Trop. Anim. Health Prod., 36(7), 627-32

103. MORLEY, A. J. and D. K. THOMSON (1984)
Swollen-head syndrome in broiler chickens.
Avian Dis., 28, 238-243

104. MYERS, R.K. and ARP, L.H. (1987)
Pulmonary clearance and lesions of lung and air sac in passively immunized and unimmunized turkeys following exposure to aerosolized *Escherichia coli*.
Avian Dis., 31, 622-628

105. NAGARAJA, K.V., EMERY, D.A., NEWMAN, J.A. and POMOROY, B.S. (1983)
Identification and isolation of somatic pili from pathogenic *Escherichia coli*:
Am. J. Vet. Res., 44, 284-287

106. Nakamura, K., Ueda, H., Tanimura, T. and Noguchi, K. (1994)
Effect of mixed live vaccine (Newcastle disease and infectious bronchitis) and *Mycoplasma gallisepticum* on the chicken respiratory tract and on *Escherichia coli* infection.
J. Comp. Pathol., 111, 33-42

107. NEUMANN, U., GLÜNDER, G., AHLERS, C., NOGOSSEK, M.I., WEBER.M., SANDER, I., LEYENDECKER, M., HAMANN, H., DISTL., O., HARTUNG, J., KAMPHUES J. und RING, C. (2002)
Risikofaktoren in herkömmlichen und alternativen Legehennenhaltungen: Erfahrungen am Lehr- und Forschungsgut Ruthe.
Kongressband 2. Leipziger Tierärztetag, 514-515

108. NGELEKA, M., KWAGA, J.K., WHITE, D.G., WHITTAM, T.S., RIDDELL, C., GOODHOPE, R., POTTER, A.A. and ALLAN, B. (1996)
Escherichia coli cellulitis in broiler chickens: clonal relationship among strains and analysis of virulence-associated factors of isolates from diseased birds.
Infect.Immun., 64, 3118-3126

109. NOLAN, L.K., HORNE, S. M., GIDDING, C.W., FOLEY, S.L., JOHNSON, T.J., LYNNE, A.M. and SKYBERG, J. (2003)
Resistance to serum complement, *iss*, and virulence of avian *Escherichia coli*.
Vet. Res. Commun., 27, 101-110

110. OLSEN, A., WICK, M.J., MORGELIN, M. and BJORCK, L. (1998)
Curli, fibrous surface proteins of *Escherichia coli*, interact with major histocompatibility complex class I molecules.
Infect.Immun., 66, 944-949

111. PAKPINYO, S., D.H. LEY, J. BARNES, J.P. VAILLANCOURT and GUY, J.S (2003)
Enhancement of enteropathogenic *Escherichia coli* pathogenicity in young turkeys by concurrent turkey coronavirus infection.
Avian Dis., 47, 396-405

112. PANIGRAHY, B. and GYIMAH, J.E. (1984)
Immunogenicity of an oil-emulsified *Escherichia coli* bacterin.
Avian Dis., 28, 475-481

113. PARREIRA, V. R. and YANO, T. (1998)
Cytotoxin produced by *Escherichia coli* isolated from chickens with swollen head syndrome (SHS)
Vet. Microbiol., 62, 111-119

114. PATTISON, M., CHETTLE, N., RANDALL, C.J. and WEYTH, P.J. (1989)
Observations on swollen head syndrom in broiler and broiler breeder chickens.
Vet. Rec., 125, 229-231

115. PEIGHAMBARI, S. M., VAILLANCOURT, J. P.,WILSON, R. A. and GYLES, C. L. (1995 a)
Characteristics of *Escherichia coli* isolates from avian cellulitis.
Avian Dis., 39, 116-124

116. PEIGHAMBARI, S. M., JULIAN, R. J., VAILLANCOURT, J. P. and GYLES, C. L. (1995 b)
Escherichia coli cellulitis: experimental infections in broiler chickens.
Avian Dis., 39, 125-134

117. PEIGHAMBARI, S. M., HUNTER, D. B., SHEWEN, P. E. and GYLES, C. L. (2002)
Safety, immunogenicity, and efficacy of two *Escherichia coli cya crp* mutants as vaccines for broilers.
Avian Dis., 46, 287-297

118. PENNINGS, A. (2001)
Entwicklung des Impfstoffes Nobilis® *E. coli* inac.
Proceedings der Fortbildungsveranstaltung der Intervet Deutschland GmbH, Oberschleißheim

119. PERLEMANN, B., MEROZ, M. and SAMBERG, Y. (1991)
Swollen head syndrom in broiler breeders in Israel.
Vet. Rec., 123, 444

