
16 References

- Abdel-Wahhab, M.A., Nada, S.A., Khalil, F.A., 2002. Physiological and toxicological responses in rats fed aflatoxin-contaminated diet with or without sorbent materials. *Anim. Feed Sci. Technol.* 97:209-219.
- Al Adil, K.M., Yahia, S.A., Abdul-Nour, B.A., Daoud, K.A., 1977. Contamination by *Aspergillus flavus* group of some foodstuffs in Baghdad area. *Bulletin of the Biological Research Centre, Baghdad (Abstract)*. 9:107-114.
- Alcroft, R. and Carnaghan, R.B.A, 1962. Groundnut toxicity: *Aspergillus flavus* toxin (aflatoxin) in animal product: Preliminary communication. *Vet. Rec.* 863-864
- Allcroft, R., Roberts, B.A. and Lloyd, M.K. 1968. Excretion of aflatoxin in a cow. *Food Cosmet. Toxicol.* 6: 619-625.
- Anderson, R.A. 1983. Detoxification of aflatoxin-contaminated corn. In: *Aflatoxin and Aspergillus flavus in Corn*. U. Diener, R. Asquith, and J. Dickens (Eds.). Southern Cooperative Series Bulletin 279. Auburn University, Auburn, Alabama, pp. 87–90.
- AOAC, 1990. *Official Methods of Analysis*, 15th ed., Association of Official Analytical Chemists, Washington, DC.
- AOAC, 1995. *Official Methods of Analysis*. Vol. II. 16th ed. Association of Official Analytical Chemists, Arlington, VA.
- Applebaum, R.S., Brackett, R.E., Wiseman, D.W., Marth, E.H. 1982. Responses of dairy cows to dietary aflatoxin: feed intake and yield, toxin content, and quality of milk of cows treated with pure and impure aflatoxin. *J. Dairy Sci.* 65: 1503-1508.
- Aravind, K.L., Patil, V.S., Devegowda, G., Umakantha, B., Ganpule, S.P., 2003. Efficacy of esterified glucomannan to counteract mycotoxicosis in naturally contaminated feed on performance and serum biochemical and hematological parameters in broilers. *Poultry Sci.* 82:571-576.
- Arranz, I., Sizoo, E., Van Egmond, H., Kroeger, K., Legarda, T. M., Burdaspal, P., Reif, K., Stroka, J., 2006. Determination of aflatoxin B1 in medical herbs: interlaboratory study. *J. AOAC International* 89:595-605.

-
- Atroshi, F., Rizzo, A., Westermarck, T., Ali-Vehmas, T., 2002. Antioxidant nutrients and mycotoxins. *Toxicology* 180:151-167.
- Auerbach, H., Maas, R.F.M., Op den Camp, H.J.M., Pol, A. and Fink-Gremmels, J. 1998. Biodegradation of Aflatoxin B1 by bovine rumen micro-organism in vitro and its effects on rumen fermentation. *Revue Med. Veter.* 149:573.
- Azziz-Baumgartner, E., Lindblade, K., Gieseke, K., Rogers, H.S., Kieszak, S., Njapau, N., Schleicher, R., McCoy, L. F., Misore, A., DeCock, K., Rubin, C., Slutsker, L., Aflatoxin Investigative Group, 2005. Case–Control Study of an Acute Aflatoxicosis Outbreak, Kenya, 2004. *Environ. Health Perspectives* 113:1779-1783.
- Baertschi, S.W., Roney, K.D., Shimada, T., Harris, T.M., Guengerich, F.P., 1989. Comparison of rates of enzymatic oxidation of aflatoxin B1, aflatoxin G1, and sterigmatocystin and activities of the epoxides in forming guanyl-N⁷ adducts and inducing different genetic responses. *Chem. Res. Toxicol.* 2:114-122.
- Barbieri, G., Bergamini, C., Ori, E., Resca, P., 1994. Aflatoxin M1 in parmesan cheese: HPLC determination. *J. Food Sci.* 59:1313.
- Battacone, G., Nudda, A., Cannas, A., Borlino, A. C., Bomboi, G. and Pulina, G. 2003. Excretion of aflatoxin M1 in milk of dairy ewes treated with different doses of aflatoxin B1. *J. Dairy Sci.* 86:2667-2675.
- Becroft, D. M. O. and D. R. Webster. 1972. Aflatoxin and Reye's disease. *Br. Med. J.* 4:117.
- Bennett, R.A, Essigmann, J. M., G. N. Wogan, 1981. Excretion of an aflatoxin-guanine adduct in the urine of aflatoxin B1-treated rats. *Cancer Res.* 41: 650-654.
- Berg, T. 2003. How to establish international limits for mycotoxins in food and feed? *Food Control* 14:219-224.
- Bertoni, G., 1999. Guida all'interpretazione dei profili metabolici. A.S.P.A. Associazione Scientifica di Produzione Animale, Università degli Studi di Perugia.
- Bertoni, G., Calamari, L. and Trevisi, E. 2000. New criteria for identifying reference values for specific blood parameters in dairy cows. *La Selezione Veterinaria (Suppl.):*S261-S268.

- Bertoni, G., Travisi, E., Bani, P. and Xingtai, H. 2001. Behaviour of digesta passage rate during lactation in primiparous and multiparous dairy cows. In: Proceedings of the ASPA XIV Congress, pp. 144-146.
- Binder, E. M. 2007. Managing the risk of mycotoxins in modern feed production. *Anim. Feed Sci. Tech.*, 133:149-166.
- Bock, C.H. and Cotty, P.J., 1999. Wheat seed colonized with atoxigenic *Aspergillus flavus*: Characterization and production of a biopesticide for aflatoxin control. *Biocontrol Sci. Technol.*, 9:529–543.
- Bondy, G. and Pestka, J.J. 2000. Immunomodulation by fungal toxins. *J. Toxicol. Environ. Health Part B*, 3:109–143.
- Brackett, R.E., Marth, E.H., 1982. Fate of aflatoxin M1 in cheddar cheese and in process cheese spread. *J. Food Prot.* 45:549-552.
- Breinholt, V., Arbogast, D., Loveland, P., Pereira, C., Dashwood, R., Hendricks, J., Bailey, G., 1999. Chlorophyllin chemoprevention in trout initiated by aflatoxin B1 bath treatment: an evaluation of reduced bioavailability vs. target organ protective mechanisms. *Toxicol. Appl. Pharmacol.* 158:141-151.
- Brown, R. L., Bhatnagar, D., Cleveland, T.E., Cary, J.W., 1998. Recent advances in preharvest prevention of mycotoxin contamination. In K. K. Sinha and D. Bhatnagar (Eds.). *Mycotoxins in Agriculture and Food Safety*. Marcel Dekker, Inc., New York, pp. 351–379.
- Bruckmaier, R.M., Weiss, D., Wiedemann, M., Schmitz, S. and Wendl, G. 2004. Changes of physicochemical indicators during mastitis and the effects of milk ejection on their sensitivity. *J. Dairy Res.* 71: 316-321.
- Bruns, H. A., 2003. Controlling Aflatoxin and Fumonisin in Maize by Crop Management. *J. Toxicol.: TOXIN REVIEWS* 22:153–173.
- Campbell, T.C., Caedo, J.P., Bulato-Jayne, J., Salamat, L., Engek, R.W., 1970. Aflatoxin M1 in human urine. *Nature* 227:403-404.
- CAST (Council for Agricultural Science and Technology), 2003. *Mycotoxins: Risk in plant, animal and human system*. Ames, Iowa, USA.

