

7. REFERENCES

- Abel, E.L. (1978) Effect of ethanol on pregnant rats and their offspring. *Psychopharmacology*, 57, 5-11
- Abel, E.L. (1979) Sex ratio in fetal alcohol syndrome. *Lancet*, ii, 105
- Abel, E.L. (1980) Fetal alcohol syndrome: behavioral teratology. *Psychol. Bull.*, 87, 29-50
- Abel, E.L. (1981) *Fetal Alcohol Syndrome*, Vol. 1, Boca Raton, FL, CRC Press
- Abel, E.L. (1985a) Prenatal effects of alcohol on growth: a brief overview. *Fed. Proc.*, 44, 2318-2322
- Abel, E.L. (1985b) Alcohol enhancement of marijuana-induced fetotoxicity. *Teratology*, 31, 35-40
- Abel, E.L. & Dintcheff, B.A. (1978) Effects of prenatal alcohol exposure on growth and development in rats. *J. Pharmacol. exp. Ther.*, 207, 916-921
- Abel, E.L. & Dintcheff, B.A. (1986) Saccharin preference in animals prenatally exposed to alcohol: no evidence of altered sexual dimorphism. *Neurobehav. Toxicol. Teratol.*, 8, 521-523
- Abel, E.L. & Greizerstein, H.B. (1979) Ethanol-induced prenatal growth deficiency: changes in fetal body composition. *J. Pharmacol. exp. Ther.*, 211, 668-671
- Abernethy, D.J., Frazelle, J.H. & Boreiko, C.J. (1982) Effects of ethanol, acetaldehyde and acetic acid in the C3H/10T1/2 C18 cell transformation system (Abstract No. Bf-1). *Environ. Mutagenesis*, 4, 331
- Adam, L. & Postel, W. (1987) Gas chromatographic analysis of ethyl carbamate (urethane) in spirits (Ger.). *Branntweinwirtschaft, March*, 66-68
- Addiction Research Foundation (1985) *Statistics On Alcohol and Drug Use in Canada and Other Countries*, Vol. 1, *Statistics on Alcohol Use*, Toronto, pp. 214-218
- Adelhardt, M., Jensen, O.M. & Hansen, H.S. (1985) Cancer of the larynx, pharynx, and oesophagus in relation to alcohol and tobacco consumption among Danish brewery workers. *Dan. med. Bull.*, 32, 119-123
- Adelstein, A. & White, G. (1976) Alcoholism and mortality. *Popul. Trends*, 6, 7-13
- Agarwal, D.P. & Goedde, H.W. (1986) *Ethanol oxidation: ethnic variations in metabolism and response*. In: Kalow, W. et al., eds, *Ethnic Differences in Reactions to Drugs and Xenobiotics (Progress in Clinical & Biological Research Series, Vol. 214)*, New York, Alan R. Liss, pp. 99-112
- Agarwal, D.P., Harada, S. & Goedde, H.W. (1981) Racial differences in biological sensitivity to ethanol: the role of alcohol dehydrogenase and aldehyde dehydrogenase isozymes. *Alcohol. clin. exp. Res.*, 5, 12-16
- Aguilar, M.V., Martinez, M.C. & Masoud, T.A. (1987) Arsenic content in some Spanish wines. Influence of the wine-making technique on arsenic content in musts and wines. *Z. Lebensmittel-untersuch. Forsch.*, 185, 185-187
- Ahlbom, H.E. (1937) Predisposition factors to squamous-cell carcinoma of the mouth, throat and oesophagus. Statistical study on material in the Radiumhemmet Hospital, Stockholm (Ger.). *Acta radiol.*, 18, 163-185

- Alfonso, M., Parafita, M.A., Mancebo, M.J. & Marcó, J. (1985) Further evidence for effects of ethanol on gonadotrophins and prolactin secretion in female rats. *Gen. Pharmacol.*, 16, 43-47
- Alvarez, M.R., Cimino, L.E., Jr, Cory, M.J. & Gordon, R.E. (1980a) Ethanol induction of sister chromatid exchanges in human cells *in vitro*. *Cytogenet. Cell Genet.*, 27, 66-69
- Alvarez, M.R., Cimino, L.E., Jr & Pusateri, T.J. (1980b) Induction of sister chromatid exchanges in mouse fetuses resulting from maternal alcohol consumption during pregnancy. *Cytogenet. Cell Genet.*, 28, 173-180
- Amacher, D.E., Paillet, S.C., Turner, G.N., Ray, V.A. & Salsburg, D.S. (1980) Point mutations at the thymidine kinase locus in L5178Y mouse lymphoma cells. II. Test validation and interpretation. *Mutat. Res.*, 72, 447-474
- Amerine, M.A., Berg, H.W. & Cruess, W.V. (1972) *The Technology of Wine Making*, 3rd ed., Westport, CT, Avi Publishing Co.
- Anderson, L.M., Harrington, G.W., Pylypiw, H.M., Jr, Hagiwara, A. & Magee, P.N. (1986) Tissue levels and biological effects of N-nitrosodimethylamine in mice during chronic low or high dose exposure with or without ethanol. *Drug Metab. Disposition*, 14, 733-739
- Anderson, R.A., Jr (1982) *The possible role of paternal alcohol consumption in the etiology of the fetal alcohol syndrome*. In: Abel, E.L., ed., *Fetal Alcohol Syndrome*, Vol. 3, *Animal Studies*, Boca Raton, FL, CRC Press, pp. 83-112
- Anderson, R.A., Jr, Willis, B.R. & Oswald, C. (1985) Spontaneous recovery from ethanol-induced male infertility. *Alcohol*, 2, 479-484
- Anon. (1966) *Encyclopaedia Britannica*, Chicago, IL, William Benton
- Anon. (1980) *Farm Chemicals Handbook*, Willoughby, OH, Meister Publishing, p. D279
- Anon. (1985a) The facts about 'alcohol equivalence'. *Brew. Dig.*, November, 22-26
- Anon. (1985b) Does alcohol cause breast cancer? *Lancet*, i, 1311-1312
- Anon. (1987) Yellow 6 labeling for alcoholic beverages proposed. *Food chem. News*, 7 September, 37
- Arimoto, S., Nakano, N., Ohara, Y., Tanaka, K. & Hayatsu, H. (1982) A solvent effect on the mutagenicity of tryptophan-pyrolysate mutagens in the *Salmonella*/mammalian microsome assay. *Mutat. Res.*, 102, 105-112
- Athanasiou, K. & Bartsocas, C.S. (1980) The effect of pine resin on chromosome breakage and sister-chromatid exchanges in human peripheral lymphocytes. *Mutat. Res.*, 79, 79-80
- Austin, H., Delzell, E., Gruffman, S., Levine, R., Morrison, A.S., Stolley, P.D. & Cole, P. (1986) A case-control study of hepatocellular carcinoma and the hepatitis B virus, cigarette smoking, and alcohol consumption. *Cancer Res.*, 46, 962-966
- Axelson, O. (1978) Aspects on confounding in occupational health epidemiology. *Scand. J. Work Environ. Health*, 4, 98-102
- Badr, F.M. & Badr, R.S. (1975) Induction of dominant lethal mutation in male mice by ethyl alcohol. *Nature*, 253, 134-136
- Badr, F.M. & Hussain, F. (1977) Action of ethanol and its metabolite acetaldehyde in human lymphocytes. In vivo and in vitro study (Abstract). *Genetics*, 86, S2-S3
- Badr, F.M., Badr, R.S., Asker, R.L. & Hussain, F.H. (1977) *Evaluation of the mutagenic effects of ethyl alcohol by different techniques*. In: Gross, M.M., ed., *Alcohol Intoxication and Withdrawal*, IIIa, *Biological Aspects of Ethanol*, New York, Plenum Press, pp. 25-46
- Bakken, A.M., Farstad, M. & Berge, R. (1979) The formation of alkyl palmitate by rat liver microsomes. *FEBS Lett.*, 99, 47-50

- Balboni, C. (1963) *Alcohol in relation to dietary patterns*. In: Lucia, S.P., ed., *Alcohol and Civilization*, New York, McGraw-Hill, pp. 61-74
- Baldwin, S. & Andreasen, A.A. (1974) Congener development in bourbon whisky matured at various proofs for twelve years. *J. Assoc. off. anal. Chem.*, 57, 940-950
- Baldwin, S., Black, R.A., Andreasen, A.A. & Adams, S.L. (1967) Aromatic congener formation in maturation of alcoholic distillates. *J. agric. Food Chem.*, 15, 381-385
- Bandas, E.L. (1982) Study of the role of metabolites and impurities in the mutagenic action of ethanol on yeast mitochondria. *Genetika*, 18, 1056-1061
- Bandas, E.L. & Zakharov, I.A. (1980) Induction of *rho⁻* mutations in yeast *Saccharomyces cerevisiae* by ethanol. *Mutat. Res.*, 71, 193-199
- Bandion, F., Valenta, M. & Kain, W. (1976) Contribution to an evaluation of benzaldehyde contents in stone fruit fine brandies and stone fruit liquors (Ger.). *Mitt. Rebe Wein Obstbau Früchteverwert. Klosterneuburg*, 26, 131-138
- Banduhn, N. & Obe, G. (1985) Mutagenicity of methyl 2-benzimidazolecarbamate, diethylstilbestrol and estradiol: structural chromosomal aberrations, sister-chromatid exchanges, C-mitoses, polyploidies and micronuclei. *Mutat. Res.*, 156, 199-218
- Bannigan, J. & Burke, P. (1982) Ethanol teratogenicity in mice: a light microscopic study. *Teratology*, 26, 247-254
- Barale, R., Rusciano, D., Stretti, G., Zucconi, D., Monaco, M., Mosesso, P. & Principe, P. (1983) The induction of forward gene mutation and gene conversion in yeasts by treatment with cyclophosphamide *in vitro* and *in vivo*. *Mutat. Res.*, 111, 295-312
- Baraona, E. (1985) *Ethanol and lipid metabolism*. In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 65-95
- Baraona, E., Pirola, R.C. & Lieber, C.S. (1974) Small intestinal damage and changes in cell population produced by ethanol ingestion in the rat. *Gastroenterology*, 66, 226-234
- Baraona, E., Leo, M.A., Borowsky, S.A. & Lieber, C.S. (1975) Alcoholic hepatomegaly: accumulation of protein in the liver. *Science*, 190, 794-795
- Baraona, E., Leo, M.A., Borowsky, S.A. & Lieber, C.S. (1977) Pathogenesis of alcohol-induced accumulation of protein in the liver. *J. clin. Invest.*, 60, 546-554
- Baraona, E., Pikkarainen, P., Salaspuro, M., Finkelman, F. & Lieber, C.S. (1980) Acute effects of ethanol on hepatic protein synthesis and secretion in the rat. *Gastroenterology*, 79, 104-111
- Baraona, E., Matsuda, Y., Pikkarainen, P., Finkelman, F. & Lieber, C.S. (1981a) Effect of ethanol on hepatic protein secretion and microtubules. Possible mediation by acetaldehyde. In: Galanter, M. ed., *Currents in Alcoholism*, Vol. VIII, New York, Grune & Stratton, pp. 421-434
- Baraona, E., Guerra, M. & Lieber, C.S. (1981b) Cytogenetic damage of bone marrow cells produced by chronic alcohol consumption. *Life Sci.*, 29, 1797-1802
- Baraona, E., Finkelman, F. & Lieber, C.S. (1984) Reevaluation of the effects of alcohol consumption on rat liver microtubules: effects of feeding status. *Res. Commun. chem. Pathol. Pharmacol.*, 44, 265-278
- Baraona, E., DiPadova, C. & Lieber, C.S. (1985) Transport of acetaldehyde in red blood cells from liver to other tissues (Abstract No. 405). *Hepatology*, 5, 1048
- Baraona, E., Julkunen, R., Tannenbaum, L. & Lieber, C.S. (1986) Role of intestinal bacterial overgrowth in ethanol production and metabolism in rats. *Gastroenterology*, 90, 103-110
- Barauskaite, S.V. (1985) Carcinogenic effect of ethyl alcohol (Abstract) (Russ.). In: *Proceedings of a Conference on Current Developments of Drugs Synthesis and Research*, 27-28 June, Kaunas (Lithuania), USSR, p. 159

- Barilyak, I.R. & Kozachuk, S.Y. (1983) Embryotoxic and mutagenic activity of ethanol and acetaldehyde after intra-amniotic injection (Russ.). *Tsitol. Genet.*, 17, 57-60
- Barlow, O.W., Beams, A.J. & Goldblatt, H. (1936) Studies of the pharmacology of ethyl alcohol. I. A comparative study of the pharmacologic effects of grain and synthetic ethyl alcohols. II. A correlation of the local irritant, anesthetic and toxic effects of three potable whiskeys with their alcohol content. *J. Pharmacol. exp. Ther.*, 56, 117-146
- Barrison, I.G., Waterson, E.J. & Murray-Lyon, I.M. (1985) Adverse effects of alcohol in pregnancy. *Br. J. Addict.*, 80, 11-22
- Barron, S. & Riley, E.P. (1985) Pup-induced maternal behavior in adult and juvenile rats exposed to alcohol prenatally. *Alcohol. clin. exp. Res.*, 9, 360-365
- Barron, S., Riley, E.P. & Smotherman, W.P. (1986) The effect of prenatal alcohol exposure on umbilical cord length in fetal rats. *Alcohol. clin. exp. Res.*, 10, 493-495
- Bartsch, W., Sporer, G., Dietmann, K. & Fuchs, G. (1976) Acute toxicity of various solvents in the mouse and rat. *Arzneimittelforschung*, 26, 1581-1583
- Bassir, O. & Maduagwu, E.N. (1978) Occurrence of nitrate, nitrite, dimethylamine, and dimethyl-nitrosamine in some fermented Nigerian beverages. *J. agric. Food Chem.*, 26, 200-203
- Baumes, R., Cordonnier, R., Nitz, S. & Drawert, F. (1986) Identification and determination of volatile constituents in wines from different vine cultivars. *J. Sci. Food Agric.*, 37, 927-943
- Beaud, P. & Ramuz, A. (1978) General composition of morello cherry brandies: comparison with kirsch (Fr.). *Trav. Chim. aliment. Hyg.*, 69, 536-543
- Begg, C.B., Walker, A.M., Wessen, B. & Zelen, M. (1983) Alcohol consumption and breast cancer. *Lancet*, i, 293-294
- Berenyi, M.R., Straus, B. & Cruz, D. (1974) In vitro and in vivo studies of cellular immunity in alcoholic cirrhosis. *Am. J. dig. Dis.*, 19, 199-205
- Bernhard, C.G. & Goldberg, L. (1935) Absorption and oxidation of alcohol in alcoholics (Ger.). *Acta med. scand.*, 86, 152-215
- Bernstein, L. & Khan, A. (1973) Rapid spectrophotometric determination of oxalate in beer and wort. *Am. Soc. brew. Chem. Proc.*, 20-23
- Best, C.H., Hartroft, W.S., Lucas, C.C. & Ridout, J.H. (1949) Liver damage produced by feeding alcohol or sugar and its prevention by choline. *Br. med. J.*, ii, 1001-1006
- Bhalla, V.K., Chen, C.J.H. & Gnanaprakasam, M.S. (1979) Effects of in vivo administration of human chorionic gonadotropin and ethanol on the process of testicular receptor depletion and replenishment. *Life Sci.*, 24, 1315-1324
- Biles, B. & Emerson, T.R. (1968) Determination of fibres in beer. *Nature*, 219, 93-94
- Bird, R.P., Draper, H.H. & Basrur, P.K. (1982) Effect of malonaldehyde and acetaldehyde on cultured mammalian cells: production of micronuclei and chromosomal aberrations. *Mutat. Res.*, 101, 237-246
- Bjelke, E. (1973) *Epidemiologic Studies of Cancer of the Stomach, Colon, and Rectum: With Special Emphasis on the Role of Diet*, Thesis, University of Minnesota
- Blackwelder, W.C., Yano, K., Rhoads, G.G., Kagan, A., Gordon, T. & Palesch, Y. (1980) Alcohol and mortality: the Honolulu Heart Study. *Am. J. Cancer*, 68, 164-169
- Blakley, P.M. & Scott, W.J., Jr (1984a) Determination of the proximate teratogen of the mouse fetal alcohol syndrome. 2. Pharmacokinetics of the placental transfer of ethanol and acetaldehyde. *Toxicol. appl. Pharmacol.*, 72, 364-371

- Blakley, P.M. & Scott, W.J., Jr (1984b) Determination of the proximate teratogen of the mouse fetal alcohol syndrome. 1. Teratogenicity of ethanol and acetaldehyde. *Toxicol. appl. Pharmacol.*, 72, 355-363
- Blevins, R.D. & Shelton, M.S. (1983) Response of *Salmonella typhimurium* mutants to 3D9-THC and in conjunction with known mutagens. *J. environ. Sci. Health, A18*, 413-443
- Blevins, R.D. & Taylor, D.E. (1982) Mutagenicity screening of twenty-five cosmetic ingredients with the *Salmonella*/microsome test. *J. environ. Sci. Health, A17*, 217-239
- Bleyman, M.A. & Thurman, R.G. (1979) Comparison of acute and chronic ethanol administration on rates of ethanol elimination in the rat *in vivo*. *Biochem. Pharmacol.*, 28, 2027-2030
- Bo, W.J., Krueger, W.A., Rudeen, P.K. & Symmes, S.K. (1982) Ethanol-induced alterations in the morphology and function of the rat ovary. *Anat. Rec.*, 202, 255-260
- Bode, C., Goebell, H. & Stähler, M. (1970) Alteration of alcohol-dehydrogenase activity in rat liver following protein deficiency and ethanol (Ger.). *Z. ges. exp. Med.*, 152, 111-124
- Bode, J.C. & Menge, H. (1978) Gastrointestinal tract and alcohol (Ger.). *Internist*, 19, 116-122
- Boeck, D. & Kieninger, H. (1979) Nucleic bases and nucleosides in several beers (Ger.). *Brauwissenschaft*, 32, 160-166
- Boggan, W.O., Randall, C.M., DeBeukelaer, M. & Smith, R. (1979) Renal anomalies in mice prenatally exposed to ethanol. *Res. Commun. chem. Pathol. Pharmacol.*, 23, 127-142
- Böhlke, J.U., Singh, S. & Goedde, H.W. (1983) Cytogenetic effects of acetaldehyde in lymphocytes of Germans and Japanese: SCE, clastogenic activity, and cell cycle delay. *Hum. Genet.*, 63, 285-289
- Bokkenheuser, V.D., Winter, J., Mosenthal, A.C., Mosbach, E.H., McSherry, C.K., Ayengar, N.K.N., Andrews, A.W., Lebherz, W.B., III, Pienta, R.J. & Wallenstein, S. (1983) Fecal steroid 21-dehydroxylase, a potential marker for colorectal cancer. *Am. J. Gastroenterol.*, 78, 469-475
- Boland, B. & Roizen, R. (1973) Sales slips and survey responses: new data on the reliability of survey consumption measures. *Drinking Drug Pract. Surv.*, 8, 5-10
- Bond, N.W. (1986) Prenatal alcohol exposure and offspring hyperactivity: effects of *para*-chlorophenylalanine and methysergide. *Neurobehav. Toxicol. Teratol.*, 8, 667-673
- Bosin, T.R., Krogh, S. & Mais, D. (1986) Identification and quantification of 1,2,3,4-tetrahydro- β -carboline-3-carboxylic acid and 1-methyl-1,2,3,4-tetrahydro- β -carboline-3-carboxylic acid in beer and wine. *J. agric. Food Chem.*, 34, 843-847
- Bösron, W.F., Li, T.-K. & Vallee, B.L. (1980) New molecular forms of human liver alcohol dehydrogenase: isolation and characterization of ADH Indianapolis. *Proc. natl Acad. Sci. USA*, 77, 5784-5788
- Boveris, A., Oshino, N. & Chance, B. (1972) The cellular production of hydrogen peroxide. *Biochem. J.*, 128, 617-630
- Bradshaw, E. & Schonland, M. (1969) Oesophageal and lung cancers in Natal African males in relation to certain socio-economic factors. An analysis of 484 interviews. *Br. J. Cancer*, 23, 275-284
- Bradshaw, E. & Schonland, M. (1974) Smoking, drinking, and oesophageal cancer in African males of Johannesburg, South Africa. *Br. J. Cancer*, 30, 157-163
- Brander, C.F., Kepner, R.E. & Webb, A.D. (1980) Identification of some volatile compounds of wine of *Vitis vinifera* cultivar Pinot noir. *Am. J. Enol. Vitic.*, 31, 69-75