120. PFAFF-MCDONOUGH, S.J., HORNE, S.M., GIDDINGS, C.W., EBERT, J.O., DOETKOTT, C., SMITH, M.H. and NOLAN, L.K. (2000)
Complement resistance-related traits among *Escherichia coli*isolates from apparently healthy birds with colibacillosis.
Avian Dis., 44, 23-33

121. PHILLIP, H.-C. und VOSS, M. (2001).
Was wissen wir über Coli-Infektionen bei Legehennen? :
Lohmann Information April-Juni 2001, 41-44

122. PIERSON, F. W., LARSEN, C. T. and DOMERMUTH, C. H. (1996)
The production of colibacillosis in turkeys following sequential exposure to Newcastle disease virus or Bordetella avium, avirulent hemorrhagic enteritis virus, and *Escherichia coli.*
Avian Dis., 40, 837-840

123. POURBAKHSH, S.A., BOULIANNE, M., MARTINEAU-DOIZE, B., DOZOIS, C.M., DESAUTELS, C. and FAIRBROTHER, J.M. (1997a)
Dynamics of *Escherichia coli* infection in experimentally inoculated chickens.
Avian Dis., 41, 221-223

124. POURBAKHSH, S.A., BOULIANNE, M., MARTINEAU-DOIZE, C.M., and FAIRBROTHER, J.M.(1997b).
Virulence mechanism of aivan fimbriated *Escherichia coli* in experimentally inoculated chickens.
Vet.Mikobiol. 58, 195-213

125. POURBAKHSH, S. A., DHO-MOULIN, M., BREE, A., DESAUTELS, C., MARTINEAU-DOIZE, B. and FAIRBROTHER, J. M. (1997c)
Localization of the in vivo expression of P and F1 fimbriae in chickens experimentally inoculated with pathogenic *Escherichia coli.*
Microb. Pathog., 22, 331-341

126. PROVENCE, D.L. and CURTISS, R., 3rd (1994)
Isolation and characterization of a gene involved in hemagglutination by an avian pathogenic *Escherichia coli* strain.
Infect. Immun., 62, 1369-1380

127. RATLEDGE, C. and DOVER, L.G. (2000)
Iron metabolism in pathogenic bacteria
Annu.Rev.Mikrobiol., 54, 881-941

128. REINGOLD, J., STARR, N., MAURER, J. and LEE, M.D. (1999)
Identification of a new *Escherichia coli* She haemolysin homolog in avian *E.coli*.
Vet. Mikrobiol., 66, 25-134

129. ROBBINS, J.B., MC CRACKEN, G.H., JR., GOTSCHLICH, E.C., ORSKOV, F., ORSKOV, I. and HANSON, L.A. (1974)
Escherichia coli K-1 capsular polysaccharide associated with neonatal meningitis.
N.Engl.J.Med., 290, 1216-1220

130. ROLAND K., KARACA, K. and SIZEMORE, D. (2004)
Expression of *Escherichia coli* antigens in *Salmonella typhimurium* as a vaccine to prevent airsacculitis in chicken.
Avian Dis., 48, 595-605

131. ROSARIO, C. C., LOPEZ, A. C., TELLEZ, I. G., NAVARRO, O. A., ANDERSON, R. C. and ESLAVA, C. C. (2004)
Serotyping and virulence genes detection in *Escherichia coli* isolated from fertile and infertile eggs, dead-in-shell embryos, and chickens with yolk sac infection.
Avian Dis., 48, 791-802

132. ROSENBERG, J.K., FRIES, F.A. and CLOUD, S.S. (1985)
In vitro and in vivo characterization of avian *Escherichia coli*. III. Immunization.
Avian Dis., 29, 1108-1117

133. RUBLE, R.P., WAKENELL, P.S. and CULLOR, J.S (2002)
Seroprevalence of antibodies specific for gram-negative core antigens in chickens on the basis of an *Escherichia coli* J5 enzyme-linked immunosorbent assay.
Avian Dis., 46, 453-460

134. SANDHU, T.S. and LAYTON, H.W. (1985)
Laboratory and field trials with formalin-inactivated *Escherichia coli* (O78)-Pasteurella anatipestifer bacterin in white pekin ducks.
Avian. Dis., 29, 128-135

135. SALVADORI, M. R., YAMADA, A. T. and YANO, T. (2001)
Morphological and intracellular alterations induced by cytotoxin VT2y produced by *Escherichia coli* isolated from chickens with swollen head syndrome.
FEMS Microbiol. Lett., 197, 79-84