-
- Casteel, S.W., Pace, L.W., Rottinghaus, G.E., Evans, T.J., Geliot, E.P., 2003. Effects of diets containing mycotoxins with or without Mycosorb on piglet performance. *Atti della Società Italiana di Patologia ed Allevamento dei Suini 2003 XXIX Meeting Annuale*, Salsomaggiore Terme, Italy, 401-404.
- Castells, M., S. Marin, V. Sanchis, and A. J. Ramos. 2005. Fate of mycotoxins in cereals during extrusion cooking: a review. *Food Addit. Contam.* 22:150-157.
- Ch'ih, J.J., Lin, T., Devlin, T.M., 1983. Effect of inhibitors of microsomal enzymes on aflatoxin B1-induced cytotoxicity and inhibition of RNA synthesis in isolated rat hepatocytes. *Biochem. Biophys. Res. Commun.* 155:15-21.
- Chang, G.W.M. and Kam, P. C. A., 1999. The physiological and pharmacological roles of cytochrome P450 isoenzymes. *Anaesthesia* 54:42-50.
- Chaves-Carballo, E., Ellefson, R.D., Gomez, M.R., 1976. An aflatoxin in the liver of a patient with Reye-Johnson syndrome. *Mayo Clin. Proc.*, 51:48.
- Christensen, C.M. 1974. *Storage of Cereal Grains and Their Products*. 2nd ed. American Association of Cereal Chemists, St. Paul, Minnesota.
- Ciegler, A., Lillehoj, E.B., Peterson, R.E., Hall, H.H., 1966. Microbial detoxification of aflatoxin (abstract). *Appl. Microbiol.*, 14:934-939.
- Cleveland, T.E., Dowd, P.F., Desjardins, A.E., Deepak, B., Cotty P.J., 2003. Agricultural research on pre-harvest prevention of mycotoxins and mycotoxigenic fungi in US crops. *Pest. Man. Sci.* 59:629-642.
- Colditz, I.G. 1988. Studies on the inflammatory response during involution of the ovine mammary gland. *Quarterly Journal of Experimental Physiology*, 73: 363-368.
- Cole, R.J., Dorner, J.W., Holbrook, C.C., 1995. Advances in mycotoxin elimination and resistance. In H. E. Pattee and H. T. Stalker (Eds.). *Advances in Peanut Science*. American Peanut Research and Education Society, Stillwater, Oklahoma, pp. 456-474.
- Conway, H.F., Anderson, R.A., Bagley, E.B., 1978. Detoxification of aflatoxin-contaminated corn by roasting. *Cereal Chem.* 55:115-117.
- Coulombe, R.A. Jr., 1993. Biological action of mycotoxins. *J. Dairy Sci.* 76:880-891.

-
- Coulombe, R.A. Jr., and Sharma, R.P., 1985. Clearance and excretion of intratracheally and orally administered aflatoxin B1 in rat. *Food Chem. Toxicol.* 23:827-830.
- Coulombe, R.A. Jr., Shelton, D.W., Sinnhumber, R.O., Nixon, J.E., 1982. Comparative mutagenicity of aflatoxins using a *Salmonella*/trout hepatic enzyme activation system. *Carcinogenesis* 3, 1261-1264.
- Creppy, E.E., 2002. Update of survey, regulation and toxic effects of mycotoxins in Europe. *Toxicol. Lett.* 127:19–28.
- D' Mello, J.-P.F.; Macdonald, A.-M.C., 1997. Mycotoxins. *Anim. Feed Sci. Techn.* 69:155-166.
- Dashwood, R., Negishi, T., Hayatsu, H., Breinholt, V., Hendricks, J., Bailey, G., 1998. Chemopreventive properties of chlorophylls towards aflatoxin B1: a review of the antimutagenicity and anticarcinogenicity data in rainbow trout. *Mutat. Res.-Fund Mol. M.* 399:245-253.
- Davis, S. R., Farr, V. C. and Stelwagen, K. 1999. Regulation of yield loss and milk composition during once-daily milking: a review. *Livestock Prod. Sci.* 59:77-94.
- Davis, S.R. and Hughson, G.A. 1989. Measurement of functional udder capacity in lactating Jersey cows. *Australian J. Agric. Res.* 39:1163-1168.
- Dawson, K.A., Evans, J., Kudupoje, M., 2001. Understanding the adsorption characteristics of yeast cell wall preparations associated with mycotoxin binding. In: Lyons TP, Jacques KA, (Eds.), *Science and Technology in the Feed Industry*. Nottingham University Press, Nottingham, UK, pp. 169–181.
- Degan, G.H., Neumann, H.G., 1978. The major metabolite of aflatoxin B1 in the rat is a glutathione conjugate. *Chem. Biol. Interact.* 22:239-255.
- Devegowda, G., Aravind, B.I.R., Rajendra, K., Morton, M.G., Baburathna, A., Sudarshan C., 1994. A biological approach to counteract aflatoxicosis in broiler chickens and ducklings by use of *Saccharomyces cerevisiae* culture added to feed. In: Lyons, T.P., Jacques, K.A., (Eds.), *Biotechnology in the Feed Industry*. Nottingham University Press, Loughborough, Leics, UK, pp. 235-245.
- Diaz, D.E., Hagler, Jr. W. M., Blackwelder, J. T., Eve, J. A., Hopkins, B. A., Anderson, K. L., Jones, F. T. and Whitlow, L. W. 2004. Aflatoxin binders II: Reduction of aflatoxin M1 in

- milk by sequestering agents of cows consuming aflatoxin in feed. *Mycopathologia* 157: 233-241.
- Diaz, D.E., and T. K. Smith. 2005. Mycotoxin sequestering agents: practical tools for neutralisation of mycotoxins. Pages 323-339 in *The Mycotoxin Blue Book*. D. E. Diaz, ed. Nottingham University Press, Nottingham, UK.
- Diaz, D.E., Hagler, W.M. Jr., Hopkins, B.A., Whitlow, L.W., 2003. Aflatoxin binders I: in vitro binding assay for aflatoxin B1 by several potential sequestering agents. *Mycopathologia* 156:223-226.
- Dixon, R.C., Hamilton, P. B., 1981. Effect of food ingredients on the antifungal activity of propionic acid. *Poult. Sci.* 60:2407-2411.
- Dorner, J. W., R. J. Cole, and D. T. Wicklow. 1997. Potential for biological control of preharvest aflatoxin contamination of corn using competitive, nontoxic strains of *Aspergillus flavus* and *A. parasiticus*. Presented at the Aflatoxin Elimination Workshop, Memphis, Tennessee.
- Doyle, M. P. and E. H. Marth. 1978a. Bisulfite degrades aflatoxin: Effects of temperature and concentration of bisulfite. *J. Food Prot.* 41:774-780.
- Dvorackova, I., V. Kusak, J. Vesely, et al. 1977. Aflatoxin and encephalopathy with fatty degeneration of viscera. (Reye). *Ann. Nutrit. Aliment.* 31:977.
- Dvorak, M., 1989. Ability of bentonite and natural zeolite to absorb aflatoxin from liquid media. *Vet. Med.*, 34:733-741.
- Dvorak, R., J. Jagos, J. Bouda, A. Piskac, and O. Zapletal. 1977. Changes in the clinico-biochemical indices in the rumen liquor and urine in cases of experimental aflatoxicosis in dairy cows. *Vet Med (Prague - abstract)*, 22:161-169.
- Dwyer, M.R., Kubena, R.B., Harvey, R.B., Mayura, K., Sarr, A.B., Buckley, S., Bailey, R.H., Phillips, T.D., 1997. Effects of inorganic adsorbents and cyclopiazonic acid in broiler chicks. *Poult. Sci.* 76:1141-1149.
- Eaton, D. L., H. S. Ramsdell, and G. E. Neal. 1994. Biotransformation of aflatoxins. In: *The Toxicology of Aflatoxins: Human Health, Veterinary, and Agricultural Significance*. D.