- Braun, R., Schöneich, J., Weissflog, L. & Dedek, W. (1982) Activity of organophosphorus insecticides in bacterial tests for mutagenicity and DNA repair — direct alkylation vs. metabolic activation and breakdown. I. Butonate, vinylbutonate, trichlorfon, dichlorvos, demethyl dichlorvos and demethyl vinylbutonate. *Chem.-biol. Interactions*, 39, 339-350
- Breslow, N.E. & Day, N. (1980) *Statistical Methods in Cancer Research, Vol. I, The Analysis of Case-control Studies (IARC Scientific Publications No. 32)*, Lyon, International Agency for Research on Cancer, pp. 227-233
- Breslow, N.E. & Enstrom, J.E. (1974) Geographic correlations between cancer mortality rates and alcohol-tobacco consumption in the United States. *J. natl Cancer Inst.*, 53, 631-639
- Brodie, B.B., Butler, W.M., Jr, Horning, M.G., Maickel, R.P. & Maling, M.H. (1961) Alcohol-induced triglyceride deposition in liver through derangement of fat transport. *Am. J. clin. Nutr.*, 9, 432-435
- Broitman, S.A., Gottlieb, L.S. & Vitale, J.J. (1976) Augmentation of ethanol absorption by mono- and disaccharides. *Gastroenterology*, 70, 1101-1107
- Bross, I.D.J. & Coombs, J. (1976) Early onset of oral cancer among women who drink and smoke. *Oncology*, 33, 136-139
- Brown, L.M., Pottern, L.M. & Hoover, R.N. (1986) Prenatal and perinatal risk factors for testicular cancer. *Cancer Res.*, 46, 4812-4816
- Brown, N.A., Goulding, E.H. & Fabro, S. (1979) Ethanol embryotoxicity: direct effects on mammalian embryos *in vitro*. *Science*, 206, 573-575
- Brownson, R.C. & Chang, J.C. (1987) Exposure to alcohol and tobacco and the risk of laryngeal cancer. *Arch. environ. Health*, 42, 192-196
- Brownson, R.C., Chang, J.C. & Davis, J.R. (1987) Occupation, smoking, and alcohol in the epidemiology of bladder cancer. *Am. J. publ. Health*, 77, 1298-1300
- Brugère, J., Guenel, P., Leclerc, A. & Rodriguez, J. (1986) Differential effects of tobacco and alcohol in cancer of the larynx, pharynx, and mouth. *Cancer*, 57, 391-395
- Brusick, D.J., Jagannath, D.R., Myhr, B., Sernaw, R. & Chappel, C.I. (1988) Genetic toxicology evaluation of commercial beers. II. Mutagenic activity of commercial beer products in *Salmonella typhimurium* strains TA-98, TA-100 and TA-102. *Mutat. Res.* (in press)
- Bruun, K. (1985) *Formulating comprehensive national alcohol policies*. In: Grant, M., ed., *Alcohol Policies (WHO Regional Publications, European Series No. 18)*, Copenhagen, World Health Organization, pp. 137-142
- Bruun, K., Edwards, G., Lumio, M., Mäkelä, K., Pan, L., Popham, R.E., Room, R., Schmidt, W., Skog, O.-J., Sulkunen, P. & Österberg, E. (1975) *Alcohol Control Policies in Public Health Perspective*, Vol. 25, Helsinki, The Finnish Foundation for Alcohol Studies, pp. 34-91
- Bücher, T. & Klingenberg, M. (1958) Pathway of hydrogen in living organisms (Ger.). *Angew. Chem.*, 70, 552-570
- Buday, A.Z., Belleau, G. & Van Gheluwe, G. (1972) Quantitative determination of nucleic acid derivatives by reflectance measurements. *Am. Soc. brew. Chem. Proc.*, 56-60
- Bulatao-Jayne, J., Almero, E.M., Castro Ma, C.A., Jardeleza Ma, T.R. & Salamat, L.A. (1982) A case-control dietary study of primary liver cancer risk from aflatoxin exposure. *Int. J. Epidemiol.*, 11, 112-119
- Bull, P., Yanez, L. & Nervi, F. (1987) Mutagenic substances in red and white wine in Chile, a high risk area for gastric cancer. *Mutat. Res.*, 187, 113-117

- Burch, G.E. & Ansari, A. (1968) Chronic alcoholism and carcinoma of the pancreas. A correlative hypothesis. *Arch. intern. Med.*, 122, 273-275
- Burch, J.D., Howe, G.R., Miller, A.B. & Semenciw, R. (1981) Tobacco, alcohol, asbestos, and nickel in the etiology of cancer of the larynx: a case-control study. *J. natl Cancer Inst.*, 67, 1219-1224
- Burnett, D.A. & Sorrell, M.F. (1981) Alcoholic cirrhosis. *Clin. Gastroenterol.*, 10, 443-455
- Burnett, K.G. & Felder, M.R. (1980) Ethanol metabolism in *Peromyscus* genetically deficient in alcohol dehydrogenase. *Biochem. Pharmacol.*, 29, 125-130
- Burns, E.M., Kruckeberg, T.W., Kanak, M.F. & Stibler, H. (1986) Ethanol exposure during brain ontogeny: some long-term effects. *Neurobehav. Toxicol. Teratol.*, 8, 383-389
- Butler, M.G., Sanger, W.G. & Veomett, G.E. (1981) Increased frequency of sister-chromatid exchanges in alcoholics. *Mutat. Res.*, 85, 71-76
- Byers, T. & Funch, D.P. (1982) Alcohol and breast cancer. *Lancet*, i, 799-800
- Byers, T., Marshall, J., Graham, S., Mettlin, C. & Swansom, M. (1983) A case-control study of dietary and nondietary factors in ovarian cancer. *J. natl Cancer Inst.*, 71, 681-686
- Cabeça-Silva, C., Madeira-Lopes, A. & van Uden, N. (1982) Temperature relations of ethanol-enhanced petite mutation in *Saccharomyces cerevisiae*: mitochondria as targets of thermal death. *FEMS Microbiol. Lett.*, 15, 149-151
- Cabras, P., Meloni, M. & Pirisi, F.M. (1987) *Pesticide fate from vine to wine*. In: Ware, G.W., ed., *Reviews of Environmental Contamination and Toxicology*, Vol. 99, New York, Springer, pp. 83-117
- Cadotte, M., Allard, S. & Verdy, M. (1973) Lack of effect of ethanol *in vitro* on human chromosomes. *Ann. Génét.*, 16, 55-56
- Caetano, R., Suzman, R.M., Rosen, D.H. & Voorhees-Rosen, D.J. (1983) The Shetland Islands: longitudinal changes in alcohol consumption in a changing environment. *Br. J. Addict.*, 78, 21-36
- Carroll, R.B. (1970) Analysis of alcoholic beverages by gas-liquid chromatography. *Q. J. Stud. Alcohol*, 5 (Suppl.), 6-19
- Carter, E.A. & Isselbacher, K.J. (1971) The metabolism of ethanol to carbon dioxide by stomach and small intestinal slices. *Proc. Soc. exp. Biol. Med.*, 138, 817-819
- Carulli, N., Manenti, F., Gallo, M. & Salvioli, G.F. (1971) Alcohol-drugs interaction in man: alcohol and tolbutamide. *Eur. J. clin. Invest.*, 1, 421-424
- Casazza, J.P. & Veech, R.L. (1985) The production of 1,2-propanediol in ethanol treated rats. *Biochem. biophys. Res. Commun.*, 129, 426-430
- Castells, S., Mark, E., Abaci, F. & Schwartz, E. (1981) Growth retardation in fetal alcohol syndrome. Unresponsiveness to growth-promoting hormones. *Dev. Pharmacol. Ther.*, 3, 232-241
- Castonguay, A., Rivenson, A., Trushin, N., Reinhardt, J., Spathopoulos, S., Weiss, C.J., Reiss, B. & Hecht, S.S. (1984) Effects of chronic ethanol consumption on the metabolism and carcinogenicity of *N*^t-nitrosonornicotine in F344 rats. *Cancer Res.*, 44, 2285-2290
- Cederbaum, A.I. & Dicker, E. (1983) Inhibition of microsomal oxidation of alcohols and of hydroxyl-radical scavenging agents by the iron-chelating agent desferrioxamine. *Biochem. J.*, 210, 107-113
- Cederbaum, A.I., Dicker, E., Lieber, C.S. & Rubin, E. (1978) Ethanol oxidation by isolated hepatocytes from ethanol-treated and control rats; factors contributing to the metabolic adaptation after chronic ethanol consumption. *Biochem. Pharmacol.*, 27, 7-15

- Charalambous, G., Bruckner, K.J., Hardwick, W.A. & Linnebach, A. (1974) Separation, identification and determination of beer flavor compounds by high pressure liquid chromatography — Part II. *Tech. Q. Master Brew. Assoc. Am.*, 11, 150-154
- Chaubey, R.C., Kavi, B.R., Chauhan, P.S. & Sundaram, K. (1977) Evaluation of the effect of ethanol on the frequency of micronuclei in the bone marrow of Swiss mice. *Mutat. Res.*, 43, 441-444
- Chauhan, P.S., Aravindakshan, M., Kumar, N.S. & Sundaram, K. (1980) Failure of ethanol to induce dominant lethal mutations in Wistar male rats. *Mutat. Res.*, 79, 263-275
- Checiu, M. & Sandor, S. (1982) The effect of chronic oral alcoholization upon late fetal development in mice. *Morphol. Embryol.*, 28, 15-19
- Checiu, M. & Sandor, S. (1986) The effect of ethanol upon early development in mice and rats. IX. Late effect of acute preimplantation intoxication in mice. *Morphol. Embryol.*, 32, 5-11
- Chen, E.C.-H. & Van Gheluwe, G. (1979) Analysis of histamine in beer. *J. Am. Soc. brew. Chem.*, 37, 91-95
- Chen, J.J. & Smith, E.R. (1979) Effects of perinatal alcohol on sexual differentiation and open-field behavior in rats. *Horm. Behav.*, 13, 219-231
- Chen, T.-H., Kavanagh, T.J., Chang, C.C. & Trosko, J.E. (1984) Inhibition of metabolic cooperation in Chinese hamster V79 cells by various organic solvents and simple compounds. *Cell Biol. Toxicol.*, 1, 155-171
- Chernoff, G.F. (1977) The fetal alcohol syndrome in mice: an animal model. *Teratology*, 15, 223-229
- Chernoff, G.F. (1979) Introduction: a teratologist's view of the fetal alcohol syndrome. *Curr. Alcoholol.*, 7, 7-13
- Chernoff, G.F. (1980) The fetal alcohol syndrome in mice: maternal variables. *Teratology*, 22, 71-75
- Cherrington, E.H., ed. (1924) *Standard Encyclopedia of the Alcohol Problem*, Vol. 2, Westerville, OH, American Issue Publishing, pp. 580-597
- Chey, W.Y., Kusakcioglu, O., Dinoso, V. & Lorber, S.H. (1968) Gastric secretion in patients with chronic pancreatitis and in chronic alcoholics. *Arch. intern. Med.*, 122, 399-403
- Cheynier, V. & Rigaud, J. (1986) HPLC separation and characterization of flavonols in the skins of *Vitis vinifera* var. Cinsault. *Am. J. Enol. Vitic.*, 37, 248-252
- Christoph, N., Schmitt, A. & Hildenbrand, K. (1986) Study of the formation and behaviour of urethane during distillation in the manufacture of spirits (Ger.). *Alkohol-Ind.*, 15, 347-354
- Cicero, T.H. & Badger, T.M. (1977) Effects of alcohol on the hypothalamic-pituitary-gonadal axis in the male rat. *J. Pharmacol. exp. Ther.*, 201, 427-433
- Cicero, T.J., Meyer, E.R. & Bell, R.D. (1979) Effects of ethanol on the hypothalamic-pituitary-luteinizing hormone axis and testicular steroidogenesis. *J. Pharmacol. exp. Ther.*, 208, 210-215
- Clarren, S.K. & Smith, D.W. (1978) The fetal alcohol syndrome. *New Engl. J. Med.*, 298, 1063-1067
- Clarren, S.K., Alvord, E.C., Jr, Sumi, S.M., Streissguth, A.P. & Smith, D.W. (1978) Brain malformations related to prenatal exposure to alcohol. *J. Pediatr.*, 92, 64-67
- Clarren, S.K., Bowden, D.M. & Astley, S.J. (1987a) Pregnancy outcomes after weekly oral administration of ethanol during gestation in the pig-tailed macaque (*Macaca nemestrina*). *Teratology*, 35, 345-354
- Clarren, S.K., Bowden, D.M. & Astley, S.J. (1987b) Teratogenesis from once per week oral ingestion of ethanol in a non-human primate (Abstract No. 53). *Teratology*, 35, 66A

- Claude, J., Kunze, E., Frentzel-Beyme, R., Paczkowski, K., Schneider, J. & Schubert, H. (1986) Life-style and occupational risk factors in cancer of the lower urinary tract. *Am. J. Epidemiol.*, 124, 578-589
- Clemmesen, J. (1941) *Cancer and Occupation in Denmark, 1935-1939*, Copenhagen, Nyt Nordisk Forlag
- Colangelo, W. & Jones, D.G. (1982) The fetal alcohol syndrome: a review and assessment of the syndrome and its neurological sequelae. *Prog. Neurobiol.*, 19, 271-314
- Collis, C.H., Cook, P.J., Foreman, J.K. & Palframan, J.F. (1971) A search for nitrosamines in East African spirit samples from areas of varying oesophageal cancer frequency. *Gut*, 12, 1015-1018
- Connor, C.L. & Chaikoff, I.L. (1938) Production of cirrhosis in fatty livers with alcohol. *Proc. Soc. exp. Biol. Med.*, 32, 356-359
- Cooke, A.R. (1972) Ethanol and gastric function. *Gastroenterology*, 62, 501-502
- Coon, M.J. & Koop, D.R. (1987) Alcohol-inducible cytochrome P-450 (P-450_{ALC}). *Arch. Toxicol.*, 60, 16-21
- Cortés, F., Mateos, S. & Escalza, P. (1986) Cytotoxic and genotoxic effects of ethanol and acetaldehyde in root-meristem cells of *Allium cepa*. *Mutat. Res.*, 171, 139-143
- Cotruvo, J.A., Simmon, V.A. & Spanggord, R.J. (1977) Investigation of mutagenic effects of products of ozonation reactions in water. *Ann. N.Y. Acad. Sci.*, 298, 124-140
- Crecelius, E.A. (1977) Arsenite and arsenate levels in wine. *Bull. environ. Contam. Toxicol.*, 18, 227-230
- Creus, A., Xamena, N. & Marcos, R. (1983) Positive response of diethylstilbestrol in the sex-linked recessive lethal assay in *Drosophila* after larval feeding. *Mutat. Res.*, 122, 309-313
- Crone, C. (1965) The permeability of brain capillaries to non-electrolytes. *Acta physiol. scand.*, 64, 407-417
- Crow, K.E., Cornell, N.W. & Veech, R.L. (1977) The rate of ethanol metabolism in isolated rat hepatocytes. *Alcohol. clin. exp. Res.*, 1, 43-50
- Cunningham, H.M. & Pontefract, R. (1971) Asbestos fibres in beverages and drinking water. *Nature*, 232, 332-333
- Cushman, P., Barboriak, J.J., Liao, A. & Hoffman, N.E. (1982) Association between plasma high density lipoprotein cholesterol and antipyrine metabolism in alcoholics. *Life Sci.*, 30, 1721-1724
- Cutler, S.J., Scotto, J., Devesa, S.S. & Connelly, R.R. (1974) Third National Cancer Survey — an overview of available information. *J. natl Cancer Inst.*, 53, 1565-1575
- Czajka, M.R., Tucci, S.M. & Kaye, G.I. (1980) Sister chromatid exchange frequency in mouse embryo chromosomes after in utero ethanol exposure. *Toxicol. Lett.*, 6, 257-261
- Daft, P.A., Johnston, M.C. & Sulik, K.K. (1986) Abnormal heart and great vessel development following acute ethanol exposure in mice. *Teratology*, 33, 93-104
- Daniel, A. & Roane, D. (1987) Aneuploidy is not induced by ethanol during spermatogenesis in the Chinese hamster. *Cytogenet. Cell Genet.*, 44, 43-48
- Darroudi, F. & Natarajan, A.T. (1987) Induction of chromosomal aberrations and sister chromatid exchanges in CHO cells by mutagenic metabolites activated by plant microsomal extracts. *Biol. Zbl.*, 106, 169-174
- David, R.M. & Nerland, D.E. (1983) Induction of mouse liver glutathione S-transferase by ethanol. *Biochem. Pharmacol.*, 32, 2809-2811