136. SCHUBERT, S., RAKIN, A., KARCH, H., CARNIEL, E. and HEESEMANN, J. (1998)
Prevalence of the „high-pathogenic-islands" of *Yersinia species* among *Escherichia coli* strains that are pathogenic to humans.
Infect. Immun., 66, 480-485

137. SCHUBERT, S., RAKIN, A., FISCHER, D., SORSA, J. and HEESEMANN, J. (1999).
Characterization of the integration site of Yersinia high-pathogenicity island in *Escherichia coli*.
FEMS Microbiol. Lett., 179, 409-414

138. SELBITZ, H.-J. (1992)
Lehrbuch der veterinärmedizinischen Bakteriologie
Gustav-Fischer-Verlag, 83-90

139. SELBITZ, H.-J. (2002)
Bakterielle Erkrankungen der Tiere.
In: Medizinische Mikrobiologie und Seuchenlehre, ROLLE, M. und MAYR, A. (Hrsg.)
Enke Verlag, Stuttgart, 451-460

140. SHANE, M. (2001a)
Coliform infections are responsible for heavy losses (1).
World Poultry- Elsevier Volume 17, No 9.´01, 58-59

141. SHANE, M. (2001b)
Significant *E. coli* related conditions of poultry (2).
World Poultry- Elsevier Volume 17, No 10.´01, 35-37

142. SHARMA, J.M. (1999)
Introduction to poultry vaccines and immunity.
Adv. Vet. Med., 41, 481-494

143. SIEGMANN, O. und NEUMANN, U. (2005)
Entwicklung der Geflügelwirtschaft.
In: Kompendium der Geflügelkrankheiten, Siegmann, O., und NEUMANN, U. (Hrsg.)
Verlag Paul Parey, Berlin und Hamburg, 9-14

144. STATHOPOULOS, C., PROVENCE, D.L. and CURTISS, R., 3rd (1999)
Characterization of the avian pathogenic *Escherichia coli* hemagglutinin Tsh, a member of the immunoglobulin A protease-type family of auttransporters.
Infect. Immun., 67, 772-781

145. STEHLING, E. G., YANO, T., BROCCHI, M. AND DA SILVEIRA, W. D. (2003)
Characterization of a plasmid-encoded adhesin of an avian pathogenic *Escherichia coli* (APEC) strain isolated from a case of swollen head syndrome (SHS).
Vet. Microbiol., 95, 111-120

146. STORDEUR, P., MARLIER, D., BLANCO, J., OSWALD, E., BIET, F., DHO-MOULIN, M., MAINIL, J. (2002)
Examination of *Escherichia coli* from poultry for selected adhesin genes important in disease caused by mammalian pathogenic *E. coli*
Vet. Microbiol., 84, 231-241

147. TABLANTE, N. L., BRUNET, P. Y., ODOR, E. M., SALEM, M., HARTER-DENNIS, J., HUESTON, W. D. (1999)
Risk factors associated with early respiratory disease complex in broiler chickens.
Avian Dis., 43, 424-428

148. TIVENDALE, K.A., ALLEN, J.L., GINNS, C.A., CRABB, B.S., and BROWNING G.F. (2004)
Association of *iss* and *iucA*, but not *tsh*, with plasmid-mediated virulence of avian pathogenic *Escherichia coli*.
Infect. Immun., 72, 6554-6560

149. VAILLANCOURT, J.P. and BARNES, H.B. (2003)
Coliform Cellulitis.
In : Saif, Y. M., Diseases of Poultry, Iowa State Press, 652-656

150. VALENTIN, A. und WILLSCH, K. (1987)
Untersuchungen zur Ätiologie und Pathogenese der tiefen Dermatitis bei Schlachtbroilern.
Mh. Vet. Med., 42, 708 -771

151. VAN DEN BOSCH. J.F., HENDRIKS, J.H., GLADIGAU, I., WILLEMS, H.M., STROM, P.K. and DE GRAAF, F.K., (1993)
Identification of F11 fimbriae on chicken. *Escherichia coli* strains.
Infect. Immun., 61, 800-806

152. VANDEKERCHOVE, D., DE HERDT, P., LAEVENS, H., BUTAYE, P., MEULEMANS, G. and PASMANS, F. (2004a)
Significance of interactions between *Escherichia coli* and respiratory pathogens in layer hen flocks suffering from colibacillosis-associated mortality.
Avian Pathol., 33, 298-302

153. VANDEKERCHOVE, D., DE HERDT, P., LAEVENS, H. and PASMANS, F. (2004b)
Risk factors associated with colibacillosis outbreaks in caged layer flocks.
Avian Pathol., 33, 337-342