-
- L. Eaton and J. D. Groopman (eds.). Academic Press Inc., San Diego, California, USA, pp. 45–72.
- EC, 2003a. Commission Directive 2003/100/EC of 31 October 2003 amending Annex I to Directive 2002/32/EC of the European Parliament and of the Council on undesirable substances in animal feed (Text with EEA relevance). Off. J. of the Eur. Union L285:33-37.
- EC, 2003b. Regulation (EC) No 1831/2003 of the European Parliament and of the Council of 22 September 2003 on additives for use in animal nutrition (Text with EEA relevance). Off. J. of the Eur. Union L268:29-43.
- EC, 2006. Commission Regulation (EC) No 1881/2006 of 19 December 2006 setting maximum levels for certain contaminants in foodstuffs (Text with EEA relevance). Off. J. of the Eur. Union L364:5-24.
- EEC, 1986. Council Directive 86/609/EEC of 24 November 1986 on the approximation of laws, regulations and administrative provisions of the Member States regarding the protection of animals used for experimental and other scientific purposes. Off. J. of the Eur. Commun. L 358:1-28.
- Egmond, H. P. van 1989. Aflatoxin M1: occurrence, toxicity, regulation. In *Mycotoxins in dairy products* (ed. Egmond, H. P. van), pp. 11-55. Elsevier Applied Science, London, UK.
- El-Nezami, H., Kankaakpää, P., Salminen, S., Ahobas, J., 1998. Ability of dairy strains of lactic acid bacteria to bind a common food carcinogen, aflatoxin B1. *Food Chem. Toxicol.* 36:321–326.
- El-Nezami, H., Mykkänen, H., Kankaakpää, P., Salminen, S., Ahobas, J., 2000. Ability of *Lactobacillus* and *Propionibacterium* strains to remove aflatoxin B, from the chicken duodenum. *J. Food Prot.* 63:549–552.
- Engel, V.G., Hagemester, H., 1978. Untersuchungen über den verbleib von aflatoxin B1 in verdauungstrakt von kühen (Abstract). *Milchwissenschaft* 33:21-23.
- Essigmann, J. M., C. L. Green, R. G. Croy, K. W. Fowler, G. H. Buchi, and G. N. Wogan. 1983. Interactions of aflatoxin B1 and alkylating agents with DNA: Structural and functional studies. *Cold Spring Harbor. Symp. Quant. Biol.* 47:327–337.

- Essigmann, J. M., R. G. Croy, A. M. Nadzan, W. F. Busby, Jr., V. N. Reinhold, G. Biechi, and G. N. Wogan. 1977. Structural identification of the major DNA adduct formed by aflatoxin B1 in vitro. *Proc. Natl. Acad. Sci. USA* 74:1870–1874.
- FAO (Food and Agriculture Organization of the United Nations), 2003. Mycotoxin regulations in 2003 and current developments. In: *Worldwide regulations for mycotoxins in food and feed in 2003*. FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy.
- Farag, R. S., M. M. Rashed, and A. A. Abo-Hagger. 1996. Aflatoxin destruction by microwave heating. *Intl. J. Food Sci. Nutri.* 47:197–208.
- Fehr, P. M. and J. Delage. 1970. Effet de L'aflatoxine sur les fermentations du rumen. *Can. Nutr. Diet* 5:59–61.
- Feuell, A. J. 1977. Aflatoxin in groundnuts. IV. Problems of detoxification. *Trop. Sci.* 8:61.
- Forgacs, J. and W. T. Carll. 1962. Mycotoxicoses. *Adv. Vet. Sci.* 7:273–383.
- Frobish, R. A., Bradley, B. D., Wagner, D. D., Long-Bradley, P.E. and Hairston, H. 1986. Aflatoxin residues in milk of dairy cows after ingestion of naturally contaminated grain. *J. Food Protection* 49:781-785.
- Gallhager, E. P., Kunze, K. L., Stapelton, P. L., Eaton, D. L., 1996. The kinetics of aflatoxin B1 oxidation by humans cDNA-expressed and human liver microsomal cytochrome P4501A2 and 3A4. *Toxicol. Appl. Pharm.* 141:595-606.
- Galtier, P. 1999. Biotransformation and fate of mycotoxins. *Journal of Toxicology, Toxin Reviews* 18: 295-312.
- Galvano, F., A. Pietri, T. Bertuzzi, M. Bognanno, L. Chies, A. de Angelis, and M. Galvano. 1996b. Activated carbons: In vitro affinity for fumonisin B1 and relation of adsorption ability to physicochemical parameters. *J. Food Protect.* 60:985–991.
- Galvano, F., A. Piva, A. Ritieni, and G. Galvano. 2001. Dietary strategies to counteract the effects of mycotoxins: A review. *J. Food Protect.* 64:120–131.
- Galvano, F., Pietri, A., Bertuzzi, T., Fusconi, G., Galvano, M., Piva, A., Piva, G., 1996a. Reduction of carryover of aflatoxin from cow feed to milk by addition of activated carbons. *J. Food Protection* 59:551-554.

- Galvano, F., Ritieni, A., Piva, G., Pietri, A., 2005. Mycotoxins in the human food chain. In: The Mycotoxin Blue Book, Diaz, D.E. (eds), Nottingham University Press, Thrumpron, Nottingham, pp. 187-224.
- Giorni, P., Magan, N., Pietri, A., Bertuzzi, T., Battilani, P., 2007. Studies on *Aspergillus* Section *Flavi* isolated in northern Italy from maize. *Int. J. Food Microbiol.* 113:330-338.
- Goldblatt, L. A. and F. G. Doller. 1979. Modifying mycotoxin contamination in feeds: Use of mold inhibitors, ammoniation, roasting. In: *Interactions of Mycotoxins in Animal Production*. National Academy of Sciences, Washington, D.C., pp. 167-184.
- Goto, T., Wicklow, D. T., Ito, Y. (1996). Aflatoxin and cyclopiazonic acid production by a sclerotium-producing *Aspergillus tamaris* strain. *Appl. Environ. Microbiol.* 62:4036-4038.
- Grant, P. G., Phillips, T. D., 1998. Isothermal adsorption of aflatoxin B1 on HSCAS clay. *J. Agric. Food Chem.* 46, 599-605.
- Gratz, S., Mykkanen, H., El Nezami, H., 2005. Aflatoxin B1 binding by a mixture of *Lactobacillus* and *Propionibacterium*: in vitro versus ex vivo. *J. Food Protect.* 68:2470-2474.
- Groopman, J.D., Cain, L.G., Kensler, T.W., 1988. Aflatoxin exposure in human population: measurement and relationship to cancer. *CRC Clin. Rev. Toxicol.* 19:113-145.
- Groopman, J.D., Dinahue, P.R., Zhu, J., Chen, J., Wogan, G.N., 1985. Aflatoxin metabolism in humans: detection of metabolites and nucleic acid adducts in urine by affinity chromatography (Abstract). *Proc. Natl. Acad. Sci. USA* 82:6492-6496.
- Groopman, J.D., Fowler, K.W., Busby, W.F., Wogan, G.N., 1981. Interaction of aflatoxin B2 with rat liver DNA and histones *in vivo*. *Carcinogenesis* 2:1371-1373.
- Hagler, W.M.Jr., 1991. Potential for detoxification of mycotoxin-contaminated commodities. In: *Mycotoxins, Cancer and Health*. Bray G. and Ryan D. (eds.), Louisiana State University Press, Baton Rouge, USA, pp. 253-269.
- Harvey, R. B., L. F. Kubena, M. H. Elissalde, and T. D. Phillips. 1993. Efficacy of zeolitic ore compounds on the toxicity of aflatoxin to growing broiler chickens. *Avian Dis.* 37:67-73.