- Davis, V.E., Brown, H., Huff, J.A. & Cashaw, J.L. (1967) Ethanol-induced alterations of norepinephrine metabolism in man. *J. Lab. clin. Med.*, 69, 787-799
- Day, N.E., Muñoz, N. & Ghadirian, P. (1982) *Epidemiology of esophageal cancer: a review*. In: Correa, P. & Haenszel, W., eds, *Epidemiology of Cancer of the Digestive Tract*, The Hague, Martinus Nijhoff, pp. 21-57
- Dean, G., MacLennan, R., McLoughlin, H. & Shelley, E. (1979) Causes of death of blue-collar workers at a Dublin brewery, 1954-73. *Br. J. Cancer*, 40, 581-589
- DeBeukelaer, M.M., Randall, C.L. & Stroud, D.R. (1977) Renal anomalies in the fetal alcohol syndrome. *J. Pediatr.*, 91, 759-760
- De Flora, S., Zanacchi, P., Camoirano, A., Bennicelli, C. & Badolati, G.S. (1984a) Genotoxic activity and potency of 135 compounds in the Ames reversion test and in a bacterial DNA-repair test. *Mutat. Res.*, 133, 161-198
- De Flora, S., Camoirano, A., Zanacchi, P. & Bennicelli, C. (1984b) Mutagenicity testing with TA97 and TA102 of 30 DNA-damaging compounds, negative with other *Salmonella* strains. *Mutat. Res.*, 134, 159-165
- De Jong, U.W., Breslow, N., Goh Ewe Hong, J., Sridharan, M. & Shanmugaratnam, K. (1974) Aetiological factors in oesophageal cancer in Singapore Chinese. *Int. J. Cancer*, 13, 291-303
- Demakis, J.G., Proskey, A., Rahimtoola, S.H., Jamil, M., Sutton, G.C., Rosen, K.M., Gunnar, R.M. & Tobin, J.R., Jr (1974) The natural course of alcoholic cardiomyopathy. *Ann. intern. Med.*, 80, 293-297
- Denk, H. (1985) *Ethanol Mallory bodies and the microtubular system*. In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 154-171
- Denk, H., Gschnait, F. & Wolff, K. (1975) Hepatocellular hyalin (Mallory bodies) in long term griseofulvin-treated mice: a new experimental model for the study of hyalin formation. *Lab. Invest.*, 32, 773-776
- Desser, H. & Bandion, F. (1985) Evaluation of the changes in concentrations of biogenic amines in wines after certain treatments and during the storage of bottled wine (Ger.). *Mitt. Hoheren Bundeslehr-Versuchsanst. Wein-Obstbau Klosterneuburg*, 35, 16-19
- Dexter, J.D., Tumbleson, M.E., Decker, J.D. & Middleton, C.C. (1980) Fetal alcohol syndrome in Sinclair (S-1) miniature swine. *Alcohol. clin. exp. Res.*, 4, 146-151
- Di Luzio, N.R. & Hartman, A.D. (1967) Role of lipid peroxidation in the pathogenesis of the ethanol-induced fatty liver. *Fed. Proc.*, 26, 1436-1442
- Ding, X., Koop, D.R., Crump, B.L. & Coon, M.J. (1986) Immunochemical identification of cytochrome P-450 isozyme 3a (P-450_{ALC}) in rabbit nasal and kidney microsomes and evidence for differential induction by alcohol. *Mol. Pharmacol.*, 30, 370-378
- Dioguardi, N., Idéo, G., Del Ninno, E. & de Franchis, R. (1970) Induction of liver UDPGT by ethanol. *Lancet*, i, 1063
- DiStefano, R. (1983) Identification of ethyl esters of 2-hydroxyglutaric acid and 2-hydroxyglutaric acid γ -lactone in wines (Ital.). *Vitis*, 22, 220-224
- Dölle, W. (1969) Cobalt-induced heart disease in chronic beer drinkers (Ger.). *Internist*, 10, 29-30
- Drawert, F. & Barton, H. (1973) Critical contribution to the analysis of aflatoxins in wine (Ger.). *Wein Wiss.*, 56, 1247-1250
- Drawert, F. & Barton, H. (1974) Detection of aflatoxin in wine (Ger.). *Z. Lebensmitteluntersuch. Forsch.*, 154, 223-224

- Drawert, F., Leupold, G. & Lessing, V. (1975) *Group separation and gas chromatographic analysis of beer constituents* (Ger.). In: *Proceedings of the 15th European Brewery Convention Congress, Nice*, pp. 791-802
- Drawert, F., Leupold, G. & Lessing, V. (1976) Quantitative gas chromatographic determination of organic acids, neutral substances (carbohydrates) and amino acids in wort and beer (Ger.). *Brauwissenschaft*, 29, 345-353
- Driver, H.E. & McLean, A.E.M. (1986) Dose-response relationships for initiation of rat liver tumours by diethylnitrosamine and promotion by phenobarbitone or alcohol. *Food chem. Toxicol.*, 24, 241-245
- Dunham, L.J., Rabson, A.S., Stewart, H.L., Frank, A.S. & Young, J.L. (1968) Rates, interview, and pathology study of cancer of the urinary bladder in New Orleans, Louisiana. *J. natl Cancer Inst.*, 41, 683-709
- Dupuis, C., Dehaene, P., Deroubaix-Tella, P., Blanc-Garin, A.P., Rey, C. & Carpentier-Courault, C. (1978) Cardiopathies of children born to alcoholic mothers (Fr.). *Arch. Mal. Coeur*, 71, 565-572
- Durbec, J.P., Chevillotte, G., Bidart, J.M., Berthezene, P. & Sarles, H. (1983) Diet, alcohol, tobacco and risk of cancer of the pancreas: a case-control study. *Br. J. Cancer*, 47, 463-470
- Dürr, H.K., Bode, J.C., Giesecking, R., Haase, R., von Arnim, I. & Beckmann, B. (1975) Changes in exocrine function of the parotid gland and pancreas of patients with liver cirrhosis and chronic alcoholism (Ger.). *Verh. Dtsch. Ges. inn. Med.*, 81, 1322-1324
- de Duve, C. & Baudhuin, P. (1966) Peroxisomes (microbodies and related particles). *Physiol. Rev.*, 46, 323-357
- Eastwood, G.L. & Kirchner, J.P. (1974) Changes of the fine structure of mouse gastric epithelium produced by ethanol and urea. *Gastroenterology*, 67, 71-84
- Edwards, G., Chandler, J. & Hensman, C. (1972) Drinking in a London suburb: I. Correlates of normal drinking. *Q. J. Stud. Alcohol, Suppl.* 6, 69-93
- Edwards, G., Gross, M.M., Keller, M., Moser, J. & Room, R., eds (1977) *Alcohol-related Disabilities (WHO Offset Publication No. 32)*, Geneva, World Health Organization
- Edwards, J.A. & Price Evans, D.A. (1967) Ethanol metabolism in subjects possessing typical and atypical liver alcohol dehydrogenase. *Clin. Pharmacol. Ther.*, 8, 824-829
- Edwards, T.L., Singleton, V.L. & Boulton, R. (1985) Formation of ethyl esters of tartaric acid during wine aging: chemical and sensory effects. *Am. J. Enol. Vitic.*, 36, 118-124
- Eisenbrand, G., Spiegelhalder, B. & Preussmann, R. (1981) *Analysis of human biological specimens for nitrosamine contents*. In: Bruce, W.R., Correa, P., Lipkin, M., Tannenbaum, S.R. & Wilkins, T.D., eds, *Gastrointestinal Cancer: Endogenous Factors (Banbury Report 7)*, Cold Spring Harbor, NY, CSH Press, pp. 275-283
- Elliott, C.R., Prasad, J.S., Husby, A.D., Ellingson, R.J., Holtzman, J.L. & Crankshaw, D.L. (1985) Effects of chronic ethanol consumption on male Syrian hamster hepatic microsomal mixed-function oxidases. *Alcohol*, 2, 17-22
- Ellis, F.W., Pick, J.R. & Sawyer, M. (1977) Effects of ethanol administration during pregnancy on fetal development in beagle dogs (Abstract No. 76). *Fed. Proc.*, 36, 285
- Elwood, J.M., Pearson, J.C.G., Skippen, D.H. & Jackson, S.M. (1984) Alcohol, smoking, social and occupational factors in the aetiology of cancer of the oral cavity, pharynx and larynx. *Int. J. Cancer*, 34, 603-612

- Elzay, R.P. (1966) Local effect of alcohol in combination with DMBA on hamster cheek pouch. *J. dent. Res.*, 45, 1788-1795
- Elzay, R.P. (1969) Effect of alcohol and cigarette smoke as promoting agents in hamster pouch carcinogenesis. *J. dent. Res.*, 48, 1200-1205
- Emby, D.J. & Fraser, B.N. (1977) Hepatotoxicity of paracetamol enhanced by ingestion of alcohol. Report of two cases. *S. Afr. med. J.*, 51, 208-209
- Enstrom, J.E. (1975) Cancer mortality among Mormons. *Cancer*, 36, 825-841
- Enstrom, J.E. (1977) Colorectal cancer and beer drinking. *Br. J. Cancer*, 35, 674-683
- Enstrom, J.E. (1978) Cancer and total mortality among active Mormons. *Cancer*, 42, 1943-1951
- Enstrom, J.E. (1980) Cancer mortality among Mormons in California during 1968-75. *J. natl Cancer Inst.*, 65, 1073-1082
- Eriksson, C.J.P. & Deitrich, R.A. (1983) *Metabolic mechanisms in tolerance and physical dependence on alcohol*. In: Kissin, B. & Begleiter, H., eds, *The Pathogenesis of Alcoholism: Biological Factors*, New York, Plenum Press, pp. 253-283
- Ernhart, C.B., Sokol, R.J., Martier, S., Moron, P., Nadler, D., Ager, J.W. & Wolf, A. (1987) Alcohol teratogenicity in the human: a detailed assessment of specificity, critical period, and threshold. *Am. J. Obstet. Gynecol.*, 156, 33-39
- Eschnauer, H. (1967) Trace elements in wine (Ger.). *Z. Lebensmitteluntersuch. Forsch.*, 134, 13-17
- Eschnauer, H. (1982) Trace elements in must and wine: primary and secondary contents. *Am. J. Enol. Vitic.*, 33, 226-230
- Espinet, C. & Argilés, J.M. (1984) Ethanol and acetaldehyde concentrations in the rat foeto-maternal system after an acute ethanol administration given to the mother. *Arch. int. Physiol. Biochim.*, 92, 339-344
- Estival, A., Clemente, F. & Ribet, A. (1981) Ethanol metabolism by the rat pancreas. *Toxicol. appl. Pharmacol.*, 61, 155-165
- Etiévant, P.X. (1981) Volatile phenol determination in wine. *J. agric. Food Chem.*, 29, 65-67
- Farinati, F., Zhou, Z., Bellah, J., Lieber, C.S. & Garro, A.J. (1985) Effect of chronic ethanol consumption on activation of nitrosopyrrolidine to a mutagen by rat upper alimentary tract, lung, and hepatic tissue. *Drug Metab. Disposition*, 13, 210-214
- Fazakas-Todea, I., Checiu, M. & Sandor, S. (1985) The effect of ethanol upon early development in mice and rats. VIII. The effect of chronic consumption of some beverages upon preimplantation development in rats. *Morphol. Embryol.*, 31, 249-256
- Feinman, L., Baraona, E., Matsuzaki, S., Korsten, M. & Lieber, C.S. (1978) Concentration dependence of ethanol metabolism *in vivo* in rats and man. *Alcohol. clin. exp. Res.*, 2, 381-385
- Feldman, J.G. & Boxer, P. (1979) Relationship of drinking to head and neck cancer. *Prev. Med.*, 8, 507-519
- Feldman, J.G., Hazan, M., Nagarajan, M. & Kissin, B. (1975) A case-control investigation of alcohol, tobacco, and diet in head and neck cancer. *Prev. Med.*, 4, 444-463
- Fernandez, K., Caul, W.F., Boyd, J.E., Henderson, G.I. & Michaelis, R.C. (1983) Malformations and growth of rat fetuses exposed to brief periods of alcohol *in utero*. *Teratog. Carcinog. Mutagenesis*, 3, 457-460

- Fillmore, K. & Caetano, R. (1982) *Epidemiology of alcohol abuse and alcoholism in occupations*. In: *Occupational Alcoholism: A Review of Research Issues (National Institute on Alcohol Abuse and Alcoholism Research Monograph No. 8; DHHS Publication No. (ADM) 82-1184)*, Washington DC, US Government Printing Office, pp. 21-88
- Finnish Foundation for Alcohol Studies (1977) *International Statistics on Alcoholic Beverages, Production, Trade and Consumption 1950-1972*, Forssa, Aurasen Kirjapaino, pp. 209-222
- Fisher, S.E., Inselman, L.S., Duffy, L., Atkinson, M., Spencer, H. & Chang, B. (1985) Ethanol and fetal nutrition: effect of chronic ethanol exposure on rat placental growth and membrane-associated folic acid receptor binding activity. *J. pediatr. Gastroenterol. Nutr.*, 4, 645-649
- Fisher, S.E., Duffy, L. & Atkinson, M. (1986) Selective fetal malnutrition: effect of acute and chronic ethanol exposure upon rat placental Na,K-ATPase activity. *Alcohol. clin. exp. Res.*, 10, 150-153
- Flamant, R., Lasserre, O., Lazar, P., Leguerinais, J., Denoix, P. & Schwartz, D. (1964) Differences in sex ratio according to cancer site and possible relationship with use of tobacco and alcohol. Review of 65,000 cases. *J. natl Cancer Inst.*, 32, 1309-1316
- Flanders, W.D. & Rothman, K.J. (1982) Interaction of alcohol and tobacco in laryngeal cancer. *Am. J. Epidemiol.*, 115, 371-379
- Food and Agriculture Organization (1979) *Perspective on Mycotoxins (FAO Food and Nutrition Paper 13)*, Rome, pp. 64-65
- Forney, R.B., Hughes, F.W., Richards, A.B. & Gates, P.W. (1963) Toxicity and depressant action of ethanol and hexobarbital after pretreatment with asparagine. *Toxicol. appl. Pharmacol.*, 5, 790-793
- Forsander, O.A. (1970) Influence of ethanol on the redox state of the liver. *Q. J. Stud. Alcohol*, 31, 550-570
- Forsander, O.A., Räihä, N., Salaspuro, M. & Mäenpää, P. (1965) Influence of ethanol on the liver metabolism of fed and starved rats. *Biochem. J.*, 94, 259-265
- Fournet, B. & Montreuil, J. (1975) Identification and quantification of organic acids in various French beers (Fr.). *Cah. Nutr. Diét.*, 10, 69-71
- Freedman, A. & Shklar, G. (1978) Alcohol and hamster buccal pouch carcinogenesis. *Oral Surg.*, 46, 794-805
- French, S.W. & Burbige, E.J. (1979) *Alcoholic hepatitis: clinical, morphologic, pathogenic and therapeutic aspects*. In: Popper, H. & Shaffner, F., eds, *Progress in Liver Diseases*, Vol. VI, New York, Grune & Stratton, pp. 557-579
- Frey, W.A. & Vallee, B.L. (1980) Digitalis metabolism and human liver alcohol dehydrogenase. *Proc. natl Acad. Sci. USA*, 77, 924-927
- Friedberg, C.K. (1971) Symposium: cardiomyopathy. Introduction. *Circulation*, 44, 935-941
- Friedman, L.A. & Kimball, A.W. (1986) Coronary heart disease mortality and alcohol consumption in Framingham. *Am. J. Epidemiol.*, 124, 481-489
- Fukui, M. & Wakasugi, C. (1972) Liver alcohol dehydrogenase in a Japanese population. *Jpn. J. legal Med.*, 26, 46-51
- Gabrial, G.N., Schrager, T.F. & Newberne, P.M. (1982) Zinc deficiency, alcohol, and a retinoid: association with esophageal cancer in rats. *J. natl Cancer Inst.*, 68, 785-789
- Gallup, G., Jr, Shriber, J., III & McMurray, C. (1985) *Alcohol Use and Abuse in America (Gallup Report No. 242)*, Princeton, NJ, Gallup Poll, p. 68

- Garcia Heras, J., Herrera, J., Lovell, M., Coco, I. & Coco, R. (1982) Induction of sister chromatid exchanges in mouse kidney fibroblasts by medroxyprogesterone acetate. *Medicina*, 42, 255-258
- Garro, A.J., Seitz, H.K. & Lieber, C.S. (1981) Enhancement of dimethylnitrosamine metabolism and activation to a mutagen following chronic ethanol consumption. *Cancer Res.*, 41, 120-124
- Gascon-Barré, M. (1982) Interrelationships between vitamin D₃ and 25-hydroxyvitamin D₃ during chronic ethanol administration in the rat. *Metabolism*, 31, 67-72
- Gascon-Barré, M. & Joly, J.-G. (1981) The biliary excretion of [³H]-25-hydroxyvitamin D₃ following chronic ethanol administration in the rat. *Life Sci.*, 28, 279-286
- Gavaler, J.S. & Van Thiel, D.H. (1987) Reproductive consequences of alcohol abuse: males and females compared and contrasted. *Mutat. Res.*, 186, 269-277
- Geokas, M.C. (1984) Ethanol and the pancreas. *Med. Clin. N.A.*, 68, 57-75
- Gibel, W. (1967) Experimental studies on syncarcinogenesis in oesophageal carcinoma (Ger.). *Arch. Geschwulstforsch.*, 30, 181-189
- Giknis, M.L.A. & Damjanov, I. (1983) The transplacental effects of ethanol and metronidazole in Swiss Webster mice. *Toxicol. Lett.*, 19, 37-42
- Giknis, M.L.A., Damjanov, I. & Rubin, E. (1980) The differential transplacental effects of ethanol in four mouse strains. *Neurobehav. Toxicol.*, 2, 235-237
- Glinsukon, T., Taycharipranai, S. & Toskulkao, C. (1978) Aflatoxin B₁ hepatotoxicity in rats pretreated with ethanol. *Experientia*, 34, 869-870
- Goad, P.T., Hill, D.E., Slikker, W., Jr, Kimmel, C.A. & Gaylor, D.W. (1984) The role of maternal diet in the developmental toxicology of ethanol. *Toxicol. appl. Pharmacol.*, 73, 256-267
- Gold, E.B., Gordis, L., Diener, M.D., Seltser, R., Boitnott, J.K., Bynum, T.E. & Hutcheon, D.F. (1985) Diet and other risk factors for cancer of the pancreas. *Cancer*, 55, 460-467
- Goldstein, G. & Arulanantham, K. (1978) Neural tube defect and renal anomalies in a child with fetal alcohol syndrome. *J. Pediatr.*, 93, 636-637
- Golimowski, J., Valenta, P. & Nürnberg, H.W. (1979a) Toxic trace metals in food. I. A new voltammetric procedure for toxic trace metal control of wines. *Z. Lebensmitteluntersuch. Forsch.*, 168, 353-359
- Golimowski, J., Valenta, P., Stoeppler, M. & Nürnberg, H.W. (1979b) Trace metals in food. II. A comparative study of the levels of toxic trace metals in wine by differential pulse anodic stripping voltammetry and electrothermal atomic absorption spectrometry. *Z. Lebensmitteluntersuch. Forsch.*, 168, 439-443
- Gordon, B.H.J., Baraona, E., Miyakawa, H., Finkelman, F. & Lieber, C.S. (1985) Exaggerated acetaldehyde response after ethanol administration during pregnancy and lactation in rats. *Alcohol. clin. exp. Res.*, 9, 17-22
- Gordon, G.G., Altman, K., Southren, A.L., Rubin, E. & Lieber, C.S. (1976) The effect of alcohol (ethanol) administration on sex-hormone metabolism in normal men. *New Engl. J. Med.*, 295, 793-797
- Gordon, T. & Kannel, W.B. (1984) Drinking and mortality: the Framingham study. *Am. J. Epidemiol.*, 120, 97-107
- Gould, L., Zahir, M., DeMartino, A. & Gomprecht, R.F. (1971) Cardiac effects of a cocktail. *J. Am. med. Assoc.*, 218, 1799-1802
- Graf, U., Würgler, F.E., Katz, A.J., Frei, H., Juon, H., Hall, C.B. & Kale, P.G. (1984) Somatic mutation and recombination test in *Drosophila melanogaster*. *Environ. Mutagenesis*, 6, 153-188