154. VANDEKERCHOVE, D., VANDEMAELE, F., ADRIAENSEN, C., ZALESKA, M., HERNALSTEENS, J. P., DE BAETS, L., BUTAYE, P., VAN IMMERSEEL, F., WATTIAU, P., LAEVENS, H., MAST, J., GODDEERIS, B. and PASMANS, F. (2005)
Virulence-associated traits in avian *Escherichia coli*: comparison between isolates from colibacillosis-affected and clinically healthy layer flocks.
Vet. Microbiol., 108, 75-87

155. VANDEMAELE, F., ASSADZADEH, A., DERIJCKE, J., VEREECKEN, M. and GODDEERIS, B. M. (2002)
Avian pathogenic *Escherichia coli* (APEC).
Tijdschr. Diergeneeskd., 127, 582-588

156. VANDEMAELE, F., MUGASA, J.P., VANDEKERCHOVE, D., GODDEERIS, B. M (2003)
Predominance of the *pap*GII allele with high sequence homology to that of human isolates among avian pathogenic *Escherichia coli* (APEC).
Vet. Microbiol., 97, 245-257

157. VANDEMAELE, F., VERVERKEN, C., BLEYEN, N., GEYS, J., D'HULST, C., ADDWEBI, T. VAN EMPEL, P. and GODDEERIS, B. M. (2005)
Immunization with the binding domain of FimH, the adhesin of type 1 fimbriae, does not protect chickens against avian pathogenic *Escherichia coli*.
Avian Pathol., 34, 264-72

158. VIDOTTO, M.C., NAVARRO, H.R. and GAZIRI, L.C. (1997)
Adherence pili of pathogenic strains of avian *Escherichia coli*.
Vet. Microbiol., 59, 79-87

159. WATERS, V.L., and CROSA, J.H.
Colicin V virulence plasmids.
Microbiol. Rev., 55, 437-450

160. Weebadda, W. K., Hoover, G. J., Hunter, D. B. and Hayes, M. A. (2001)
Avian air sac and plasma proteins that bind surface polysaccharides of *Escherichia coli* O2.
Comp. Biochem. Physio.l B. Biochem. Mol. Biol., 130, 299-312

161. WEISER, N.J. and GOTSCHLICH, E.C. (1991)
Outer membrane protein A (OmpA) contibutes to serum resistance and pathogenicity of *Escherichia coli* K-1.
Infect. Immun., 59, 2252-2258

162. WIELER, L.H. und C. SCHWARZ (2000)
Zum Einsatz von Stallspezifischen Impfstoffen: Grundlagen, Erfolgskontrolle.
58. Fachgespräch „Geflügelkrankheiten“, Hannover, 5-15

163. WIESENER, E. und RIBBECK, R. (1991)
Wörterbuch der Veterinärmedizin
Gustav Fischer Verlag , Jena,

164. WILLINGER, H. (1992)
Enterobacteriacae-Infektionen.
In: Krankheiten des Wirtschaftsgeflügels Band II, Heider, G. und Monreal, G. (Hrsg.)
Gustav Fischer Verlag, Jena, 97-110

165. WOOLEY, R.E., SPEARS, K.R., BROWN, J., NOLAN, L.K. and FLETCHER, O.J. (1992)
Relationship of complement resistance and selected virulence factors in pathogenic avian *Escherichia coli*.
Avian Dis., 36, 679-684

166. WOOLEY, R.E., NOLAN, L.K., BROWN, j., GIBBS, P.S., GIDDINS, C.W. and TURNER, K.S. (1993)
Association of K-1 capsule, smooth lipopolysaccharides, traT gene, and Colicin V production with complement resistance of avian *Escherichia coli*.
Avian Dis., 37, 1092-1096

167. WOOLEY, R., GIBBS, P., BROWN, T. and MAURER, J. (2000)
Chicken embryo lethality assay for determing the virulence status of avian *Escherichia coli* isolates.
Avian Dis., 44, 318-324

168. WRAY, C. and DAVIS, R. H. (2001)
Enterobacteriacae.
In : Poultry Diseases 5th Editon, JORDAN, F., PATTISON, M., ALEXANDER, D., FARAGHER, T., (ed.),
W.B. Saunders, 125-130

169. YEGANI, M., (2005)
Immunosuppression.
World Poultry, 21, No.2., 18-22

170. ZHAO, S., MAURER, J.J., HUBERT, S., DE VILLENA, J.F., MC DERMOTT, P.F., MENG, J., AYERS, S., ENGLISH, L. and WHITE, D.G. (2005)
Antimicrobial susceptibility and molecular characterisation of avian pathogenic *Escherichia coli* isolates.
Vet. Microbiol., 107, 215-227