- Harvey, R. B., Phillips, T. D., Ellis, J. A., Kubena, L. F., Huff, W. E., Petersen, D. V., 1991. Effects of aflatoxin M1 residues in milk by addition of hydrated sodium calcium aluminosilicate to aflatoxin-contaminated diets of dairy cows. *Am. J. Vet. Res.* 52:1556–1559.
- Hendrickse, R. G. 1985. The influence of aflatoxins on child health in the tropics with particular reference to kwashiorkor. *Trans. Royal Soc. Trop. Med. Hyg.* 78:427–435.
- Hendrickse, R. G., J. B. S. Coulter, S. M. Lamplugh, S. B. J. Mac-Farland, T. E. Williams, M. I. A. Omer, G. I. Sulimen, G. A. El-Zorgani. 1983. Aflatoxins and kwashiorkor: Epidemiology and clinical studies in Sudanese children and findings in autopsy liver samples from Nigeria and South Africa. *Bull. Soc. Pathol. Exp.* 76:559–566.
- Hiesh, D. P. H., Wong, J. J., 1994. Pharmacokinetics and excretion of aflatoxins. In: D.L. Eaton, J.D. Groopman (ed.) *The toxicology of aflatoxins: human health, veterinary and agricultural significance.* Academic Press Ltd., London, UK, pp 73-88.
- Hill, R.A., Wilson, D.M., MvMillian, W.W., Widstrom, N.W., Cole, R.J., Sanders, T.H., Blankenship, P.D., 1985. Ecology of *Aspergillus flavus* group and aflatoxin formation in corn and peanuts. In *Trichothenes and Other Mycotoxins*, Lacey J. eds., John Wiley and Sons, Chichester, England, pp 79-95.
- Holeski, C. J., Eaton, D. L., Monroe, D. H., Bellamy, G. M., 1987. Effects of phenobarbital on the biliary excretion of aflatoxin P1-glucuronide and aflatoxin B1-S-glutathione in the rat. *Xenobiotica* 17:139-153.
- Horn, B. W., J. W. Dorner, R. L. Greene, P. D. Blankenship, and R. J. Cole. 1994. Effect of *Aspergillus parasiticus* soil inoculum on invasion of peanut seeds. *Mycopathologia* 125:179–191.
- Hsieh, D. P. H., Salhab, A.S., Wong, J. J., Yang, S.L., 1974. Toxicity of aflatoxin Q1 as evaluated with the chicken embryo and bacterial auxotrophs. *Toxicol. Appl. Pharmacol.* 30:237-242.
- Hsieh, D. P. H., Wong, J. J., 1994. Pharmacokinetics and excretion of aflatoxins. In: *The Toxicology of Aflatoxins: Human Health, Veterinary, and Agricultural Significance.* Eaton D. L. and Groopman J. D. (eds.). Academic Press Inc., San Diego, California, USA, pp. 73–88.

- Huang, Z., D. G. White, and G. A. Payne. 1997. Corn seed proteins inhibitory to *Aspergillus flavus* and aflatoxin biosynthesis. *Phytopathology* 87:622–627.
- Huwig, A., Freimund, S., Kappeli, O., Dutler, H., 2001. Mycotoxin detoxication of animal feed by different adsorbents. *Toxicol. Lett.* 122:179–188.
- Hwang, J. H., and K. G. Lee. KwangGeun. 2006. Reduction of aflatoxin B1 contamination in wheat by various cooking treatments. *Food Chem.* 98:71-75.
- IARC (International Agency for Research on Cancer), 2002. World health organization international agency for research on cancer. Aflatoxins: B1, B2, G1, G2, M1. In: Some traditional erbal medicines, some mycotoxins, naphthalene and styrene. IARC monographs on the evaluation of carcinogenic risks to humans, Lyon, France, 82, pp. 171-175.
- Ito, Y., Peterson, S. W., Wicklow, D. T., Goto, T. 2001. *Aspergillus pseudotamarii*, a new aflatoxin producing species in *Aspergillus* section *Flavi*. *Mycol. Res.* 105:233–239.
- Jakab, G. J., Hmielecki, R. R., Zarba, A., Hemenway, D. R., Groopman, J. D., 1994. Respiratory aflatoxicosis: suppression of pulmonary and systemic host defenses in rats and mice. *Toxicol. Appl. Pharm.* 125:198-205.
- JECFA (Joint FAO/WHO Expert Committee on Food Additives), 2001. Safety evaluation of certain mycotoxins in food. IPCS (International Programme on Chemical Safety), Food and Agriculture Organization of the United Nations, World Health Organization, Geneva.
- Jones, R. K., H. E. Duncan, and P. B. Hamilton. 1981. Planting date, harvest date, and irrigation effects on infection and aflatoxin production by *Aspergillus flavus* in field corn. *Phytopathology* 71:810.
- Jouany, J. P., Diaz, D.E., 2005. Effects of mycotoxins in ruminants. In: *The Mycotoxin Blue Book*, Diaz, D.E. (eds), Nottingham University Press, Thrumpron, Nottingham, pp. 295-321.
- Jouany, J.P., 2007. Methods for preventing, decontaminating and minimizing the toxicity of mycotoxins in feeds. *Anim. Feed Sci. Technol.*, 137:342–362.
- Kannewischer, I., Arvide, M.G.T., White G.N., Dixon, J.B., 2006. Smectite Clays as Adsorbents of Aflatoxin B1: Initial Steps. *Clay Sci. (suppl. 2)* 12:199-204.

- Karaman, M., Basmacioglu, H., Ortatagli, M., Oguz, H., 2005. Evaluation of the detoxifying effect of yeast glucomannan on aflatoxicosis in broilers as assessed by gross examination and histopathology. *Brit. Poultry Sci.* 46:394-400.
- Kensler, T.W., Davis, E.F., Bolton, M.G., 1994. Strategies for chemoprotection against aflatoxin-induced liver cancer. In: *The Toxicology of Aflatoxins: Human Health, Veterinary, and Agricultural Significance*. Eaton D. L. and Groopman J. D. (eds.). Academic Press Inc., San Diego, California, USA, pp. 281–306.
- Kensler, T.W., Groopman, J.D., Sutter, T.R., Curphey, T.J., Roebuck, B.D., 1999. Development of cancer chemoprevention agents: oltipraz as a paradigm. *Chem. Res. Toxicol.* 12:113-136.
- Kiessling, K.H., Pettersson, H., Sandholm, K., Olsen, M., 1984. Metabolism of aflatoxin, ochratoxin, zearalenone and three trichothecenes by intact rumen fluid, rumen protozoa and rumen bacteria. *Appl. Environ. Microbiol.*, 47:1070-1073.
- Klich, M. A., Tiffany, L. H., Knaphus, G. 1992. Ecology of the aspergilli of soils and litter. In: Bennett, J. W., Klich, M. A., eds. *Aspergillus: Biology and Industrial Applications*. Boston, Butterworth-Heinemann: 329–353.
- Krishna, D. R., Klotz, U., 1994. Extrahepatic metabolism of drugs in humans. *Clin. Pharmacokinet.* 26:144–60.
- Krishnamachari, K. A. V. R., R. V. Bhat, V. Nagarajan, and T. B., G. Tilac., 1975. Investigations into an outbreak of hepatitis in Western India. *Indian J. Med. Res.* 63:1036–1048.
- Kumagai, S., 1989. Intestinal absorption and excretion of aflatoxin in rats. *Toxicol. Appl. Pharm.* 97:88-97.
- Lafont, P., Sarfati, J., Jacquet, J., Gaillardin, M. and Lafont, J. 1983. Influences de facteurs pathologiques et nutritionnels sur l'elimination de l'aflatoxine par la memelle chez la vache. *Microbiologie Aliments Nutrition* 1:293-300.
- Larsson, P., Busk, L., Tjälve, H., 1994. Hepatic and extrahepatic bioactivation and GSH-conjugation of aflatoxin B1 in sheep. *Carcinogenesis* 15: 947-955.
- Larsson, P., Tjälve, H., 1996. Bioactivation of aflatoxin B1 in the nasal and tracheal mucosa in swine. *J. Anim. Sci.* 74:1672-1680.