- Graham, S., Schotz, W. & Martino, P. (1972) Alimentary factors in the epidemiology of gastric cancer. *Cancer*, 30, 927-938
- Graham, S., Dayal, H., Rohrer, T., Swanson, M., Sultz, H., Shedd, D. & Fischman, S. (1977) Dentition, diet, tobacco and alcohol in the epidemiology of oral cancer. *J. natl Cancer Inst.*, 59, 1611-1618
- Granerus, G., Svensson, S.-E. & Wetterqvist, H. (1969) Histamine in alcoholic drinks. *Lancet*, i, 1320
- Grant, M. (1985) *Establishing priorities for action*. In: Grant, M., ed., *Alcohol Policies (WHO Regional Publications, European Series No. 18)*, Copenhagen, World Health Organization, pp. 1-8
- Greenfield, N.J., Pietruszko, R., Lin, G. & Lester, D. (1976) The effect of ethanol ingestion on the aldehyde dehydrogenases of rat liver. *Biochim. biophys. Acta*, 428, 627-632
- Greenwald, E.K., Martz, R.C., Harris, B., Brown, D.J., Forney, R.B. & Hughes, F.W. (1968) Ethyl alcohol toxicity in the bat (*Myotis lucifugus*). *Toxicol. appl. Pharmacol.*, 13, 358-362
- Griciute, L. (1981) *Influence of ethyl alcohol on experimental carcinogenesis* (Russ.) (Abstract). In: *Proceedings of the 5th Conference of the Oncologists of Estonian SSR, Latvian SSR and Lithuanian SSR, 26-28 October, Tallin, USSR*, p. 170
- Griciute, L., Castegnaro, M. & Béréziat, J.-C. (1981) Influence of ethyl alcohol on carcinogenesis with *N*-nitrosodimethylamine. *Cancer Lett.*, 13, 345-352
- Griciute, L., Castegnaro, M. & Béréziat, J.-C. (1982) *Influence of ethyl alcohol on the carcinogenic activity of N-nitrosodi-n-propylamine*. In: Bartsch, H., Castegnaro, M., O'Neill, I.K. & Okada, M., eds, *N-Nitroso Compounds: Occurrence and Biological Effects (IARC Scientific Publications No. 41)*, Lyon, International Agency for Research on Cancer, pp. 643-648
- Griciute, L., Castegnaro, M. & Béréziat, J.-C. (1984) *Influence of ethyl alcohol on carcinogenesis induced with N-nitrosodiethylamine*. In: Börzsönyi, M., Day, N.E., Lapis, K. & Yamasaki, H., eds, *Models, Mechanisms and Etiology of Tumour Promotion (IARC Scientific Publications No. 56)*, Lyon, International Agency for Research on Cancer, pp. 413-417
- Griciute, L., Castegnaro, M., Béréziat, J.-C. & Cabral, J.R.P. (1986) Influence of ethyl alcohol on the carcinogenic activity of *N*'-nitrosonornicotine. *Cancer Lett.*, 31, 267-275
- Griciute, L., Castegnaro, M. & Béréziat, J.C. (1987) *Influence of ethyl alcohol on carcinogenesis induced by volatile N-nitrosamines detected in alcoholic beverages*. In: Bartsch, H., O'Neill, I.K. & Schulte-Hermann, R., eds, *Relevance of N-Nitroso Compounds to Human Cancer: Exposures and Mechanisms (IARC Scientific Publications No. 84)*, Lyon, International Agency for Research on Cancer, pp. 264-265
- Grigor, M.R. & Bell, I.C., Jr (1973) Synthesis of fatty acid esters of short-chain alcohol: an acyltransferase in rat liver microsomes. *Biochim. biophys. Acta*, 306, 26-30
- Grunnet, N. (1973) Oxidation of acetaldehyde by rat-liver mitochondria in relation to ethanol oxidation and the transport of reducing equivalents across the mitochondrial membrane. *Eur. J. Biochem.*, 35, 236-243
- Gualandi, G. & Bellincampi, D. (1981) Induced gene mutation and mitotic non-disjunction in *A. nidulans*. *Toxicol. Lett.*, 9, 389-394
- Guerri, C. & Sanchis, R. (1986) Alcohol and acetaldehyde in rat's milk following ethanol administration. *Life Sci.*, 38, 1543-1556
- Guymon, J.F. & Crowell, E.A. (1972) GC-separated brandy components derived from French and American oaks. *Am. J. Enol. Vitic.*, 23, 114-120

- Gwinn, M.L., Webster, L.A., Lee, N.C., Layde, P.M. & Rubin, G.L. (1986) Alcohol consumption and ovarian cancer risk. *Am. J. Epidemiol.*, 123, 759-766
- Habbrick, B.F., Zaleski, W.A., Casey, R. & Murphy, F. (1979) Liver abnormalities in three patients with fetal alcohol syndrome. *Lancet*, i, 580-581
- Habs, M. & Schmähl, D. (1981) Inhibition of the hepatocarcinogenic activity of diethylnitrosamine (DEN) by ethanol in rats. *Hepato-gastroenterology*, 28, 242-244
- Haenszel, W., Kurihara, M., Segi, M. & Lee, R.K.C. (1972) Stomach cancer among Japanese in Hawaii. *J. natl Cancer Inst.*, 49, 969-988
- Haggard, H.W. & Jellinek, E.M. (1942) *Alcohol Explored*, Garden City, NY, Doubleday, Doran & Co., pp. 189-195
- Hahn, H.K.J. & Burch, R.E. (1983) Impaired ethanol metabolism with advancing age. *Alcohol. clin. exp. Res.*, 7, 299-301
- Haines, A.P., Moss, A.R., Whittemore, A. & Quivey, J. (1982) A case-control study of pancreatic carcinoma. *J. Cancer Res. clin. Oncol.*, 103, 93-97
- Hajjar, J.-J., Murphy, D., Tomicic, T. & Scheig, R. (1981) Effect of amino acids and dipeptides on ethanol absorption across the rat intestine. *Pharmacology*, 23, 177-184
- Hakim, J., Feldmann, G., Troube, H., Boucherot, J. & Boivin, P. (1972) Comparative study of bilirubin and *para*-nitrophenol glucuronyl transferase activities. II. Effect of chronic alcohol intoxication in man (Fr.). *Pathol. Biol.*, 20, 277-285
- Hakulinen, T., Lehtimäki, L., Lehtonen, M. & Teppo, L. (1974) Cancer morbidity among two male cohorts with increased alcohol consumption in Finland. *J. natl Cancer Inst.*, 52, 1711-1714
- Halkka, O. & Eriksson, K. (1977) *The effects of chronic ethanol consumption on goniomitosis in the rat*. In: Gross, M.M., ed., *Alcohol Intoxication and Withdrawal*, IIIa, *Biological Aspects of Ethanol*, New York, Plenum Press, pp. 1-6
- Halmesmäki, E., Raivio, K. & Ylikorkala, O. (1985) A possible association between maternal drinking and fetal clubfoot. *New Engl. J. Med.*, 312, 790
- Halsted, C.H., Griggs, R.C. & Harris, J.W. (1967) The effect of alcoholism on the absorption of folic acid (H^3 -PGA) evaluated by plasma levels and urine excretion. *J. Lab. clin. Med.*, 69, 116-131
- Halsted, C.H., Robles, E.A. & Mezey, E. (1973) Distribution of ethanol in the human gastrointestinal tract. *Am. J. clin. Nutr.*, 26, 831-834
- Hamada, H., Toshimitsu, N., Kojima, M. & Morita, T. (1985) Effects of ethanol on the induction of respiration-deficient mutants in yeast by metal ions. *Chem. pharm. Bull.*, 33, 3507-3509
- Hamilton, S.R., Hyland, J., McAvinchey, D., Chaudhry, Y., Hartka, L., Kim, H.T., Cichon, P., Floyd, J., Turjman, N., Kessie, G., Nair, P.P. & Dick, J. (1987a) Effects of chronic dietary beer and ethanol consumption on experimental colonic carcinogenesis by azoxymethane in rats. *Cancer Res.*, 47, 1551-1559
- Hamilton, S.R., Sohn, O.S. & Fiala, E.S. (1987b) Effects of timing and quantity of chronic dietary ethanol consumption on azoxymethane-induced colonic carcinogenesis and azoxymethane metabolism in Fischer 344 rats. *Cancer Res.*, 47, 4305-4311
- Handa, R.J., McGivern, R.F., Noble, E.S. & Gorski, R.A. (1985) Exposure to alcohol *in utero* alters the adult patterns of luteinizing hormone secretion in male and female rats. *Life Sci.*, 37, 1683-1690

- Handler, J.A. & Thurman, R.G. (1987) Rates of H₂O₂ generation from peroxisomal β -oxidation are sufficient to account for fatty acid-stimulated ethanol metabolism in perfused rat liver. *Alcohol*, 4, 131-134
- Hanson, J.W., Streissguth, A.P. & Smith, D.W. (1978) The effects of moderate alcohol consumption during pregnancy on fetal growth and morphogenesis. *J. Pediatr.*, 92, 457-460
- Hardell, L., Bengtsson, N.O., Jonsson, U., Eriksson, S. & Larsson, L.G. (1984) Aetiological aspects on primary liver cancer with special regard to alcohol, organic solvents and acute intermittent porphyria — an epidemiological investigation. *Br. J. Cancer*, 50, 389-397
- Harger, R.N. & Hulpie, H.R. (1956) *The pharmacology of alcohol*. In: Thompson, G.N., ed., *Alcoholism*, Springfield, IL, Charles C. Thomas, pp. 103-232
- Harger, R.N., Hulpie, H.R. & Lamb, E.B. (1937) The speed with which various parts of the body reach equilibrium in the storage of ethyl alcohol. *J. biol. Chem.*, 120, 689-704
- Harlap, S. & Shiono, P.H. (1980) Alcohol, smoking, and incidence of spontaneous abortions in the first and second trimester. *Lancet*, ii, 173-176
- Harrison, B. (1971) *Drink and the Victorians. The Temperance Question in England 1815-1872*, Pittsburgh, University of Pittsburgh Press, p. 132
- Harsanyi, Z., Granek, I.A. & Mackenzie, D.W.R. (1977) Genetic damage induced by ethyl alcohol in *Aspergillus nidulans*. *Mutat. Res.*, 48, 51-74
- Harvey, E.B., Schairer, C., Brinton, L.A., Hoover, R.N. & Fraumeni, J.F., Jr (1987) Alcohol consumption and breast cancer. *J. natl Cancer Inst.*, 78, 657-661
- Hashimoto, S. & Recknagel, R.O. (1968) No chemical evidence of hepatic lipid peroxidation in acute ethanol toxicity. *Exp. mol. Pathol.*, 8, 225-242
- Hasumura, Y., Teschke, R. & Lieber, C.S. (1974) Increased carbon tetrachloride hepatotoxicity, and its mechanism, after chronic ethanol consumption. *Gastroenterology*, 66, 415-422
- Havers, W., Majewski, F., Olbing, H. & Eikenberg, H.-U. (1980) Anomalies of the kidneys and genitourinary tract in alcohol embryopathy. *J. Urol.*, 124, 108-110
- Hawkins, R.D. & Kalant, H. (1972) The metabolism of ethanol and its metabolic effects. *Pharmacol. Rev.*, 24, 67-157
- He, S.-M. & Lambert, B.O. (1985) Induction and persistence of SCE-inducing damage in human lymphocytes exposed to vinyl acetate and acetaldehyde in vitro. *Mutat. Res.*, 158, 201-208
- Hedner, K., Wadstein, J. & Mitelman, F. (1984) Increased sister chromatid exchange frequency in chronic alcohol users. *Hereditas*, 101, 265-266
- ter Heide, R. (1984) *Instrumental analysis of alcoholic beverages*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages (Foundation for Biotechnical and Industrial Fermentation Research 3)*, Helsinki, pp. 149-165
- ter Heide, R. (1986) *The flavour of distilled beverages*. In: Morton, I.D. & MacLeod, A.J., eds, *Food Flavours*, Part B, *The Flavour of Beverages*, Amsterdam, Elsevier, pp. 239-336
- ter Heide, R., de Valois, P.J., Visser, J., Jaegers, P.P. & Timmer, R. (1978) *Concentration and identification of trace constituents in alcoholic beverages*. In: Charalambous, G., ed., *Analysis of Foods and Beverages. Headspace Techniques*, New York, Academic Press, pp. 249-281
- ter Heide, R., Schaap, H., Wobben, H.J., de Valois, P.J. & Timmer, R. (1981) *Flavor constituents in rum*. In: Charalambous, G. & Inglett, G., eds, *The Quality of Foods and Beverages*, Vol. 1, *Chemistry and Technology*, New York, Academic Press, pp. 183-200

- Henderson, G.I., Turner, D., Patwardhan, R.V., Lumeng, L., Hoyumpa, A.M. & Schenker, S. (1981) Inhibition of placental valine uptake after acute and chronic maternal ethanol consumption. *J. Pharmacol. exp. Ther.*, 216, 465-472
- Henefer, E.P. (1966) Ethanol, 30 per cent, and hamster pouch carcinogenesis. *J. dent. Res.*, 45, 838-844
- Herity, B., Moriarty, M., Bourke, G.J. & Daly, L. (1981) A case-control study of head and neck cancer in the Republic of Ireland. *Br. J. Cancer*, 43, 177-182
- Herity, B., Moriarty, M., Daly, L., Dunn, J. & Bourke, G.J. (1982) The role of tobacco and alcohol in the aetiology of lung and larynx cancer. *Br. J. Cancer*, 46, 961-964
- Herrmann, J., Pallister, P.D. & Opitz, J.M. (1980) Tetraectrodactyly and other skeletal manifestations in the fetal alcohol syndrome. *Eur. J. Pediatr.*, 133, 221-226
- Hétu, C., Yelle, L. & Joly, J.-G. (1982) Influence of ethanol on hepatic glutathione content and on the activity of glutathione S-transferases and epoxide hydrase in the rat. *Drug Metab. Disposition*, 10, 246-250
- Heuch, I., Kvåle, G., Jacobsen, B.K. & Bjelke, E. (1983) Use of alcohol, tobacco and coffee, and risk of pancreatic cancer. *Br. J. Cancer*, 48, 637-643
- Heymann, H., Noble, A.C. & Boulton, R.B. (1986) Analysis of methoxypyrazines in wines. 1. Development of a quantitative procedure. *J. agric. Food Chem.*, 34, 268-271
- Hiaring, P.E. (1986) J. Lohr: pioneer in reverse osmosis. *Wines Vines*, 67, 34-36
- Hiatt, R.A. & Bawol, R.D. (1984) Alcoholic beverage consumption and breast cancer incidence. *Am. J. Epidemiol.*, 120, 676-683
- Hiatt, R., Klatsky, A. & Armstrong, M.A. (1987) Heavy alcohol consumption may increase the risk of breast cancer (Abstract No. 3305). *Fed. Proc.*, 46, 883
- Hiatt, R.A., Klatsky, A.L. & Armstrong, M.A. (1988) Alcohol consumption and the risk of breast cancer in a prepaid health plan. *Cancer Res.*, 48, 2284-2287
- Higginson, J. (1966) Etiological factors in gastrointestinal cancer in man. *J. natl Cancer Inst.*, 37, 527-545
- Hill, A. & Wolff, S. (1983) Sister chromatid exchanges and cell division delays induced by diethylstilbestrol, estradiol, and estriol in human lymphocytes. *Cancer Res.*, 43, 4114-4118
- Hill, D.E., Slikker, W., Jr, Goad, P.T., Bailey, J.R., Sziszak, T.J. & Hendrickx, A.G. (1983) Maternal, fetal, and neonatal elimination of ethanol in nonhuman primates. *Dev. Pharmacol. Ther.*, 6, 259-268
- Hinds, M.W., Thomas, D.B. & O'Reilly, H.P. (1979) Asbestos, dental X-rays, tobacco, and alcohol in the epidemiology of laryngeal cancer. *Cancer*, 44, 1114-1120
- Hinds, M.W., Kolonel, L.N., Lee, J. & Hirohata, T. (1980) Associations between cancer incidence and alcohol cigarette consumption among five ethnic groups in Hawaii. *Br. J. Cancer*, 41, 929-940
- Hiramatsu, R. & Furutani, F. (1978) Persistences of sprayed malathion and trichlorfon in grape berries and grape products (Jpn.). *Yamaguchi-ken Nogyo Shikenjo Kenkyu Hokoku*, 30, 37-44 [Chem. Abstr., 89, 192446g]
- Hirayama, T. (1966) An epidemiological study of oral and pharyngeal cancer in Central and Southeast Asia. *Bull. World Health Org.*, 34, 41-69