- Ledoux, D.R., Rottinghaus, G.E., 1999. In vitro and in vivo testing of adsorbents for detoxifying mycotoxins in contaminated feedstuffs. In: Lyons, T.P., Jacques, K.A., (Eds.), *Biotechnology in the Feed Industry*. Nottingham University Press, Nottingham, UK, 369–379.
- Lee, L. S. 1989. Aflatoxin. *J. Am. Oil Chem. Soc.* 66:1398–1413.
- Lemke, S.L., Ottinger, S.E., Mayura, K., Ake, C.L., Pimpukdee, K., Wang, N., Phillips, T.D., 2001. Development of a multi-tiered approach to the in vitro prescreening of clay-based enterosorbents. *Anim. Feed Sci. Technol.* 93:17-29.
- Lind, A. B., Wadelius, M., Darj, E., Finnström, N., Lundgren, S., Rane, A., 2003. Gene Expression of Cytochrome P450 1B1 and 2D6 in Leukocytes in Human Pregnancy. *Pharmacol. Toxicol.* 92:295-299.
- Linzell, J. L. 1959. Physiology of the mammary glands. *Physiology Reviews* 39:534-570.
- Littell, R. C., P. R. Henry, and C. B. Ammerman. 1998. Statistical analysis of repeated measure data using SAS procedures. *J. Anim. Sci.* 76:1216-1231.
- Liu, L., Massey, T.E., 1992. Bioactivation of aflatoxin B1 by lipoxygenase, prostaglandin H synthase and cytochrome P450 monooxygenase in guinea pigs tissues. *Carcinogenesis* 13:533-539.
- Liu, L., Roebuck, B.D., Yager, J.D., Groopman, J.D., Kensler, T.W., 1988. Protection by oltipraz against the hepatotoxicity of aflatoxin B1 in the rat. *Toxicol. Appl. Pharmacol.* 93:442-451.
- Loveland, P.M., Nixon, J.E., Bailey, G.S., 1984. Glucoronides in bile of rainbow trout (*Salmo gairdneri*) injected with [³H]afltoxin B1 and the effects of dietary β-naphthoflavone. *Comp. Biochem. Physiol.* 78C:13-19.
- Lynch., G. P., Shalkop, W. T., Jacoby, N. M., Smith, D. F. and Miller, R. W. 1971. Response of dairy calves to oral doses of aflatoxin. *J. Dairy Sci.* 54:1687-1698.
- Maeba, H., Y. Takamoto, M. Kamimura, and T. Miura. 1988. Destruction and detoxification of aflatoxins with ozone. *J. Food Sci.* 53:667–668.

- Mansri, M.S., Garcia, N.C., Page, J.R., 1969. The aflatoxin M1 content of milk from the cows fed know amounts of aflatoxin. *Vet. Rec.* 84:146-147.
- Marth, E. H. and M. P. Doyle. 1979. Update on molds: Degradation aflatoxin. *Food Technol.* 33:81–87.
- Mayura, K., M. A. Abdel-Wahhab, K. S. McKenzie, A. B. Sarr, J. F. Edwards, K. Naguib, and T. D. Phillips. 1998. Prevention of maternal and developmental toxicity in rats via dietary inclusion of common aflatoxin sorbents: Potential for hidden risks. *Toxicol. Sci.* 41:175–182.
- McGee, D. C., O. M. Olanya, and G. M. Hoyos. 1996. Populations of *Aspergillus flavus* in the Iowa cornfield ecosystems in years not favorable for aflatoxin contamination of corn grain. *Plant Dis.* 80:742–746.
- McKenzie, K. S., L. F. Kubena, A. J. Denvir, T. D. Rogers, G. D. Hitchens, R. H. Bailey, R. B. Harvey, S. A. Buckley, and T. D. Phillips. 1998. Aflatoxicosis in turkey poult is prevented by treatment of naturally contaminated corn with ozone generated by electrolysis. *Poultry Sci.* 77:1094–1102.
- McKinney, J.D., Cavanaugh, G.C., Bell, J.T., Hoverland, A.S., Nelson, D.M., Pearson, J., Selkirk, R.J., 1973. Effects of ammoniation on aflatoxins in rations fed lactating cows. *J. Am. Oil. Chem. Soc.* 50:79-84.
- Mertens, D. R. and Wyatt, R. D. 1977. Acute aflatoxicosis in lactating dairy cows. *Journal of Dairy Science* 60: 153-154.
- Mertens, D.R. 1997. Creating a System for Meeting the Fiber Requirements of Dairy Cows. *Journal of Dairy Science* 80:1463-1481.
- Mertens, D.R., 2002. Gravimetric determination of amylase- treated neutral detergent fiber in feeds with refluxing in beakers or crucibles: collaborative study. *J. AOAC Int.* 85:1217-1240.
- Minto, R.E. and Townsend, C.A. (1997) Enzymology and molecular biology of aflatoxin biosynthesis. *Chem. Rev.* 97, 2537-2552.

- Mortimer, D. N., Gilbert, J., Shepherd, M. J., 1987. Rapid and highly sensitive analysis of aflatoxin M1 in liquid and powdered milks using an affinity column cleanup. *J. Chromatogr.* 407:393-398.
- Moschini, M., F. Masoero, A. Gallo and D. Diaz. 2007. Mucosal absorption of aflatoxin B1 in lactating dairy cows. *Ital. J. Anim. Sci. (Suppl. 1)* 6:324-326.
- Moschini, M., Masoero, F., Diaz, D. E., Gallo, A., Pietri, A. and Piva, G. 2006. Plasma aflatoxin concentrations over time in bolus fed lactating dairy cows. *J. Animal Sci. (Suppl. 1)* 84: 74.
- Muller, N., Petzinger, E., 1989. Hepatocellular uptake of aflatoxin B1 by non-ionic diffusion. Inhibition of bile acid transport by interference with membrane lipids. *Biochim. Biophys. Acta* 938, 334-344.
- Munksgaard, L., Larsen, J., Werner, H., Andersen, P. E. and Viuf, B. T. 1987. Carry over of aflatoxin from cows' feed to milk and milk products. *Milchwissenschaft* 42: 165-167.
- Natarajan, K. R., K. C. Rhee, C. M. Cater, and K. F. Mattil., 1975. Distribution of aflatoxins in various fractions separated from raw peanuts and defatted peanut meal. *J. Am. Oil. Chem. Soc.* 52:44-47.
- National Research Council. 2001. Nutrient requirements of dairy cattle, seventh revised edition. National Academy of Science, Washington, D.C..
- Nelson, C.E., 1993. Strategies of mold control in dairy feeds. *J. Dairy Sci.* 76:898-902.
- Ngindu, A., P. R. Kenya, D. M. Ocheng, T. N. Omonde, W. Ngare, D. Gatei, B. K. Johnson, J. A. Ngira, H. Nandwa, A. J. Jansen, J. N. Kaviti, and T. A. Siongok., 1982. Outbreak of acute hepatitis caused by aflatoxin poisoning in Kenya. *Lancet.* 1:1346-1348.
- Norton, R. A., 1999. Inhibition of aflatoxin B1 biosynthesis in *Aspergillus flavus* by anthocyanidins and related flavonoids. *J. Agric. Food Chem.* 47:1230-1235.
- NRC (National Research Council), 2001. Nutrient requirements of dairy cattle: Seventh Revised Edition. National Academy Press, Washington, D.C., xxi+381 s.
- Oatley, J.T., Rarick, M.D., GeunEog, Ji, Linz., L.E., 2000. Binding of aflatoxin B1 to bifidobacteria in vitro. *J. Food Protect.* 63:1133-1136.

-
- Oluwafemi, F. 2004. Fate of aflatoxin in cereals and cereal products during processing. *J. Food Agr. Environ.* 2:57/33-60.
- Park, D. L., L. S. Lee, R. L. Price, and A. E. Pohland. 1988. Review of the decontamination of aflatoxins by ammoniation: Current status and regulation. *J. Assoc. Off. Anal. Chem.* 71:685–703.
- Park, J. W., and Y. B. Kim. 2006. Effect of pressure cooking on aflatoxin B1 in rice. *J. Agr. Food Chem.* 54:2431-2435.
- Patel, P.M., Netke, S. P., Gupta, D.S.& Dabadghao, A.K., 1981. Note on the effect of processing milk into Khoa on aflatoxin M1 content. *Indian J. Anim. Sci.* 51:791-792.
- Patterson, D-S. P. and Anderson, P. H. 1982. Recent aflatoxin feeding experiments in cattle. *Veterinary Record* 110: 60.
- Payne, G. A. 1992. Aflatoxin in maize. *Crit. Rev. Plant Sci.* 10(5):423–440.
- Payne, G. A. 1998. Process of contamination by aflatoxin- producing fungi and their impact on crops. Pp. 279–306. In K. K. S.: *Risks in Plant, Animal, and Human Systems* Sinha and D. Bhatnagar (Eds.). *Mycotoxins in Agriculture and Food Safety*. Marcel Dekker, Inc., New York.
- Payne, G. A., W. M. Hagler, Jr, and C. R. Adkins. 1988. Aflatoxin accumulation in inoculated ears of field-grown maize. *Plant Dis.* 72:422–424.
- Peaker, M. 1980. The effect of raised intramammary pressure on mammary function in the goat in relation to the cessation of lactation. *J. Physiology* 301:415-428.
- Peers, F. G. and C. A. Linsell. 1973. Dietary aflatoxins and liver cancer: A population study in Kenya. *Br. J. Cancer* 27:473–484.
- Peers, F. G., C. A. Gilman, and C. A. Linsell. 1976. Dietary aflatoxins and human liver cancer: A study in Swaziland. *Intl J Cancer* 17:167–176.
- Peers, F., X. Bosch, J. Kaldor, A. Linsell, and M. Pluijmen. 1987. Aflatoxin exposure, hepatitis B virus infection and liver cancer in Swaziland. *Intl. J. Cancer* 39:545–553.

-
- Pelkonen, O., Rautio, A., Raunio, H., Pasanen, M., 2000. CYP2A6: a human coumarin 7-hydroxylase. *Toxicology* 144:139-147.
- Peltonen, K.D., El Nezami, H.S., Salminen, S.J., Ahokas, J.T., 2000. Binding of aflatoxin B1 by probiotic bacteria. *J. Sci. Food Agr.* 80, 1942-1945.
- Pestka, J. J., Casale, W., 1989. Naturally occurring fungal toxins. In M. S. Simmons and J. Nriagu (Eds.). *Food Contamination from Environmental Sources*. John Wiley and Sons, Ltd.
- Pettersson, H., Bertilsson, J. and Wennberg, O. 1989. Carry-over of aflatoxin from dairy cattle feed to milk. Healthy animals, safe foods, healthy man World Association of Veterinary Food Hygienists Xth Jubilee International Symposium, pp. 97-102.
- Phillips, T. D., Clement, B.A., Park., D.L., 1994. Approaches to reduction of aflatoxins in foods and feeds.. In L. D. Eaton and J. D. Groopman (Eds.). *The Toxicology of Aflatoxin: Human Health, Veterinary and Agricultural Significance*. Academic Press inc., San Diego, USA, pp. 383–406.
- Phillips, T.D., Clement, B.A.,Kubena, L.F., Harvey, R.B., 1990. Detection and detoxification of aflatoxins: prevention of aflatoxicosis and aflatoxin residues with hydrated sodium calcium aluminosilicates. *Vet. Hum. Toxicol.* 32:15–19.
- Phillips, T.D., Kubena, L.F., Harvey, R.B., Taylor, D.R., Heidelbaugh, N.D., 1988. Hydrated sodium calcium aluminosilicate: A high affinity sorbent for aflatoxin. *Poultry Sci.* 67:243–247.
- Phillips, T.D., Kubena, L.F., Harvey, R.B., Taylor, D.R., Heidelbaugh, N.D., 1987. Mycotoxin hazards in agriculture: new approach to control. *J. Am. Vet. Med. Assoc.* 190:1617.
- Phillips, T.D., Sarr, A.B., Clement, B.A., Kubena, L.F., Harvey, R.B., 1990. Prevention of aflatoxicosis in farm animals via selective chemisorption of aflatoxin. In: Bray, G.A., Ryan, D.H. (eds), *Pennington Center Nutrition Series Volume 1, Mycotoxins, Cancer, and Health*, Louisiana State Univ. Press, Baton Rouge, Louisiana, pp. 223-237.
- Pimpukdee, K., Kubena, L.F., Bailey, C.A., Huebner, H.J., Afriyie-Gyawu, E., Phillips, T.D., 2004. Aflatoxin-induced toxicity and depletion of hepatic vitamin A in young broiler

- chicks: protection of chicks in the presence of low levels of NovaSil PLUS in the diet. *Poultry Sci.* 83:737-744.
- Pitt, J. I., 1989. Field studies on *Aspergillus flavus* and aflatoxins in Australia groundnuts. In *Aflatoxin Contamination of Groundnuts*, McDonald D. and Mehan V. K. eds., ICRISAT, Patancheru, India, pp. 223-236.
- Piva, G., A. Galvano, A. Pierti, and A. Piva. 1995. Detoxification methods of aflatoxins. A review. *Nutr. Res.* 5:689-715.
- Polan, C. E., Hayes, J. R., Campbell, T. C., 1974. Consumption and fate of aflatoxin B1 by lactating cows. *J. Agric. Food Chem.* 22:635-638.
- Pong, R.S., Wogan, G.N., 1971. Toxicity and biochemical and fine structural effects of synthetic aflatoxins M1 and B1 in rat liver. *J. Natl. Cancer Inst.*, 47:585-592.
- Ramos, A. J., E. Hernandez, J. M. Pla-Delfina, and M. Merino. 1996. Intestinal absorption of zearalenone and in vitro study of non-nutritive sorbent materials. *International J. Pharmaceutics* 128:129–137.
- Ramos, A. J., Hernandez, E., 1996. In vitro aflatoxin adsorption by means of a montmorillonite silicate. A study of adsorption isotherms. *Anim. Feed Sci. Technol.* 62:263–269.
- Ramos-Girona, A.G., Gimenez, E.H., 1997. In vitro adsorption of aflatoxins by means of sorbent compounds: montmorillonite (in Spanish, with English abstract). *Rev. Iberoamericana Micologia* 14:72-77.
- Rastogi, S., Dogra, R. K. S., Khanna, S. K., Das, M., 2006. Skin tumorigenic potential of aflatoxin B1 in mice. *Food Chem. Toxicol.* 44:670-677.
- Rayner, E. T., S. P. Koltun, and F. G. Dollear. 1977. Solvent extraction of aflatoxins from contaminated agricultural products. *J. Am. Oil. Chem. Soc.* 54:242A–244A.
- Richardson, K. C. 1947. Contractile tissues in the mammary gland, with special reference to myoepithelium in the goat. *Proceedings of the Royal Society Of London – B - Biological Sciences* 136: 30-45.