- Hirayama, T. (1975) *Prospective studies on cancer epidemiology based on census population in Japan*. In: Bucalossi, P., Veronesi, U. & Cascinelli, N., eds, *Proceedings of the XIth International Cancer Congress, Florence 1974*, Vol. 3, *Cancer Epidemiology, Environmental Factors*, Amsterdam, Excerpta Medica, pp. 26-35
- Hirayama, T. (1977) *Changing patterns of cancer in Japan with special reference to the decrease in stomach cancer mortality*. In: Hiatt, H.H., Watson, J.D. & Winsten, J.A., eds, *Origins of Human Cancer*, Book A, *Incidence of Cancer in Humans*, Cold Spring Harbor, NY, CSH Press, pp. 55-75
- Hirayama, T. (1978) *Prospective studies on cancer epidemiology based on census population in Japan*. In: Nieburgs, H.E., ed., *Prevention and Detection of Cancer*, Vol. 1, *Etiology*, New York, Marcel Dekker, pp. 1139-1148
- Hirayama, T. (1979) Diet and cancer. *Nutr. Cancer*, 1, 67-81
- Hirayama, T. (1981) *A large-scale cohort study on the relationship between diet and selected cancers of digestive organs*. In: Bruce, W.R., Correa, P., Lipkin, M., Tannenbaum, S.R. & Wilkins, T.D., eds, *Gastrointestinal Cancer: Endogenous Factors (Banbury Report 7)*, Cold Spring Harbor, NY, CSH Press, pp. 409-429
- Hirayama, T. (1985) *A cohort study on cancer in Japan*. In: Blot, W.J., Hirayama, T. & Hoel, D.G., eds, *Statistical Methods for Cancer Epidemiology*, Hiroshima, Radiation Effects Research Foundation, pp. 73-91
- Ho, B.T., Fritchie, G.E., Idänppää-Heikkilä, J.E. & McIsaac, W.M. (1972) Placental transfer and tissue distribution of ethanol-1-¹⁴C. A radioautographic study in monkeys and hamsters. *Q. J. Stud. Alcohol*, 33, 485-493
- Hoeft, H. & Obe, G. (1983) SCE-inducing congeners in alcoholic beverages. *Mutat. Res.*, 121, 247-251
- Hoerner, M., Behrens, U.J., Worner, T. & Lieber, C.S. (1986) Humoral immune response to acetaldehyde adducts in alcoholic patients. *Res. Commun. chem. Pathol. Pharmacol.*, 54, 3-12
- Hoey, J., Montvernat, C. & Lambert, R. (1981) Wine and tobacco: risk factors for gastric cancer in France. *Am. J. Epidemiol.*, 113, 668-674
- Hohorst, H.J., Kreutz, F.H. & Bücher, T. (1959) On the metabolite concentration of the liver of the rat (Ger.). *Biochem. Z.*, 332, 18-46
- Holmberg, B., Kronevi, T. & Ekner, A. (1986) *Subchronic Toxicity Investigation of Ethyl Alcohol: A Test for Lowest Effective Dose (LED) to be Used in a Long-Term Bioassay for Carcinogenicity* (Arbete och Hälsa Vetenskaplig Skriftserie 14), Solna, Arbetarskyddsstyrelsen
- Holtzman, J.L., Gebhard, R.L., Eckfeldt, J.H., Mottonen, L.R., Finley, D.K. & Eshelman, F.N. (1985) The effects of several weeks of ethanol consumption on ethanol kinetics in normal men and women. *Clin. Pharmacol. Ther.*, 38, 157-163
- Hood, R.D., Lary, J.M. & Blacklock, J.B. (1979) Lack of prenatal effects of maternal ethanol consumption in CD-1 mice. *Toxicol. Lett.*, 4, 79-82
- Hoofdproduktschap voor Akkerbouwprodukten (Central Commodity Board for Arable Products) (1984) *Alcohol. Biomedical and Social Aspects of the Use of Alcoholic Beverages* (Dutch), Amsterdam
- Horak, W., Fuchs, H. & Bäcker, P. (1974a) Analysis of rum (Part I) (Ger.). *Alkohol-Ind.*, 87, 217-218
- Horak, W., Fuchs, H. & Bäcker, P. (1974b) Analysis of rum (Part II) (Ger.). *Alkohol-Ind.*, 87, 245-249
- Horgan, M.M., Sparrow, M.D. & Brazeau, R., eds (1986) *Alcohol Beverage Taxation and Control Policies*, 6th ed., Ottawa, Brewers Association of Canada

- Horie, A., Kohchi, S. & Kuratsune, M. (1965) Carcinogenesis in the esophagus. II. Experimental production of esophageal cancer by administration of ethanolic solution of carcinogens. *Gann*, 56, 429-441
- Horiguchi, T., Suzuki, K., Comas-Urrutia, A.C., Mueller-Heubach, E., Boyer-Milic, A.M., Baratz, R.A., Morishima, H.O., James, L.S. & Adamsons, K. (1971) Effect of ethanol upon uterine activity and fetal acid-base state of the rhesus monkey. *Am. J. Obstet. Gynecol.*, 109, 910-917
- Horn, R.S. & Manthei, R.W. (1965) Ethanol metabolism in chronic protein deficiency. *J. Pharmacol. exp. Ther.*, 147, 385-390
- Horton, A.A. (1971) Induction of aldehyde dehydrogenase in a mitochondrial fraction. *Biochim. biophys. Acta*, 253, 514-517
- Horvat, D., Rozgaj, R., Račić, J., Mimica, M., Čorović, N. & Pavičević, L. (1983) Chromosome damages in chronic alcohol consumers. *Coll. Antropol.*, 7, 71-77
- Howarth, A.E. & Pihl, E. (1985) High-fat diet promotes and causes distal shift of experimental rat colonic cancer — beer and alcohol do not. *Nutr. Cancer*, 6, 229-235
- Hulpie, H.R. & Cole, V.V. (1946) Potentiation of the depressant action of alcohol by adrenalin. *Q. J. Stud. Alcohol*, 7, 89-97
- Hunt, P.A. (1987) Ethanol-induced aneuploidy in male germ cells of the mouse. *Cytogenet. Cell Genet.*, 44, 7-10
- IARC (1974) *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Vol. 7, Some Antithyroid and Related Substances, Nitrofurans and Industrial Chemicals, Lyon
- IARC (1975) *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Vol. 8, Some Aromatic Azo Compounds, Lyon, pp. 257-266
- IARC (1976a) *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Vol. 12, Some Carbamates, Thiocarbamates and Carbazides, Lyon
- IARC (1976b) *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Vol. 10, Some Naturally Occurring Substances, Lyon
- IARC (1976c) *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Vol. 11, Cadmium, Nickel, Some Epoxides, Miscellaneous Industrial Chemicals and General Considerations on Volatile Anaesthetics, Lyon
- IARC (1977a) *IARC Monographs on the Evaluation of Carcinogenic Risk of Chemicals to Man*, Vol. 14, Asbestos, Lyon
- IARC (1977b) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man*, Vol. 15, Some Fumigants, the Herbicides 2,4-D and 2,4,5-T, Chlorinated Dibenzodioxins and Miscellaneous Industrial Chemicals, Lyon
- IARC (1978) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 17, Some N-Nitroso Compounds, Lyon
- IARC (1979a) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 19, Some Monomers, Plastics and Synthetic Elastomers, and Acrolein, Lyon
- IARC (1979b) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 20, Some Halogenated Hydrocarbons, Lyon
- IARC (1980) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 23, Some Metals and Metallic Compounds, Lyon
- IARC (1982a) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 29, Some Industrial Chemicals and Dyestuffs, Lyon

- IARC (1982b) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 27, *Some Aromatic Amines, Anthraquinones and Nitroso Compounds, and Inorganic Fluorides Used in Drinking-water and Dental Preparations*, Lyon
- IARC (1983a) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 31, *Some Food Additives, Feed Additives and Naturally Occurring Substances*, Lyon
- IARC (1983b) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 30, *Miscellaneous Pesticides*, Lyon
- IARC (1983c) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 32, *Polynuclear Aromatic Compounds, Part 1, Environmental and Experimental Data*, Lyon
- IARC (1985) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 36, *Allyl Compounds, Aldehydes, Epoxides and Peroxides*, Lyon
- IARC (1986a) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 38, *Tobacco Smoking*, Lyon
- IARC (1986b) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 39, *Some Chemicals Used in Plastics and Elastomers*, Lyon
- IARC (1986c) *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans*, Vol. 40, *Some Naturally Occurring and Synthetic Food Components, Furocoumarins and Ultraviolet Radiation*, Lyon
- IARC (1987a) *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*, Suppl. 7, *Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1 to 42*, Lyon
- IARC (1987b) *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*, Suppl. 6, *Genetic and Related Effects: An Updating of Selected IARC Monographs from Volumes 1 to 42*, Lyon
- Iber, F.L. (1977) Drug metabolism in heavy consumers of ethyl alcohol. *Clin. Pharmacol. Ther.*, 22, 735-742
- Idéo, G., de Franchis, R., del Ninno, E. & Dioguardi, N. (1971) Ethanol increases liver uridine-diphosphate-glucuronyltransferase. *Experientia*, 27, 24-25
- Igali, S. & Gazso, L. (1980) Mutagenic effect of alcohol and acetaldehyde on *Escherichia coli* (Abstract). *Mutat. Res.*, 209-210
- Ihemelandu, E.C. (1984) Effect of maternal alcohol consumption on pre-and post-natal muscle development of mice. *Growth*, 48, 35-43
- Ijiri, I. (1974) Studies on the relationship between the concentrations of blood acetaldehyde and urinary catecholamine and the symptoms after drinking alcohol (Jpn.). *Jpn. J. Stud. Alcohol*, 9, 35-59
- Ikawa, M., Impraim, C.C., Wang, G. & Yoshida, A. (1983) Isolation and characterization of aldehyde dehydrogenase isozymes from usual and atypical human livers. *J. biol. Chem.*, 258, 6282-6287
- Infante, F., Voirol, M., Brahime-Reteno, O., Raymond, L., Hollenweger, V. & Loizeau, E. (1980a) Alcohol, tobacco and diet in relation to cancers of the liver and cirrhosis: preliminary results (Fr.). *Schweiz. med. Wochenschr.*, 110, 875-876

- Infante, F., Voirol, M., Raymond, L., Hollenweger, V., Conti, M.C. & Loizeau, E. (1980b) *Alcohol, tobacco and nutriments consumption in liver cancer and cirrhosis patients in Geneva*. In: *Alcohol and the Gastrointestinal Tract (Les Colloques de l'INSERM 95)*, Paris, Institut National de Science et de la Recherche Médicale, pp. 53-58
- Inoue, K., Fukunaga, M. & Yamasawa, K. (1980) Correlation between human erythrocyte aldehyde dehydrogenase activity and sensitivity to alcohol. *Pharmacol. Biochem. Behav.*, 13, 295-297
- Interesse, F.S., Lamparelli, F. & Alloggio, V. (1984) Mineral contents of some southern Italian wines. I. Determination of B, Al, Si, Ti, V, Cr, Mn, Fe, Ni, Cu, Zn, Mo, Sn, Pb by inductively coupled plasma atomic emission spectrometry (ICP-AES). *Z. Lebensmitteluntersuch. Forsch.*, 178, 272-278
- Iseri, O.A., Lieber, C.S. & Gottlieb, L.S. (1966) The ultrastructure of fatty liver induced by prolonged ethanol ingestion. *Am. J. Pathol.*, 48, 535-555
- Ishii, K., Nakamura, K., Ozaki, H., Yamada, N. & Takeuchi, T. (1968) Epidemiology of pancreatic cancer (Jpn.). *Jpn. J. clin. Med.*, 26, 1839-1842
- Ishii, K., Takeuchi, T. & Hirayama, T. (1973) Chronic calcifying pancreatitis and pancreatic carcinoma in Japan. *Digestion*, 9, 429-437
- Israel, Y., Valenzuela, J.E., Salazar, I. & Ugarte, G. (1969) Alcohol and amino acid transport in the human small intestine. *J. Nutr.*, 98, 222-224
- Israel, Y., Videla, L. & Bernstein, J. (1975) Liver hypermetabolic state after chronic alcohol consumption: hormonal interrelations and pathogenic implications. *Fed. Proc.*, 34, 2052-2059
- Jackson, C. & Jackson, C.L. (1941) Cancer of the larynx. Its increasing incidence. *Arch. Otolaryngol.*, 33, 45-65
- Jackson, M. (1982) *The World Guide to Beer*, London, New Burlington Books
- Jacobsen, E. (1952) The metabolism of ethyl alcohol. *Pharmacol. Rev.*, 4, 107-135
- James, D.A. & Smith, D.M. (1982) Analysis of results from a collaborative study of the dominant lethal assay. *Mutat. Res.*, 97, 303-314
- Jansson, T. (1982) The frequency of sister chromatid exchanges in human lymphocytes treated with ethanol and acetaldehyde. *Hereditas*, 97, 301-303
- Jedrychowski, W., Wahrendorf, J., Popiela, T. & Rachtan, J. (1986) A case-control study of dietary factors and stomach cancer risk in Poland. *Int. J. Cancer*, 37, 837-842
- Jellinek, E.M. (1954) *International experience with the problem of alcoholism*. In: *Proceedings of a Meeting of Expert Committees on Mental Health and Alcohol, 27 Sept-2 Oct 1954, Geneva, Switzerland (WHO/MENT/587; WHO/APD/ALC/12)*, Geneva, World Health Organization, pp. 1-28
- Jenkins, W.J. & Peters, T.J. (1980) Selectively reduced hepatic acetaldehyde dehydrogenase in alcoholics. *Lancet*, i, 628-629
- Jenkins, W.J., Cakebread, K. & Palmer, K.R. (1984) Effect of alcohol consumption on hepatic aldehyde dehydrogenase activity in alcoholic patients. *Lancet*, i, 1048-1049
- Jensen, O.M. (1979) Cancer morbidity and causes of death among Danish brewery workers. *Int. J. Cancer*, 23, 454-463
- Jensen, O.M. (1980) *Cancer Morbidity and Causes of Death Among Danish Brewery Workers*, Lyon, International Agency for Research on Cancer
- Jensen, O.M. (1983) Cancer risk among Danish male Seventh-day Adventists and other temperance society members. *J. natl Cancer Inst.*, 70, 1011-1014

- Jensen, O.M., Tuyns, A.J. & Péquignot, G. (1978) Usefulness of population controls in retrospective studies of alcohol consumption. Experience from a case-control study of esophageal cancer in Ille-et-Vilaine, France. *Q. J. Stud. Alcohol*, 39, 175-182
- Jensen, O.M., Wahrendorf, J., Rosenqvist, A. & Geser, A. (1984) The reliability of questionnaire-derived historical dietary information and temporal stability of food habits in individuals. *Am. J. Epidemiol.*, 120, 281-290
- Johansson, I. & Ingelman-Sundberg, M. (1985) Carbon tetrachloride-induced lipid peroxidation dependent on an ethanol-inducible form of rabbit liver microsomal cytochrome P-450. *FEBS Lett.*, 183, 265-269
- Johnson, H. (1985) *The World Atlas of Wine*, 3rd ed., London, Mitchell Beazley International
- Joly, J.-G., Ishii, H., Teschke, R., Hasumura, Y. & Lieber, C.S. (1973) Effect of chronic ethanol feeding on the activities and submicrosomal distribution of reduced nicotinamide adenine dinucleotide phosphate-cytochrome P-450 reductase and the demethylases for aminopyrine and ethylmorphine. *Biochem. Pharmacol.*, 22, 1532-1535
- Jones, K.L. & Smith, D.W. (1973) Recognition of the fetal alcohol syndrome in early infancy. *Lancet*, ii, 999-1001
- Jones, K.L. & Smith, D.W. (1975) The fetal alcohol syndrome. *Teratology*, 12, 1-10
- Jones, W.L. & Stewart, D.B. (1984) Effects of orally-administered ethanol on mammary gland morphology and functional efficiency in lactating rats. *Exp. Pathol.*, 25, 205-213
- Jounela-Eriksson, P. & Lehtonen, M. (1981) *Phenols in the aroma of distilled beverages*. In: Charalambous, G. & Inglett, G., eds, *The Quality of Foods and Beverages*, Vol. 1, *Chemistry and Technology*, New York, Academic Press, pp. 167-181
- Jouret, C. & Puech, J.L. (1975) The importance of lignin in the maturing of rum (Fr.). *Ann. Technol. agric.*, 24, 325-333
- Kabat, G.C., Howson, C.P. & Wynder, E.L. (1986) Beer consumption and rectal cancer. *Int. J. Epidemiol.*, 15, 494-501
- Käfer, E. (1984) Disruptive effects of ethyl alcohol on mitotic chromosome segregation in diploid and haploid strains of *Aspergillus nidulans*. *Mutat. Res.*, 135, 53-75
- Kahn, A.J. (1968) Effect of ethanol exposure during embryogenesis and the neonatal period on the incidence of hepatoma in C3H male mice. *Growth*, 32, 311-316
- Kahn, J.H. & Conner, H.A. (1972) Rapid gas-liquid chromatographic determination of phenethyl alcohol in alcoholic distillates. *J. Assoc. off. anal. Chem.*, 55, 1155-1158
- Kahn, J.H., LaRoe, E.G. & Conner, H.A. (1968) Whiskey composition: identification of components by single-pass gas chromatography-mass spectrometry. *J. Food Sci.*, 33, 395-400
- Kalant, H. (1971) *Absorption, diffusion, distribution, and elimination of ethanol: effects on biological membranes*. In: Kissin, K. & Begleiter, H., eds, *The Biology of Alcoholism*, Vol. 1, *Biochemistry*, New York, Plenum Press, pp. 1-62
- Kaminski, M., Rumeau-Rouquette, C. & Schwartz, D. (1976) Alcohol consumption among pregnant women and pregnancy outcome (Fr.). *Rev. Epidémiol. Santé publique*, 24, 27-40
- Kaminski, M., Franc, M., Lebouvier, M., du Mazaubrun, C. & Rumeau-Rouquette, C. (1981) Moderate alcohol use and pregnancy outcome. *Neurobehav. Toxicol. Teratol.*, 3, 173-181
- Kanagasundaram, N. & Leevy, C.M. (1981) *Ethanol, immune reactions and the digestive system*. In: Leevy, C.M., ed., *Clinics in Gastroenterology*, Vol. 10, *Alcohol in the GI Tract*, London, W.B. Saunders, pp. 295-306

- Kater, R.M.H., Carulli, N. & Iber, F.L. (1969) Differences in the rate of ethanol metabolism in recently drinking alcoholic and nondrinking subjects. *Am. J. clin. Nutr.*, 22, 1608-1617
- Katsouyanni, K., Trichopoulos, D., Boyle, P., Xirouchaki, E., Trichopoulou, A., Lisseos, B., Vasilaros, S. & MacMahon, B. (1986) Diet and breast cancer: a case-control study in Greece. *Int. J. Cancer*, 38, 815-820
- Katz, D., Pitchumoni, C.S., Thomas, E. & Antonelle, M. (1976) The endoscopic diagnosis of upper-gastrointestinal hemorrhage. Changing concepts of etiology and management. *Dig. Dis.*, 21, 182-189
- Kaufman, M.H. (1983) Ethanol-induced chromosomal abnormalities at conception. *Nature*, 302, 258-260
- Kaufman, M.H. & Bain, I.M. (1984a) Influence of ethanol on chromosome segregation during the first and second meiotic divisions in the mouse egg. *J. exp. Zool.*, 230, 315-320
- Kaufman, M.H. & Bain, I.M. (1984b) The development potential of ethanol-induced monosomic and trisomic conceptuses in the mouse. *J. exp. Zool.*, 231, 149-155
- Keiding, S., Christensen, N.J., Damgaard, S.E., Dejgård, A., Iversen, H.L., Jacobsen, A., Johansen, S., Lundquist, F., Rubinstein, E. & Winkler, K. (1983) Ethanol metabolism in heavy drinkers after massive and moderate alcohol intake. *Biochem. Pharmacol.*, 32, 3097-3102
- Keilin, D. & Hartree, E.F. (1936) Coupled oxidation of alcohol. *Proc. R. Soc. Med. (Lond.)*, 119, 141-159
- Keilin, D. & Hartree, E.F. (1945) Properties of catalase. Catalysis of coupled oxidation of alcohols. *Biochem. J.*, 39, 293-301
- Keller, A.Z. (1977) Alcohol, tobacco and age factors in the relative frequency of cancer among males with and without liver cirrhosis. *Am. J. Epidemiol.*, 106, 194-202
- Keller, A.Z. & Terris, M. (1965) The association of alcohol and tobacco with cancer of the mouth and pharynx. *Am. J. publ. Health*, 55, 1578-1585
- Kennaway, E.L. & Kennaway, N.M. (1947) A further study of the incidence of cancer of the lung and larynx. *Br. J. Cancer*, 1, 260-298
- Keppen, L.D., Pysher, T. & Rennert, O.M. (1985) Zinc deficiency acts as a co-teratogen with alcohol in fetal alcohol syndrome. *Pediatr. Res.*, 19, 944-947
- Kesäniemi, Y.A. & Sippel, H.W. (1975) Placental and foetal metabolism of acetaldehyde in rat. I. Contents of ethanol and acetaldehyde in placenta and foetus of the pregnant rat during ethanol oxidation. *Acta pharmacol. toxicol.*, 37, 43-48
- Ketcham, A.S., Wexler, H. & Mantel, N. (1963) Effects of alcohol in mouse neoplasia. *Cancer Res.*, 23, 667-670
- Khanna, J.M. & Israel, Y. (1980) *Ethanol metabolism*. In: Javitt, N.B., ed., *International Review of Physiology*, I, *Liver and Biliary Tract Physiology*, Vol. 21, Baltimore, MD, University Park Press, pp. 275-315
- Kieffer, J.D. & Ketchel, M.M. (1970) Blockade of ovulation in the rat by ethanol. *Acta endocrinol.*, 65, 117-124
- Kieninger, H., Hums, N. & Tavera, M. (1976) Separation and quantitative determination of purines and pyrimidines in wort and beer. Part 1 (Ger.). *Brauwissenschaft*, 29, 71-75