-
- Riley, R.T., Pestka, J., 2005. Mycotoxins: metabolism, mechanism and biochemical markers. In: *The Mycotoxin Blue Book*, Diaz, D.E. (eds), Nottingham University Press, Thrumpron, Nottingham, pp. 279-294.
- Roebuck, B.D., Maxuitenko, Y.Y., 1994. Biochemical mechanism and biological implications of the toxicity of aflatoxins as related to aflatoxin carcinogenesis. In: *The Toxicology of Aflatoxins: Human Health, Veterinary, and Agricultural Significance*. Eaton D. L. and Groopman J. D. (eds.). Academic Press Inc., San Diego, California, USA, pp. 27-43.
- Rotter, R.G., Frohlich, A.A., Marquardt, R.R., 1989. Influence of dietary charcoal on ochratoxin A toxicity in Leghorn chicks. *Can. J. Vet. Res.* 53:449-453.
- Ryan, N. J., G. R. Hogan, A. W. Hayes, et al. 1979. Aflatoxin B1: Its role in the etiology of Reye's syndrome. *Pediatrics* 64:71.
- Sabbioni, G., P. Skipper, G. Buchi, and S. R. Tannenbaum. 1987. Isolation and characterization of the major serum albumin adduct formed by aflatoxin B1 in vivo in rats. *Carcinogenesis* 8(6):819-824.
- Samapundo, S., Devliegherea, F., Geeraerde, A. H., De Meulenaerb, B., Van Impec, J. F., Debeverea J., 2007. Modelling of the individual and combined effects of water activity and temperature on the radial growth of *Aspergillus flavus* and *A. parasiticus* on corn. *Food Microbiol.* 24:517-529.
- Samarajeewa, U., A. C. Sen, S. Y. Fernando, E. M. Ahmed, and C.I. Wei. 1991. Inactivation of aflatoxin B1 in corn meal, copra meal and peanuts by chlorine gas treatment. *Food Chem. Toxicol.* 29:41-47.
- Samson, R. A. 2001. Current fungal taxonomy and mycotoxins. In: *Mycotoxins and Phycotoxins in Perspective at the Turn of the Millennium*. Wageningen, The Netherlands: Ponsen & Looyen.
- Santin, E., 2005. Mould Growth and mycotoxin production. In: *The Mycotoxin Blue Book*, Diaz, D.E. (eds), Nottingham University Press, Thrumpron, Nottingham, pp. 225-234.
- SAS, Statistical Analysis System Institute. 2001. *SAS/STAT users's guide: statistics, version 9.1*. Statistical Analysis Systems Institute Inc., Cary, NC.

- Scheidegger, K.A., Payne, G.A., 2003. Unlocking the secrets behind secondary metabolism: a review of *Aspergillus flavus* from pathogenicity to functional genomics. *J. Toxicol.-Toxin. Rev.* 22:423-459.
- Scheideler, S.E., 1989. Effects of various types of aluminosilicates and aflatoxin B1 on the aflatoxin toxicity, chick performance and mineral status. *Poul. Sci.* 72:282-288.
- Schell, T.C., Lindemann, M.D., Kornegay, E.T., Blodgett, D.J., Doerr, J.A., 2000. Effectiveness of different types of clay for reducing the detrimental effects of aflatoxin-contaminated diets on performance and serum profiles of weanling pigs. *J. Anim. Sci.* 71:1226-1231.
- Schell, T.C., Lindemann, M.D., Kornegay, E.T., Blodgett, D.J., Doerr, J.A., 1993. Effectiveness of different types of clay for reducing the detrimental effects of aflatoxin-contaminated diets on performance and serum profiles of weanling pigs. *J. Anim. Sci.* 71, 1226–1231.
- Scholl, P. and J. D. Groopman., 1995. Epidemiology of human aflatoxin exposures and its relationship to liver cancer. In M. Eklund, J. L. Richard, and K. Mise (Eds.). *Molecular Approaches to Food Safety: Issues Involving Toxic Microorganisms*. Alaken, Inc., Fort Collins, Colorado, pp 169-182.
- Scholl, P., Musser, S.M., Kensler, T.W., Groopman, J.D., 1996. Inhibition of aflatoxin M1 excretion in rat urine during dietary intervention with oltipraz. *Carcinogenesis* 17:1385-1388.
- Shank, R. C. 1977. Epidemiology of aflatoxin carcinogenesis. *Adv. Mod. Toxicol.* 3:291–318.
- Shank, R. C., C. H. Bourgeois, N. Keschamras, et al. 1971. Aflatoxins in autopsy specimens from Thai children with an acute disease of unknown etiology. *Food Cosmet Toxicol* 9:501.
- Shantha, T. 1987. Detoxification of groundnut seed and products in India. In: *Summary and Recommendations of the International Workshop on Aflatoxin Contamination of Groundnut*. ICRISAT Center, India, pp. 16.
- Shantha, T. and M. Sreenivasa. 1977. Photo-destruction of aflatoxin in groundnut oil. *Indian J. Technol.* 15:453.
- Shimada, T., and Guengerich, F.P., 1989. Evidence for cytochrome P-450NF, the nifedipine oxidase, being the principal enzyme involved in the bioactivation of aflatoxins in human liver. *Proc. Natl. Acad. Sci U.S.A.* 86, 462-465.

- Smith, E.E., Phillips, T.D., Ellis, J.A., Harvey, R.B., Kubena, L.F., Thompson, J., Newton, G., 1994. Dietary hydrated sodium calcium aluminosilicate reduction of aflatoxin M1 residue in dairy goat milk and effects on milk production and components. *J. Anim. Sci.* 72, 677–682.
- Soliman, K.M, Ismail, B.R., 1999. Aflatoxins contamination in spices and medicinal plants and their fate during cooking. *Bulletin of Faculty of Agriculture, University of Cairo (Abstract)*. 50:679-691.
- Sova, Z., Pohunkova, H., Reisnerova, H., Slamova, A., Haisl, K., 1991. Hematological and histological response to the diets containing aflatoxin B1 and zeolite in broilers of domestic fowl. *Acta. Vet. Bron (abstract)* 60:31-40.
- Spotti, M., Fracchiolla, M.L., Arioli, F., Caloni, F., Pompa, G., 2005. Aflatoxin B1 binding to sorbents in bovine ruminal fluid. *Vet. Res. Commun.* 29, 507-515.
- Stanley, V.G., Ojo, R., Woldesenbet, S., Hutchinson, D.H., 1993. The use of *Saccharomyces cerevisiae* to suppress the effects of aflatoxicosis in broiler chicks. *Poult. Sci.* 72:1876-1872.
- Stark, A. A., Y. Gal, and G. Shaulsky. 1990. Involvement of singlet oxygen in photoactivation of aflatoxins B1 and B2 to DNA binding forms in vivo. *Carcinogenesis* 11:529–534.
- Steiner, J., Bluthgen, A. and Heeschen, W. W.S.H. J. 1990. Untersuchungen zur beeinflussung der ausscheidung von aflatoxin M1 durch polychlorierte bifhenyle beim laktierenden rind. *Kieler Milchwirtschaftliche Forschungsberichte (Abstract)* 42: 543-552.
- Stelwagen, K., Farr, V. C., McFadden, H. A., Prosser, C.G. and Davis, S. R. 1997. Time course of milk accumulation-induced opening of mammary tight junctions, and blood clearance of milk components. *American Journal of Physiology* 273: R379-R386.
- Stroka, J., M. Petz, U. Joerissen, and E. Anklam. 1999. Investigation of various extractants for the analysis of aflatoxin B1 in different food and feed matrices. *Food Addit. Contam.* 16:331-338.
- Sudakin, D. L., 2003. Dietary Aflatoxin Exposure and Chemoprevention of Cancer: A Clinical Review. *J. Toxicol.-Clin. Toxin.* 41:195-204.