- Kiessling, K.H. (1962) The occurrence of acetaldehyde in various parts of the rat brain after alcohol injection, and its effect on the pyruvate oxidation. *Exp. Cell Res.*, 27, 367-368
- Kikugawa, K., Kato, T. & Hayatsu, H. (1985) Screening of mutagenicity of processed foods by the use of blue cotton (Jpn.). *J. Food Hyg. Soc. (Jpn.)*, 26, 432-436
- Kimura, E.T., Ebert, D.M. & Dodge, P.W. (1971) Acute toxicity and limits of solvent residue for sixteen organic solvents. *Toxicol. appl. Pharmacol.*, 19, 699-704
- Kirchner, J.A. & Malkin, J.S. (1953) Cancer of the larynx. Thirty-year survey at New Haven Hospital. *Arch. Otolaryngol.*, 58, 19-30
- Klassen, R.W. & Persaud, T.V.N. (1976) Experimental studies on the influence of male alcoholism on pregnancy and progeny. *Exp. Pathol.*, 12, 38-45
- Klassen, R.W. & Persaud, T.V.N. (1978) Influence of alcohol on the reproductive system of the male rat. *Int. J. Fertil.*, 23, 176-184
- Klatsky, A.L., Friedman, G.D. & Siegelaub, A.B. (1981) Alcohol and mortality: a ten-year Kaiser-Permanente experience. *Ann. intern. Méd.*, 95, 139-145
- Klein, D. (1981) Nitrosamines in beers and whiskies (Fr.). *Méd. Nutr.*, 17, 293-300, 303
- Kline, J., Shrout, P., Stein, Z., Susser, M. & Warburton, D. (1980) Drinking during pregnancy and spontaneous abortion. *Lancet*, ii, 176-180
- Knupfer, G. & Room, R. (1964) Age, sex and social class as factors in amount of drinking in a metropolitan community. *Soc. Probl.*, 12, 224-240
- Kodama, T. & Mori, W. (1983a) Morphological behavior of carcinoma of the pancreas. 1. Histological classification and electron microscopical observation. *Acta pathol. jpn.*, 33, 467-481
- Kodama, T. & Mori, W. (1983b) Morphological lesions of the pancreatic ducts. Significance of pyloric gland metaplasia in carcinogenesis of exocrine and endocrine pancreas. *Acta pathol. jpn.*, 33, 645-660
- Kohila, T., Eriksson, K. & Halkka, O. (1976) Goniomitosis in rats subjected to ethanol. *Med. Biol.*, 54, 150-151
- Koike, K., Hashimoto, N., Kitami, H. & Okada, K. (1972) Flash exchange gas chromatography of volatile amines in beer. *Rep. Res. Lab. Kirin Brew.*, 15, 25-29
- Koivula, T. & Lindros, K.O. (1975) Effects of long-term ethanol treatment on aldehyde and alcohol dehydrogenase activities in rat liver. *Biochem. Pharmacol.*, 24, 1937-1942
- Königstein, M., Larisch, M. & Obe, G. (1984) Mutagenicity of antiepileptic drugs. I. Carbamazepine and some of its metabolites. *Mutat. Res.*, 139, 83-86
- Konishi, N., Kitahori, Y., Shimoyama, T., Takahashi, M. & Hiasa, Y. (1986) Effects of sodium chloride and alcohol on experimental esophageal carcinogenesis induced by *N*-nitrosopiperidine in rats. *Jpn. J. Cancer Res. (Gann)*, 77, 446-451
- Kono, S., Ikeda, M., Ogata, M., Tokudome, S., Nishizumi, M. & Kuratsune, M. (1983) The relationship between alcohol and mortality among Japanese physicians. *Int. J. Epidemiol.*, 12, 437-441
- Kono, S., Ikeda, M., Tokudome, S., Yoshimura, T., Nishizumi, M. & Kuratsune, M. (1985) Alcohol and cancer in male Japanese physicians. *J. Cancer Res. clin. Oncol.*, 109, 82-85
- Kono, S., Ikeda, M., Tokudome, S., Nishizumi, M. & Kuratsune, M. (1986) Alcohol and mortality: a cohort study of male Japanese physicians. *Int. J. Epidemiol.*, 15, 527-532

- Koop, D.R. & Casazza, J.P. (1985) Identification of ethanol-inducible P-450 isozyme 3a as the acetone and acetol monooxygenase of rabbit microsomes. *J. biol. Chem.*, 260, 13607-13612
- Koop, D.R., Morgan, E.T., Tarr, G.E. & Coon, M.J. (1982) Purification and characterization of a unique isozyme of cytochrome P-450 from liver microsomes of ethanol-treated rabbits. *J. biol. Chem.*, 257, 8472-8480
- Kopun, M. & Propping, P. (1977) The kinetics of ethanol absorption and elimination in twins and supplementary repetitive experiments in singleton subjects. *Eur. J. clin. Pharmacol.*, 11, 337-344
- Korsten, M.A., Matsuzaki, S., Feinman, L. & Lieber, C.S. (1975) High blood acetaldehyde levels after ethanol administration. Difference between alcoholic and nonalcoholic subjects. *New Engl. J. Med.*, 292, 386-389
- Korte, A. & Obe, G. (1981) Influence of chronic ethanol uptake and acute acetaldehyde treatment on the chromosomes of bone-marrow cells and peripheral lymphocytes of Chinese hamsters. *Mutat. Res.*, 88, 389-395
- Korte, A., Slacik-Erben, R. & Obe, G. (1979) The influence of ethanol treatment on cytogenetic effects in bone marrow cells of Chinese hamsters by cyclophosphamide, aflatoxin B₁ and patulin. *Toxicology*, 12, 53-61
- Korte, A., Wagner, H.M. & Obe, G. (1981) Simultaneous exposure of Chinese hamsters to ethanol and cigarette smoke: cytogenetic aspects. *Toxicology*, 20, 237-246
- Kortteinen, T. (1986) Utilization of agricultural produce in the production of alcohol — world trends 1961-1983. *Contemp. Drug Probl.*, 12, 679-706
- Kozachuk, S.Y. & Baril'yak, I.R. (1982) Ultrastructure and histochemical characteristics of embryonic hepatocytes under the action of ethanol (Russ.). *Tsitol. Genet.*, 16, 59-68
- Krebs, C. (1928) Experimental alcoholic tumours in white mice (Ger.). *Z. Immunol.-Forsch. exp. Ther.*, 59, 203-218
- Krebs, H.A., Freedland, R.A., Hems, R. & Stubbs, M. (1969) Inhibition of hepatic gluconeogenesis by ethanol. *Biochem. J.*, 112, 117-124
- Krikun, G. & Cederbaum, A.I. (1984) Stereochemical studies on the cytochrome P-450 and hydroxyl radical dependent pathways of 2-butanol oxidation by microsomes from chow-fed, phenobarbital-treated, and ethanol-treated rats. *Biochemistry*, 23, 5489-5494
- Krogh, P., Hald, B., Gjertsen, P. & Myken, F. (1974) Fate of ochratoxin A and citrinin during malting and brewing experiments. *Appl. Microbiol.*, 28, 31-34
- Kronick, J.B. (1976) Teratogenic effects of ethyl alcohol administered to pregnant mice. *Am. J. Obstet. Gynecol.*, 124, 676-680
- Krueger, W.A., Bo, W.J. & Rudeen, P.K. (1982) Female reproduction during chronic ethanol consumption in rats. *Pharmacol. Biochem. Behav.*, 17, 629-631
- Kucherla, K., Taneja, N. & Mohan, D. (1986) Chromosomal aberrations and sister chromatid exchanges in chronic male alcoholics. *Indian J. med. Res.*, 83, 417-421
- Kune, S., Kune, G.A. & Watson, L.F. (1987a) Case-control study of alcoholic beverages as etiological factors: the Melbourne Colorectal Cancer Study. *Nutr. Cancer*, 9, 43-56
- Kune, S., Kune, G.A. & Watson, L.F. (1987b) Observation on the reliability and validity of the design and diet history method in the Melbourne Colorectal Cancer Study. *Nutr. Cancer*, 9, 5-20

- Kuratsune, M., Kohchi, S., Horie, A. & Nishizumi, M. (1971) Test of alcoholic beverages and ethanol solutions for carcinogenicity and tumor-promoting activity. *Gann*, 62, 395-405
- Kuwano, A. & Kajii, T. (1987) Synergistic effect of aphidicolin and ethanol on the induction of common fragile sites. *Hum. Genet.*, 75, 75-78
- Kvåle, G., Bjelke, E. & Gart, J.J. (1983) Dietary habits and lung cancer risk. *Int. J. Cancer*, 31, 397-405
- Kvlland, I. (1983) The mutagenic effect in bacteriophage T4D of a hair dye, 1,4-diaminoanthra-quinone, and of two solvents, dimethylsulfoxide and ethanol. *Hereditas*, 99, 209-213
- Kyllerman, M., Aronson, M., Sabel, K.-G., Karlberg, E., Sandin, B. & Olegård, R. (1985) Children of alcoholic mothers. Growth and motor performance compared to matched controls. *Acta paediatr. scand.*, 74, 20-26
- Lafond, J.S., Fouron, J.-C., Bard, H. & Ducharme, G. (1985) Effects of maternal alcohol intoxication on fetal circulation and myocardial function: an experimental study in the ovine fetus. *J. Pediatr.*, 107, 947-950
- Lam, K.C., Yu, M.C., Leung, J.W.C. & Henderson, B.E. (1982) Hepatitis B virus and cigarette smoking: risk factors for hepatocellular carcinoma in Hong Kong. *Cancer Res.*, 42, 5246-5248
- Lambert, B., Chen, Y., He, S.M. & Sten, M. (1985) DNA cross-links in human leucocytes treated with vinyl acetate and acetaldehyde in vitro. *Mutat. Res.*, 146, 301-303
- Lamboeuf, Y., de Saint Blanquat, G. & Derache, R. (1981) Mucosal alcohol dehydrogenase- and aldehyde dehydrogenase-mediated ethanol oxidation in the digestive tract of the rat. *Biochem. Pharmacol.*, 30, 542-545
- Lamy, L. (1910) Statistical clinical study of 134 cases of cancer of the oesophagus and cardia (Fr.). *Arch. Mal. Appar. digest.*, 4, 451-475
- Lane, B.P. & Lieber, C.S. (1966) Ultrastructural alterations in human hepatocytes following ingestion of ethanol with adequate diets. *Am. J. Pathol.*, 49, 593-603
- Lange, L.G. (1982) Nonoxidative ethanol metabolism: formation of fatty acid ethyl esters by cholesterol esterase. *Proc. natl Acad. Sci. USA*, 79, 3954-3957
- Laposata, E.A. & Lange, L.G. (1986) Presence of nonoxidative ethanol metabolism in human organs commonly damaged by ethanol abuse. *Science*, 231, 497-499
- Laser, H. (1955) Peroxidatic activity of catalase. *Biochem. J.*, 61, 122-127
- Lasker, J.M., Ardies, C.M., Bloswick, B.P. & Lieber, C.S. (1986a) Immunochemical evidence for an ethanol-inducible form of liver microsomal cytochrome P-450 in rodents and primates (Abstract No. 1077). *Fed. Proc.*, 45, 1665
- Lasker, J.M., Bloswick, B.P., Ardies, C.M. & Lieber, C.S. (1986b) Evidence for an ethanol-inducible form of liver microsomal cytochrome P-450 in humans (Abstract No. 13). *Hepatology*, 6, 1108
- Lasker, J.M., Raucy, J., Kubota, S., Bloswick, B.P., Black, M. & Lieber, C.S. (1987) Purification and characterization of human liver cytochrome P-450-ALC. *Biochem. biophys. Res. Commun.*, 148, 232-238
- Lasne, C., Gu, Z.W., Venegas, W. & Chouroulinkov, I. (1984) The in vitro micronucleus assay for detection of cytogenetic effects induced by mutagen-carcinogens: comparison with the in vitro sister-chromatid exchange assay. *Mutat. Res.*, 130, 273-282
- Lasserre, O., Flamant, R., Lellouch, J. & Schwartz, D. (1967) Alcohol and cancer (Study of geographical pathology in French departments) (Fr.). *Bull. INSERM*, 22, 53-60
- Lau, V.K. & Lindsay, R.C. (1972) Quantification of monocarbonyl compounds in staling beer. *Tech. Q. Master Brew. Assoc. Am.*, 9, XVII-XVIII

- La Vecchia, C., Decarli, A., Franceschi, S., Pampallona, S. & Tognoni, G. (1985) Alcohol consumption and the risk of breast cancer in women. *J. natl Cancer Inst.*, 75, 61-65
- Lê, M.G., Hill, C., Kramar, A. & Flamant, R. (1984) Alcohol beverage consumption and breast cancer in a French case-control study. *Am. J. Epidemiol.*, 120, 350-357
- Lê, M.G., Moulton, L.H., Hill, C. & Kramar, A. (1986) Consumption of dairy produce and alcohol in a case-control study of breast cancer. *J. natl Cancer Inst.*, 77, 633-636
- Lebsack, M.E., Gordon, E.R. & Lieber, C.S. (1981) The effect of chronic ethanol consumption on aldehyde dehydrogenase activity in the baboon. *Biochem. Pharmacol.*, 30, 2273-2277
- Lee, J.S.K. & Fong, L.Y.Y. (1979) Mutagenicity of Chinese alcoholic spirits. *Food Cosmet. Toxicol.*, 17, 575-578
- Lee, M. (1985) Potentiation of chemically induced cleft palate by ethanol ingestion during gestation in the mouse. *Teratog. Carcinog. Mutagenesis*, 5, 433-440
- Lee, M. & Leichter, J. (1983) Skeletal development in fetuses of rats consuming alcohol during gestation. *Growth*, 47, 254-262
- van Leeuwen, F.E., de Vet, H.C.W., Hayes, R.B., van Staveren, W.A., West, C.E. & Hautvast, J.G.A.J. (1983) An assessment of the relative validity of retrospective interviewing for measuring dietary intake. *Am. J. Epidemiol.*, 118, 752-758
- Lehtonen, M. (1973) Detection of aflatoxins in wines. *Chem. mikrobiol. Technol. Lebensm.*, 2, 161-164
- Lehtonen, M. (1983) High performance liquid chromatography determination of nonvolatile phenolic compounds in matured distilled alcoholic beverages. *J. Assoc. off. anal. Chem.*, 66, 71-78
- Lehtonen, M. & Suomalainen, H. (1979) The analytical profile of some whisky brand. *Process Biochem.*, 14, 5-6, 8-9, 26
- Lehtonen, P. (1984) *Liquid chromatographic determination of phenolic aldehydes from distilled alcoholic beverages*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 121-130
- Lehtonen, P. (1986) Isolation and HPLC determination of amines in wine. *Z. Lebensmitteluntersuch. Forsch.*, 183, 177-181
- Leichter, J. & Lee, M. (1979) Effect of maternal ethanol administration on physical growth of the offspring in rats. *Growth*, 43, 288-297
- Lelbach, W.K. (1975) Cirrhosis in the alcoholic and its relation to the volume of alcohol abuse. *Ann. N. Y. Acad. Sci.*, 252, 85-105
- Leloir, L.F. & Muñoz, J.M. (1938) Ethyl alcohol metabolism in animal tissues. *Biochem. J.*, 32, 299-307
- Lemon, F.R., Walden, R.T. & Woods, R.W. (1964) Cancer of the lung and mouth in Seventh-day Adventists. Preliminary report on a population study. *Cancer*, 17, 486-497
- Lemperle, E., Kerner, E. & Heizmann, R. (1975) Study of aflatoxin content of wines (Ger.). *Wein Wiss.*, 30, 82-86
- Leo, M.A. & Lieber, C.S. (1983) Hepatic fibrosis after long-term administration of ethanol and moderate vitamin A supplementation in the rat. *Hepatology*, 3, 1-11
- Leo, M.A., Lowe, N. & Lieber, C.S. (1987) Potentiation of ethanol-induced hepatic vitamin A depletion by phenobarbital and butylated hydroxytoluene. *J. Nutr.*, 117, 70-76

- Leppänen, O. & Ronkainen, P. (1982) A sensitive method for the determination of nitrosamines in alcoholic beverages. *Chromatographia*, 16, 219-223
- Leppänen, O., Ronkainen, P., Koivisto, T. & Denslow, J. (1979) A semi-automatic method for the gas chromatographic determination of vicinal diketones in alcoholic beverages. *J. Inst. Brew.*, 85, 278-281
- Lester, D. & Keokosky, W.Z. (1967) Alcohol metabolism in the horse. *Life Sci.*, 6, 2313-2319
- Li, T.-K. & Magnes, L.J. (1975) Identification of a distinctive molecular form of alcohol dehydrogenase in human livers with high activity. *Biochem. biophys. Res. Commun.*, 63, 202-208
- Li, T.-K., Bosron, W.F., Dafeldecker, W.P., Lange, L.G. & Vallee, B.L. (1977) Isolation of II-alcohol dehydrogenase of human liver: is it a determinant of alcoholism? *Proc. natl Acad. Sci. USA*, 74, 4378-4381
- Liddle, P.A.P. & Bossard, A. (1984) *The analysis of anethole and anethole-flavoured beverages by gas chromatography*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 99-109
- Liddle, P.A.P. & Bossard, A. (1985) *Volatile naturally-occurring restricted compounds derived from flavourings, and their determination in foods and beverages*. In: Adda, J., ed., *Progress in Food Flavour Research*, Amsterdam, Elsevier, pp. 467-476
- Lieber, C.S. (1970) New pathway of ethanol metabolism in the liver. *Gastroenterology*, 59, 930-937
- Lieber, C.S. (1982) *Medical Disorders of Alcoholism, Pathogenesis and Treatment*, Philadelphia, PA, W.B. Saunders
- Lieber, C.S. (1983) *Ethanol metabolism and toxicity*. In: Hodgson, E., Bend, J.R. & Philpot, R.M., eds, *Reviews in Biochemical Toxicology*, Vol. 5, New York, Elsevier, pp. 267-311
- Lieber, C.S. (1984a) *Metabolism and metabolic effects of alcohol*. In: Geokas, M.C., ed, *The Medical Clinics of North America*, Vol. 68, *Symposium on Ethyl Alcohol and Disease*, Philadelphia, W.B. Saunders, pp. 3-31
- Lieber, C.S. (1984b) Alcohol and the liver: 1984 update. *Hepatology*, 4, 1243-1260
- Lieber, C.S. (1985a) *Ethanol metabolism and pathophysiology of alcoholic liver disease*. In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 19-47
- Lieber, C.S. (1985b) Alcohol and the liver: metabolism of ethanol, metabolic effects and pathogenesis of injury. *Acta med. scand., Suppl.* 703, 11-55
- Lieber, C.S. & Davidson, C.S. (1962) Some metabolic effects of ethyl alcohol. *Am. J. Med.*, 33, 319-327
- Lieber, C.S. & DeCarli, L.M. (1968) Ethanol oxidation by hepatic microsomes: adaptive increase after ethanol feeding. *Science*, 162, 917-918
- Lieber, C.S. & DeCarli, L.M. (1970) Hepatic microsomal ethanol-oxidizing system: in vitro characteristics and adaptive properties *in vivo*. *J. biol. Chem.*, 245, 2505-2512
- Lieber, C.S. & DeCarli, L.M. (1972) The role of the hepatic microsomal ethanol oxidizing system (MEOS) for ethanol metabolism *in vivo*. *J. Pharmacol. exp. Ther.*, 181, 279-287
- Lieber, C.S. & DeCarli, L.M. (1974) An experimental model of alcohol feeding and liver injury in the baboon. *J. med. Primatol.*, 3, 153-163

- Lieber, C.S. & Schmid, R. (1961) The effect of ethanol on fatty acid metabolism: stimulation of hepatic fatty acid synthesis *in vitro*. *J. clin. Invest.*, 40, 394-399
- Lieber, C.S., Jones, D.P., Mendelson, J. & DeCarli, L.M. (1963) Fatty liver, hyperlipemia and hyperuricemia produced by prolonged alcohol consumption, despite adequate dietary intake. *Trans. Assoc. Am. Phys.*, 76, 289-300
- Lieber, C.S., DeCarli, L.M. & Rubin, E. (1975) Sequential production of fatty liver, hepatitis, and cirrhosis in sub-human primates fed ethanol with adequate diets. *Proc. natl Acad. Sci. USA*, 72, 437-441
- Lieber, C.S., Leo, M.A., Mak, K.M., DeCarli, L.M. & Sato, S. (1985) Choline fails to prevent liver fibrosis in ethanol-fed baboons but causes toxicity. *Hepatology*, 5, 561-572
- Lieber, C.S., Baraona, E., Leo, M.A. & Garro, A. (1987) Metabolism and metabolic effects of ethanol, including interaction with drugs, carcinogens and nutrition. *Mutat. Res.*, 186, 201-234
- Lieberman, F.L. (1963) The effect of liver disease on the rate of ethanol metabolism in man. *Gastroenterology*, 44, 261-266
- Liebich, H.M., König, W.A. & Bayer, E. (1970) Analysis of the flavor of rum by gas-liquid chromatography and mass spectrometry. *J. chromatogr. Sci.*, 8, 527-533
- Lin, J.-Y. & Tai, M.-W. (1980) Mutagenicity of Chinese wine treated with nitrite. *Food Cosmet. Toxicol.*, 18, 241-243
- Lin, R.S. & Kessler, I.I. (1981) A multifactorial model for pancreatic cancer in man. Epidemiologic evidence. *J. Am. med. Assoc.*, 245, 147-152
- Lindenbaum, J. & Lieber, C.S. (1969) Alcohol-induced malabsorption of vitamin B12 in man. *Nature*, 224, 806
- Lindros, K.O. (1978) Acetaldehyde — its metabolism and role in the actions of alcohol. *Res. Adv. Alcohol Drug Probl.*, 4, 111-176
- Lindros, K.O., Oshino, N., Parrilla, R. & Williamson, J.R. (1974) Characteristics of ethanol and acetaldehyde oxidation on flavin and pyridine nucleotide fluorescence changes in perfused rat liver. *J. biol. Chem.*, 249, 7956-7963
- Lindros, K.O., Stowell, A., Pikkarainen, P. & Salaspuro, M. (1980) Elevated blood acetaldehyde in alcoholics with accelerated ethanol elimination. *Pharmacol. Biochem. Behav.*, 13 (Suppl. 1), 119-124
- Lindros, K.O., Stowell, L., Väänänen, H., Sipponen, P., Lamminsvu, U., Pikkarainen, P. & Salaspuro, M. (1983) Uninterrupted prolonged ethanol oxidation as a main pathogenetic factor of alcoholic liver damage: evidence from a new liquid diet animal model. *Liver*, 3, 79-91
- Little, R.E. (1977) Moderate alcohol use during pregnancy and decreased infant birth weight. *Am. J. publ. Health*, 67, 1154-1156
- Litvinov, N.N., Voronin, V.M. & Kazatchkov, V.I. (1986a) Evaluation of carcinogenicity of nitrosodimethylamine used in combination with benzene, cadmium, boron or ethanol (Russ.). *Vopr. Onkol.*, 32, 80-84
- Litvinov, N.N., Voronin, V.M. & Kazatchkov, V.I. (1986b) Studies of carcinogenesis modifying properties of aniline, carbon tetrachloride, benzene and ethanol (Russ.). *Eksp. Onkol.*, 8, 21-23
- Lochry, E.A., Randall, C.L., Goldsmith, A.A. & Sutker, P.B. (1982) Effects of acute alcohol exposure during selected days of gestation in C3H mice. *Neurobehav. Toxicol. Teratol.*, 4, 15-19
- Logan, W.P.D. (1982) *Cancer Mortality by Occupation and Social Class, 1851-1971 (IARC Scientific Publications No. 36)*, Lyon, International Agency for Research on Cancer, p. 240

- Lolli, G., Serianni, E., Golder, G.M. & Luzzatto-Fegiz, P. (1958) *Alcohol in Italian Culture*, Glencoe, IL, The Free Press, pp. 52-62
- Loquet, C., Toussaint, G. & LeTalaer, J.Y. (1980) *Detection of mutagens in various alcoholic beverages, particularly in apple brandy, a product of western France*. In: Holmstedt, B., Lauwerys, R., Mercier, M. & Roberfroid, M., eds, *Mechanisms of Toxicity and Hazard Evaluation*, Amsterdam, Elsevier, pp. 287-290
- Loquet, C., Toussaint, G. & LeTalaer, J.Y. (1981) Studies on mutagenic constituents of apple brandy and various alcoholic beverages collected in western France, a high incidence area of oesophageal cancer. *Mutat. Res.*, 88, 155-164
- Lord, T. (1979) *The World Guide to Spirits*, London, Quarto Publishing
- Löser, H. & Majewski, F. (1977) Type and frequency of cardiac defects in embryofetal alcohol syndrome. Report of 16 cases. *Br. Heart J.*, 39, 1374-1379
- Losowsky, M.S. & Leonard, P.J. (1967) Evidence of vitamin E deficiency in patients with malabsorption or alcoholism and the effects of therapy. *Gut*, 8, 539-543
- Lumeng, L. & Crabb, D.W. (1984) Rate-determining factors for ethanol metabolism in fasted and castrated male rats. *Biochem. Pharmacol.*, 33, 2623-2628
- Lumeng, L. & Li, T.-K. (1974) Vitamin B₆ metabolism in chronic alcohol abuse. *J. clin. Invest.*, 53, 693-704
- Lyon, J.L., Klauber, M.R., Gardner, J.W. & Smart, C.R. (1976) Cancer incidence in Mormons and non-Mormons in Utah, 1966-1970. *New Engl. J. Med.*, 294, 129-133
- Lyon, J.L., Gardner, J.W. & West, D.W. (1980) Cancer incidence in Mormons and non-Mormons in Utah during 1967-75. *J. natl Cancer Inst.*, 65, 1055-1061
- Ma, T.-H., Harris, M.M., Van Anderson, A., Ahmed, I., Mohammad, K., Bare, J.L. & Lin, G. (1984) Tradescantia-micronucleus (Trad-MCN) tests on 140 health-related agents. *Mutat. Res.*, 138, 157-167
- MacAndrew, C. & Edgerton, R.B. (1969) *Drunken Comportment — A Social Explanation*, Chicago, IL, Aldine Publications
- Macdonald, C.M. (1973) The effects of ethanol on hepatic lipid peroxidation and on the activities of glutathione reductase and peroxidase. *FEBS Lett.*, 35, 227-230
- Macdonald, C.M., Dow, J. & Moore, M.R. (1977) A possible protective role for sulphhydryl compounds in acute alcoholic liver injury. *Biochem. Pharmacol.*, 26, 1529-1531
- Mack, T.M., Yu, M.C., Hanisch, R. & Henderson, B.E. (1986) Pancreas cancer and smoking, beverage consumption, and past medical history. *J. natl Cancer Inst.*, 76, 49-60
- MacMahon, B., Yen, S., Trichopoulos, D., Warren, K. & Nardi, G. (1981) Coffee and cancer of the pancreas. *New Engl. J. Med.*, 304, 630-633
- MacSween, R.N.M. & Anthony, R.S. (1985) *Immune mechanisms in alcoholic liver disease*. In: Hall, P., ed., *Alcoholic Liver Disease*, London, Edward Arnolds, pp. 69-89
- Magrinat, G., Dolan, J.P., Biddy, R.L., Miller, L.D. & Korol, B. (1973) Ethanol and methanol metabolites in alcohol withdrawal. *Nature*, 244, 234-235
- Majchrowicz, E. & Mendelson, J.H. (1970) Blood concentrations of acetaldehyde and ethanol in chronic alcoholics. *Science*, 168, 1100-1102
- Majewski, F. (1978) On the damaging effect of alcohol on offspring (Ger.). *Nervenarzt*, 49, 410-416
- Mak, K.M., Leo, M.A. & Lieber, C.S. (1984) Ethanol potentiates squamous metaplasia of the rat trachea caused by vitamin A deficiency. *Trans. Assoc. Am. Phys.*, 97, 210-221

- Mak, K.M., Leo, M.A. & Lieber, C.S. (1987) Effect of ethanol and vitamin A deficiency on epithelial cell proliferation and structure in the rat esophagus. *Gastroenterology*, 93, 362-370
- Mäkelä, K., Room, R., Single, E., Sulkunen, P., Walsh, B., Bunce, R., Cahannes, M., Cameron, T., Giesbrecht, N., de Lint, J., Mäkinen, H., Morgan, P., Mosher, J., Moskalewicz, J., Müller, R., Österberg, E., Wald, I. & Walsh, D. (1981) *Alcohol, Society and the State: I. A Comparative Study of Alcohol Control*, Toronto, Addiction Research Foundation
- Mallory, F.B. (1911) Cirrhosis of the liver. Five different types of lesions from which it may arise. *Bull. Johns Hopkins Hosp.*, 22, 69-75
- Mallov, S. & Bloch, J.L. (1956) Role of hypophysis and adrenals in fatty infiltration of liver resulting from acute ethanol intoxication. *Am. J. Physiol.*, 184, 29-34
- Mandard, A.M., Marnay, J., Hélie, H., Tuyns, A.J. & Le Talaer, J.Y. (1981) No effect of ethanol or apple brandy on the upper digestive tract and oesophagus of the Wistar rat. Part of a project to assess etiological factors of cancer of the oesophagus in the west of France (Fr.). *Bull. Cancer*, 68, 49-58
- Mändl, B., Wullinger, F., Wagner, D., Binder, W., Schneider, K., Schlosser, A. & Piendl, A. (1971a) Comparison of different aged beers (Ger.). *Brauwelt*, 111, 732-735
- Mändl, B., Wullinger, F., Wagner, D., Binder, W., Schneider, K., Schlosser, A. & Piendl, A. (1971b) Comparison of some European beers (Ger.). *Brauwelt*, 111, 1502-1506, 1508-1509, 1511
- Mändl, B., Wullinger, F., Wagner, D., Geiger, E., Holzmann, A., Schneider, K. & Piendl, A. (1973) Composition of some American beers (Ger.). *Brauwelt*, 113, 1727, 1729
- Mändl, B., Wullinger, F., Becker, H., Wagner, D., Jost, P., Geiger, E., Voss, H., Holzmann, A., Schneider, K. & Piendl, A. (1975) Composition of beers from Cologne (Ger.). *Brauwelt*, 115, 881-883, 886-888
- Mändl, B., Wullinger, F. & Wagner, D. (1979) Purines in beer (Ger.). *Brauwissenschaft*, 32, 221-226
- Mankes, R.F., LeFevre, R., Benitz, K.-F., Rosenblum, I., Bates, H., Walker, A.I.T., Abraham, R. & Rockwood, W. (1982) Paternal effects of ethanol in the Long-Evans rat. *J. Toxicol. environ. Health*, 10, 871-878
- Mankes, R.F., Hoffman, T., LeFevre, R., Bates, H. & Abraham, R. (1983) Acute embryopathic effects of ethanol in the Long-Evans rat. *J. Toxicol. environ. Health*, 11, 583-590
- Mann, L.I., Bhakthavathsalan, A., Liu, M. & Makowski, P. (1975) Placental transport of alcohol and its effects on maternal and fetal acid-base balance. *Am. J. Obstet. Gynecol.*, 122, 837-844
- Manousos, O., Papadimitriou, C., Trichopoulos, D., Polychronopoulou, A., Koutselinis, A. & Zavitsanos, X. (1981) Epidemiologic characteristics and trace elements in pancreatic cancer in Greece. *Cancer Detect. Prev.*, 4, 439-442
- Marbury, M.C., Linn, S., Monson, R., Schoenbaum, S., Stubblefield, P.G. & Ryan, K.J. (1983) The association of alcohol consumption with outcome of pregnancy. *Am. J. publ. Health*, 73, 1165-1168
- Marché, M., Joseph, E., Goizet, A. & Audebert, J. (1975) Theoretical study on cognac, its composition and its natural ageing in oak barrels. III. Principal components of oak wood and substances presumed to be present in spirits (Fr.). *Rev. fr. Oenol.*, 57, 13-18
- Marjanen, L.A. (1973) Comparison of aldehyde dehydrogenases from cytosol and mitochondria of rat liver. *Biochim. biophys. Acta*, 327, 238-246
- Marmot, M.G. (1984) Alcohol and coronary heart disease. *Int. J. Epidemiol.*, 13, 160-167

- Marnett, L.J., Hurd, H.K., Hollstein, M.C., Levein, D.E., Esterbauer, H. & Ames, B.N. (1985) Naturally occurring carbonyl compounds are mutagens in *Salmonella* tester strain TA104. *Mutat. Res.*, 148, 25-34
- Marniemi, J., Aitio, A. & Vainio, H. (1975) Ethanol induced alteration of microsomal membrane bound enzymes of rat liver *in vitro*. *Acta pharmacol. toxicol.*, 37, 222-232
- Marshall, M., ed. (1979) *Beliefs, Behaviors and Alcoholic Beverages: A Cross-Cultural Survey*, Ann Arbor, MI, University of Michigan Press, pp. 1-11
- Marshall, M., ed. (1982) *Through a Glass Darkly: Beer and Modernization in Papua New Guinea (Monograph 18)*, Boroko, Papua New Guinea, Institute of Applied Social and Economic Research
- Martin, P.M.D. & Hill, G.B. (1984) Cervical cancer in relation to tobacco and alcohol consumption in Lesotho, southern Africa. *Cancer Detect. Prev.*, 7, 109-115
- Martinez, F., Happa, J. & Arias, F. (1985) Biochemical and morphologic effects of ethanol on fetuses from normally ovulating and superovulated mice. *Am. J. Obstet. Gynecol.*, 151, 428-433
- Martinez, I. (1969) Factors associated with cancer of the esophagus, mouth, and pharynx in Puerto Rico. *J. natl Cancer Inst.*, 42, 1069-1094
- Massey, R.C., Crews, C. & McWeeny, D.J. (1982) Method for high-performance liquid chromatographic measurement of *N*-nitrosamines in food and beverages. *J. Chromatogr.*, 241, 423-427
- Matsuda, Y., Baraona, E., Salaspuro, M. & Lieber, C.S. (1979) Effects of ethanol on liver microtubules and Golgi apparatus. Possible role in altered hepatic secretion of plasma proteins. *Lab. Invest.*, 41, 455-463
- Matthewson, K., Al Mardini, H., Bartlett, K. & Record, C.O. (1986) Impaired acetaldehyde metabolism in patients with non-alcoholic liver disorders. *Gut*, 27, 756-764
- Mayer, K. & Pause, G. (1973) Non-volatile biogenic amines in wine (Ger.). *Mitt. Geb. Lebensm. Hyg.*, 64, 171-179
- Mayevsky, A., Bar-Sagie, D. & Bartoov, B. (1983) Sperm cell motility as a new experimental model for toxicological studies. *Arch. Toxicol., Suppl.* 6, 295-299
- McCann, J., Choi, E., Yamasaki, E. & Ames, B.N. (1975) Detection of carcinogens as mutagens in the *Salmonella*/microsome test: assay of 300 chemicals, *Proc. natl Acad. Sci. USA*, 72, 5135-5139
- McClain, C.J., Kromhout, J.P., Peterson, F.J. & Holtzman, J.L. (1980) Potentiation of acetaminophen hepatotoxicity by alcohol. *J. Am. med. Assoc.*, 244, 251-253
- McCoy, G.D. (1980) Differential effects of ethanol and other inducers of drug metabolism on the two forms of hamster liver microsomal aniline hydroxylase. *Biochem. Pharmacol.*, 29, 685-688
- McCoy, G.D., Chen, C.-H.B., Hecht, S.S. & McCoy, E.C. (1979) Enhanced metabolism and mutagenesis of nitrosopyrrolidine in liver fractions isolated from chronic ethanol-consuming hamsters. *Cancer Res.*, 39, 793-796
- McCoy, G.D., Hecht, S.S., Katayama, S. & Wynder, E.L. (1981) Differential effect of chronic ethanol consumption on the carcinogenicity of *N*-nitrosopyrrolidine and *N'*-nitrosonornicotine in male Syrian golden hamsters. *Cancer Res.*, 41, 2849-2854
- McCoy, G.D., Hecht, S.S. & Furuya, K. (1986) The effect of chronic ethanol consumption on the tumorigenicity of *N*-nitrosopyrrolidine in male Syrian golden hamsters. *Cancer Lett.*, 33, 151-159
- McDonald, C.D., Burch, G.E. & Walsh, J.J. (1971) Alcoholic cardiomyopathy managed with prolonged bed rest. *Ann. intern. Med.*, 74, 681-691