-
- Sun T.-T. and Y.-Y. Chu. 1984. Carcinogenesis and prevention strategy of liver cancer in areas of prevalence. *J Cell Physiol* 3(suppl.):39–44.
- Sweeney M. J. and Dobson A. D. W., 1999. Molecular biology of mycotoxin biosynthesis. *FEMS Microbiology Letters* 175 (1999) 149-163.
- Tjälve, H., Larsson, P., Andersson, C., Busk, L., 1992. Bioactivation of aflatoxin B1 in the bovine olfactory mucosa: DNA-binding, mutagenicity and induction of sister chromatid exchanges. *Carcinogenesis* 13:1345-1350.
- Trail, F., Mahanti, N. and Linz, J. E. (1995) Molecular biology of aflatoxin biosynthesis. *Microbiology* 141, 755-765.
- Trucksess, M. W., Richard, J. L., Stoloff, L., McDonald, J. S. and Brumley, W. C. 1983. Absorption and distribution patterns of aflatoxicol and aflatoxins B1 and M1 in blood and milk of cows given aflatoxin B1. *American Journal of Veterinary Research* 44: 1753-1756.
- Tung, H. T., F. W. Cook, R. D. Wyatt, and P. B. Hamilton. 1975. The anemia caused by aflatoxin. *Poultry Sci* 54:1962–1969.
- Van der Linde, J.A., Frens, A.M., de Jongh, M., Vles, R.O., 1964. Inspection of milk from cows fed aflatoxin-containing groundnut meal (Abstract). *Tijdschr. Diergeneesk.* 89, 1082-1088.
- Van Eijkeren, J. C. H., M. I. Bakker, and M. J. Zeilmaier. 2006. A simple steady-state model for carry-over of aflatoxins from feed to cow's milk. *Food Addit. Contam.* 23:833-838.
- van Rensburg, S. J., J. J. Van Der Watt, I. F. H. Purchase, L. Pereira Coutinho, and L. Markham. 1974. Primary liver cancer rate and aflatoxin intake in a high cancer area. *S Afr Med J* 48:2508a–2508d.
- van Rensburg, S. J., P. Cook-Mozaffari, D. J. Van Schalkwyk, J. J. Van Der Watt, T. J. Vincent, and I. F. Purchase. 1985. Hepatocellular carcinoma and dietary aflatoxin in Mozambique and Transkei. *Br J Cancer* 51:713–726.
- Van Soest, P. J., Robertson, J. B. and Lewis, B. A. 1991. Methods for dietary fiber, neutral detergent fiber, and nonstarch polysaccharides in relation to animal nutrition. *Journal of Dairy Science* 74:3583-3597.

- Varga J., Rigó K., Tóth B., Téren J. and Kozakiewicz Z., 2003. Evolutionary Relationships among *Aspergillus* Species Producing Economically Important Mycotoxins. *Food Technol. Biotechnol.* 41, 29–36.
- Vasanthi, S. and R. V. Bhat. 1998. Mycotoxins in foods: Occurrence, health, and economic significance and food control measures. *Indian J. Med. Res.* 108:212–224.
- Veldman, A., Meijs, J. A. C., Borggreve, G.J. and Heeres van der Tol, J. J. 1992. Carry-over of aflatoxin from cows' food to milk. *Animal Production* 55: 163-168.
- Walstra, P. and Jenness, R. 1984. Variability. In *Dairy chemistry and physics* (eds P. Walstra and R. Jenness), pp. 146-161. A Wiley-Interscience Publication John Wiley & Sons, Inc..
- Watts, C.M., Chen, Y.C., Ledoux, D.R., Broomhead, J.N., Bermudez, A.J., Rottinghaus, G.E., 2003. Effects of multiple mycotoxins and a hydrated sodium calcium aluminosilicate in poultry. *Int. J. Poultry Sci.* 2, 372-378.
- Westlake, K., Mackie, W.M., Dutton, M., 1989. *In vitro* metabolism of mycotoxins by bacterial, protozoal and ovine ruminal fluid preparations. *Anim. Feed Sci. Technol.*, 25:169-178.
- Widstrom, N. W. 1996. The aflatoxin problem with corn grain. Pp 219–280. In D. Sparks (Ed.). *Advances in Agronomy*. Academic Press, New York.
- Wilson, D. M., Payne, G. A., 1994. Factors affecting *Aspergillus flavus* group infection and aflatoxin contamination. In: *The Toxicology of Aflatoxins: Human Health, Veterinary, and Agricultural Significance*, Eaton D. L. and Groopman J. D. (eds.). Academic Press Inc., San Diego, California, USA, pp. 309-325.
- Wilson, R., Ziprin, R., Ragsdale, S., Busbee, D., 1985. Uptake and vascular transport of ingested aflatoxin. *Toxicol. Lett.* 29, 169-176.
- Wiseman, D.W., Marth, E.H., 1983. Behavior of aflatoxin M1 in yogurt, buttermilk and kefir. *J. Food Prot.*, 46:115-118.
- Wogan, G. N. and P. M. Newberne. 1967. Dose-response characteristics of aflatoxin B1 carcinogenesis in the rat. *Cancer Res.* 27:2370–2376.
- Wogan, G. N., Hsieh, D.P.H., 1980. The comparative metabolism and toxicokinetics of aflatoxin B1 in the monkey, rat and mouse. *Toxicol. Appl. Pharmacol.*, 55:115-125.

- Wogan, G. N., Paglialunga, S., 1974. Carcinogenicity of synthetic aflatoxin M1 in rats. *Food Cosmet. Toxicol.* 12:381-384.
- Wood, G.E., 1991. Aflatoxin M1. *Mycotoxins and phytoalexins* 1644, 145-164.
- Yaroglu, T., H.H. Oruc, M. Tayar, 2005. Aflatoxin M1 levels in cheese samples from some provinces of Turkey. *Food Control* 16:88.
- Yeh, G. S., M. C. Yu, C. C. Mo, S. Luo, M. J. Tong, and G. E. Henderson. 1989. Hepatitis B virus, aflatoxin, and hepatocellular carcinoma in southern Guangxi, China. *Cancer Res* 49:2506–2509.
- Yiannikouris, A. and Jouany, J. P. 2002. Mycotoxins in feeds and their fate in animals: a review. *Animal Research* 51: 81-99.
- Yiannikouris, A., Bertin, G., Jouany, J.P., 2005. Reducing mycotoxin impact: the science behind Mycosorb®. *Nutritional biotechnology in the feed and food industries Proceedings of Alltech' s 21st Annual Symposium, Lexington, Kentucky, USA, 22-25 May 2005*, 265-276.
- Yiannikouris, A., Francois, J., Poughon, L., Dussap, C.-G., Bertin, G., Jeminet, G., Jouany, J.-P., 2004. Alkali extraction of β -D-glucans from *Saccharomyces cerevisiae* cell wall and study of their adsorptive properties toward zearalenone. *J. Agric. Food Chem.* 52, 3666–3673.
- Yiannikouris, A., Francois, J., Poughon, L., Dussap, C.-G., Jeminet, G., Bertin, G., Jouany, J.-P., 2004c. Complexation of zearalenone with β -d-glucans isolated from the cell wall of *Saccharomyces cerevisiae*: study of the influence of pH on model β -D-glucans. *J. Food Prot.* 67 (12), 2741–2746.
- Yiannikouris, A., Jouany, J.P., 2002. Mycotoxins in feeds and their fate in animals: a review. *Anim. Res.* 51, 81-99.
- Yousef, A. E. and E. H. Marth. 1989. Use of ultraviolet energy to degrade aflatoxin M1 in raw or heated milk with and without added peroxide. *J Dairy Sci* 69:2243–2247.
- Zhu, J., Zhang, L., Hu, X., Chen, J., Xu, Y., Fremy, J., Chu, F.S., 1987. Correlation of dietary aflatoxin B1 levels with excretion of aflatoxin M1 in human urine. *Cancer Res.*, 47:1848-1852.