- McGivern, R.F., Clancy, A.N., Hill, M.A. & Noble, E.P. (1984) Prenatal alcohol exposure alters adult expression of sexually dimorphic behavior in the rat. *Science*, 224, 896-898
- McGlashan, N.D., Walters, C.L. & McLean, A.E.M. (1968) Nitrosamines in African alcoholic spirits and oesophageal cancer. *Lancet*, ii, 1017
- McGlashan, N.D., Patterson, R.L.S. & Williams, A.A. (1970) N-Nitrosamines and grain-based spirits. *Lancet*, ii, 1138
- McLain, D.E. & Roe, D.A. (1984) Fetal alcohol syndrome in the ferret (*Mustela putorius*). *Teratology*, 30, 203-210
- McMichael, A.J. (1979) Laryngeal cancer and alcohol consumption in Australia. *Med. J. Austr.*, 1, 131-134
- McMichael, A.J., Potter, J.D. & Hetzel, B.S. (1979) Time trends in colo-rectal cancer mortality in relation to food and alcohol consumption: United States, United Kingdom, Australia and New Zealand. *Int. J. Epidemiol.*, 8, 295-303
- McWeeny, D.J. & Bates, M.L. (1980) Discrimination between synthetic and natural ethyl alcohol in spirits and fortified wines. *J. Food Technol.*, 15, 407-412
- Medina, E., Pascual, J.P., Medina, K.A.M. & Medina, R. (1983) Factors associated with occurrence of breast cancer in women in Chile: study of cases and controls (Sp.). *Rev. med. Chile*, 111, 1279-1286
- Mekhjian, H.S. & May, E.S. (1977) Acute and chronic effects of ethanol on fluid transport in the human small intestine. *Gastroenterology*, 72, 1280-1286
- Mello, N.K., Bree, M.P., Mendelson, J.H. & Ellingboe, J. (1983) Alcohol self-administration disrupts reproductive function in female macaque monkeys. *Science*, 221, 677-679
- Mendelson, J.H. & Mello, N.K. (1974) *Alcohol, aggression and androgens*. In: Frazier, S.H., ed., *Aggression*, Baltimore, MD, Williams & Wilkins, pp. 225-247
- Mendelson, J.H. & Stein, S. (1966) Serum cortisol levels in alcoholic and nonalcoholic subjects during experimentally induced ethanol intoxication. *Psychosom. Med.*, 28, 616-626
- Mendelson, J.H., Ogata, M. & Mello, N.K. (1971) Adrenal function and alcoholism. I. Serum cortisol. *Psychosom. Med.*, 33, 145-157
- Mendenhall, C.L. & Chedid, A. (1980) Peliosis hepatis. Its relationship to chronic alcoholism, aflatoxin B₁, and carcinogenesis in male Holtzman rats. *Dig. Dis. Sci.*, 25, 587-592
- Mesley, R.J., Lisle, D.B., Richards, C.P. & Wardleworth, D.F. (1975) The analytical identification of rum. *Ann. Technol. agric.*, 24, 361-370
- Meyer, L.S. & Riley, E.P. (1986) Social play in juvenile rats prenatally exposed to alcohol. *Teratology*, 34, 1-7
- Mezey, E. (1975) Intestinal function in chronic alcoholism. *Ann. N.Y. Acad. Sci.*, 252, 215-227
- Mezey, E. (1976) Ethanol metabolism and ethanol-drug interactions. *Biochem. Pharmacol.*, 25, 869-875
- Mezey, E. (1985) *Effect of ethanol on intestinal morphology, metabolism, and function*. In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 342-360
- Mezey, E., Potter, J.J., Harmon, S.M. & Tsitouras, P.D. (1980) Effects of castration and testosterone administration on rat liver alcohol dehydrogenase activity. *Biochem. Pharmacol.*, 29, 3175-3180
- Mezey, E., Potter, J.J., French, S.W., Tamura, T. & Halsted, C.H. (1983) Effect of chronic ethanol feeding on hepatic collagen in the monkey. *Hepatology*, 3, 41-44

- Michaelis, A., Ramshorn, K. & Rieger, R. (1959) Ethanol — radiomimetic agent in *Vicia fabia* L. (Ger.). *Naturwissenschaften*, 46, 381-382
- Midanik, L. (1982) The validity of self-reported alcohol consumption and alcohol problems: a literature review. *Br. J. Addict.*, 77, 357-382
- Mildau, G., Preuss, A., Frank, W. & Heering, W. (1987) Ethyl carbamate (urethane) in alcoholic beverages: improved analysis and light-dependent formation (Ger.). *Dtsch. Lebensm.-Rundsch.*, 83, 69-74
- Miller, A.B., Howe, G.R., Jain, M., Craib, K.J.P. & Harrison, L. (1983) Food items and food groups as risk factors in a case-control study of diet and colo-rectal cancer. *Int. J. Cancer*, 32, 155-161
- Miller, M.W. (1986) Effects of alcohol on the generation and migration of cerebral cortical neurons. *Science*, 233, 1308-1311
- Miller, S.I., Del Villano, B.C., Flynn, A. & Krumhansl, M. (1983) Interaction of alcohol and zinc in fetal dysmorphogenesis. *Pharmacol. Biochem. Behav.*, 18, 311-315
- Miller, W.R. & Hester, R.K. (1986) Inpatient alcoholism treatment. Who benefits? *Am. Psychol.*, 41, 794-805
- Mills, P.R., Pennington, T.H., Kay, P., MacSween, R.N.M. & Watkinson, G. (1979) Hepatitis B_S antibody in alcoholic cirrhosis. *J. clin. Pathol.*, 32, 778-782
- Milon, H., Morin, Y. & Bonenfant, J.-L. (1968) Epidemic of cardiomyopathy in beer drinkers (Fr.). *Arch. Mal. Coeur*, 61, 1561-1594
- Ministère de l'Agriculture (Ministry of Agriculture) (1980) *List of Oenological Practices* (Fr.) (*Circulaire No. DQ/SRF/C/80, No. 8043*), Paris, Service de la Répression des Fraudes et du Contrôle de la Qualité
- Ministry of Agriculture, Fisheries and Food (1987) *Survey of Colour Usage in Food (Food Surveillance Paper No. 19)*, London, Her Majesty's Stationery Office, p. 81
- Misra, P.S., Lefèvre, A., Ishii, H., Rubin, E. & Lieber, C.S. (1971) Increase of ethanol, meprobamate and pentobarbital metabolism after chronic ethanol administration in man and in rats. *Am. J. Med.*, 51, 346-351
- Misselhorn, K. (1975) Formation of acetals in rum: a kinetic study. *Ann. Technol. agric.*, 24, 371-381
- Misslbeck, N.G., Campbell, T.C. & Roe, D.A. (1984) Effect of ethanol consumed in combination with high or low fat diets on the postinitiation phase of hepatocarcinogenesis in the rat. *J. Nutr.*, 114, 2311-2323
- Mistilis, S.P. & Garske, A. (1969) Induction of alcohol dehydrogenase in liver and gastro-intestinal tract. *Aust. Ann. Med.*, 18, 227-231
- Mitelman, F. & Wadstein, J. (1978) Chromosome aberrations in chronic alcoholics. *Lancet*, i, 216
- Miyakawa, H., Iida, S., Leo, M.A., Greenstein, R.J., Zimmon, D.S. & Lieber, C.S. (1985) Pathogenesis of precirrhotic portal hypertension in alcohol-fed baboons. *Gastroenterology*, 88, 143-150
- Mizoi, Y., Ijiri, I., Tatsuno, Y., Kijima, T., Fujiwara, S., Adachi, J. & Hishida, S. (1979) Relationship between facial flushing and blood acetaldehyde levels after alcohol intake. *Pharmacol. Biochem. Behav.*, 10, 303-311
- Mohan, D., Sharma, H.K., Sundaram, K.R. & Neki, J.S. (1980) Pattern of alcohol consumption of rural Punjab males. *Indian J. med. Res.*, 72, 702-711
- Moldéus, P., Andersson, B. & Norling, A. (1978) Interaction of ethanol oxidation with glucuronidation in isolated hepatocytes. *Biochem. Pharmacol.*, 27, 2583-2588

- Møller, J., Brandt, N.J. & Tygstrup, I. (1979) Hepatic dysfunction in patient with fetal alcohol syndrome. *Lancet*, i, 605-606
- Mommsen, S., Aagaard, J. & Sell, A. (1982) An epidemiological case-control study of bladder cancer in males from a predominantly rural district. *Eur. J. Cancer clin. Oncol.*, 18, 1205-1210
- Monson, R.R. & Lyon, J.L. (1975) Proportional mortality among alcoholics. *Cancer*, 36, 1077-1079
- Moore, M.H. & Gerstein, D.R., eds (1981) *Alcohol and Public Policy: Beyond the Shadow of Prohibition*, Washington DC, National Academy Press
- Morgan, E.T., Devine, M. & Skett, P. (1981) Changes in the rat hepatic mixed function oxidase system associated with chronic ethanol vapor inhalation. *Biochem. Pharmacol.*, 30, 595-600
- Morgan, E.T., Koop, D.R. & Coon, M.J. (1982) Catalytic activity of cytochrome P-450 isozyme 3a isolated from liver microsomes of ethanol-treated rabbits. *J. biol. Chem.*, 257, 13951-13957
- Morgan, R.W. & Jain, M.G. (1974) Bladder cancer: smoking, beverages and artificial sweeteners. *Can. med. Assoc. J.*, 111, 1067-1070
- Morin, Y. & Daniel, P. (1967) Quebec beer-drinkers' cardiomyopathy: etiological considerations. *Can. med. Assoc. J.*, 97, 926-928
- Morpurgo, G., Bellincampi, D., Gualandi, G., Baldinelli, L. & Crescenzi, O.S. (1979) Analysis of mitotic nondisjunction with *Aspergillus nidulans*. *Environ. Health Perspect.*, 31, 81-95
- Mortelmans, K., Haworth, S., Lawlor, T., Speck, W., Tainer, B. & Zeiger, E. (1986) Salmonella mutagenicity tests: II. Results from the testing of 270 chemicals. *Environ. mol. Mutagenesis*, 8 (Suppl. 7), 1-119
- Moser, J., ed. (1985) *Alcohol Policies in National Health and Development Planning (WHO Offset Publication No. 89)*, Geneva, World Health Organization
- Mukherjee, A.B. & Hodgen, G.D. (1982) Maternal ethanol exposure induces transient impairment of umbilical circulation and fetal hypoxia in monkeys. *Science*, 218, 700-702
- Müller, G., Spassowski, M. & Henschler, D. (1975) Metabolism of trichloroethylene in man. III. Interaction of trichloroethylene and ethanol. *Arch. Toxicol.*, 33, 173-189
- Murphy, S.E. & Hecht, S.S. (1986) Effects of chronic ethanol consumption on benzo(a)pyrene metabolism and glutathione S-transferase activities in Syrian golden hamster cheek pouch and liver. *Cancer Res.*, 46, 141-146
- Nagao, M., Takahashi, Y., Wakabayashi, K. & Sugimura, T. (1981) Mutagenicity of alcoholic beverages. *Mutat. Res.*, 88, 147-154
- Nakajima, T., Okuyama, S., Yonekura, I. & Sato, A. (1985) Effects of ethanol and phenobarbital administration on the metabolism and toxicity of benzene. *Chem.-biol. Interactions*, 55, 23-38
- Nakano, M. & Lieber, C.S. (1982) Ultrastructure of initial stages of perivenular fibrosis in alcohol-fed baboons. *Am. J. Pathol.*, 106, 145-155
- National Institute on Alcohol Abuse and Alcoholism (1987) *Sixth Special Report to the US Congress on Alcohol and Health from the Secretary of Health and Human Services (DHHS Publication No. (ADM) 87-1519)*, Washington DC, US Government Printing Office, p. 2
- Nayak, B.N. & Buttar, H.S. (1986) Induction of sister chromatid exchanges and chromosome damage by gossypol in bone marrow cells of mice. *Teratog. Carcinog. Mutagenesis*, 6, 83-91
- Nebert, D.W., Adesnik, M., Coon, M.J., Estabrook, R.W., Gonzalez, F.J., Guengerich, F.P., Gunsalus, I.C., Johnson, E.F., Kemper, B., Levin, W., Phillips, I.R., Sato, R. & Waterman, M.R. (1987) The P450 gene superfamily: recommended nomenclature. *DNA*, 6, 1-11

- Neis, J.M., te Brömmelstroet, B.W.J., van Gemert, P.J.L., Roelofs, H.M.J. & Henderson, P.T. (1985) Influence of ethanol induction on the metabolic activation of genotoxic agents by isolated rat hepatocytes. *Arch. Toxicol.*, 57, 217-221
- Nelson, B.K., Brightwell, W.S., MacKenzie, D.R., Khan, A., Burg, J.R., Weigel, W.W. & Goad, P.T. (1985a) Teratological assessment of methanol and ethanol at high inhalation levels in rats. *Fundam. appl. Toxicol.*, 5, 727-736
- Nelson, B.K., Brightwell, W.S. & Burg, J.R. (1985b) Comparison of behavioral teratogenic effects of ethanol and *n*-propanol administered by inhalation to rats. *Neurobehav. Toxicol. Teratol.*, 7, 779-783
- Nelson, R.L. & Samelson, S.L. (1985) Neither dietary ethanol nor beer augments experimental colon carcinogenesis in rats. *Dis. Colon Rectum*, 28, 460-463
- Nelson, R.R., Acree, T.E. & Butts, R.M. (1978) Isolation and identification of volatiles from Catawba wine. *J. agric. Food Chem.*, 26, 1188-1190
- Neugut, R.H. (1981) Epidemiological appraisal of the literature on the fetal alcohol syndrome in humans. *Early hum. Dev.*, 5, 411-429
- Newman, H.W. & Lehman, A.J. (1937) Rate of disappearance of alcohol from the blood stream in various species. *Arch. int. Pharmacodyn.*, 55, 440-446
- New York Heart Association Criteria Committee (1964) *Disease of the Heart and Blood Vessels*, Boston, Little, Brown & Co., p. 112
- Nicholls, P., Edwards, G. & Kyle, E. (1974) Alcoholics admitted to four hospitals in England. II. General and cause-specific mortality. *Q. J. Stud. Alcohol*, 35, 841-855
- Nikkila, E.A. & Ojala, K. (1963) Role of hepatic L-a-glycerophosphate and triglyceride synthesis in production of fatty liver by ethanol. *Proc. Soc. exp. Biol. Med.*, 113, 814-817
- Nishimura, K. & Masuda, M. (1971) Minor constituents of whisky fusel oils. I. Basic, phenolic and lactonic compounds. *J. Food Sci.*, 36, 819-822
- Nishimura, K. & Masuda, M. (1984) *Identification of some flavor characteristic compounds in alcoholic beverages*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 111-120
- Nishimura, K., Ohnishi, M., Masuda, M., Koga, K. & Matsuyama, R. (1983) *Reactions of wood components during maturation*. In: Piggott, J.R., ed., *Flavour of Distilled Beverages: Origin and Development*, Chichester, Ellis Horwood, pp. 241-255
- Noble, A.C., Orr, B.H., Cook, W.B. & Campbell, J.L. (1976) Trace element analysis of wine by proton-induced X-ray fluorescence spectrometry. *J. agric. Food Chem.*, 24, 532-535
- Nomura, F., Pikkarainen, P.H., Jauhonen, P., Arai, M., Gordon, E.R., Baraona, E. & Lieber, C.S. (1983) Effect of ethanol administration on the metabolism of ethanol in baboons. *J. Pharmacol. exp. Ther.*, 227, 78-83
- Norell, S.E., Ahlbom, A., Erwald, R., Jacobson, G., Lindberg-Navier, I., Olin, R., Törnberg, B. & Wiechel, K.-L. (1986) Diet and pancreatic cancer: a case-control study. *Am. J. Epidemiol.*, 124, 894-902
- Norton, R., Batey, R., Dwyer, T. & MacMahon, S. (1987) Alcohol consumption and the risk of alcohol related cirrhosis in women. *Br. med. J.*, 295, 80-82
- Nuutinen, H., Lindros, K.O. & Salaspuro, M. (1983) Determinants of blood acetaldehyde level during ethanol oxidation in chronic alcoholics. *Alcohol. clin. exp. Res.*, 7, 163-168

- Nuutinen, H.U., Salaspuro, M.P., Valle, M. & Lindros, K.O. (1984) Blood acetaldehyde concentration gradient between hepatic and antecubital venous blood in ethanol-intoxicated alcoholics and controls. *Eur. J. clin. Invest.*, 14, 306-311
- Nykänen, I. (1984) *The volatile compounds of Hierochloe odorata*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 131-139
- Nykänen, L. (1984) *Aroma compounds liberated from oak chips and wooden casks by alcohol*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 141-148
- Nykänen, L. (1986) Formation and occurrence of flavor compounds in wine and distilled alcoholic beverages. *Am. J. Enol. Viticolt.*, 37, 84-96
- Nykänen, L. & Nykänen, I. (1977) Production of esters by different yeast strains in sugar fermentation. *J. Inst. Brew.*, 83, 30-31
- Nykänen, L. & Nykänen, I. (1983) *Rumflavour*. In: Piggott, J.R., ed., *Flavour of Distilled Beverages: Origin and Development*, Chichester, Ellis Horwood, pp. 49-63
- Nykänen, L. & Suomalainen, H. (1983) *Aroma of Beer, Wine and Distilled Alcoholic Beverages*, Berlin, Akademie-Verlag
- Nykänen, L., Puputti, E. & Suomalainen, H. (1968) Volatile fatty acids in some brands of whisky, cognac and rum. *J. Food Sci.*, 33, 88-92
- Nykänen, L., Nykänen, I. & Suomalainen, H. (1977) Distribution of esters produced during sugar fermentation between the yeast cell and the medium. *J. Inst. Brewing*, 83, 32-34
- Nykänen, L., Nykänen, I. & Moring, M. (1984) *Aroma compounds dissolved from oak chips by alcohol*. In: Adda, J., ed., *Progress in Flavour Research*, Amsterdam, Elsevier, pp. 339-346
- Obe, G. (1986) *Epidemiological studies concerning chromosomal aberrations in alcoholics and smokers*. In: Ramel, C., Lambert, B. & Magnusson, J., eds, *Genetic Toxicology of Environmental Chemicals*, Part B, *Genetic Effects and Applied Mutagenesis*, New York, Alan R. Liss, pp. 315-326
- Obe, G. & Anderson, D. (1987) Genetic effects of ethanol. *Mutat. Res.*, 186, 177-200
- Obe, G. & Beek, B. (1979) Mutagenic activity of aldehydes. *Drug Alcohol Depend.*, 4, 91-94
- Obe, G. & Ristow, H. (1977) Acetaldehyde, but not ethanol, induces sister chromatid exchanges in Chinese hamster cells *in vitro*. *Mutat. Res.*, 56, 211-213
- Obe, G. & Ristow, H. (1979) Mutagenic, cancerogenic and teratogenic effects of alcohol. *Mutat. Res.*, 65, 229-259
- Obe, G. & Salloch-Vogel, R.-R. (1985) Chromosomal mutations in alcoholics (Ger.). *Suchtgefahren*, 31, 65-70
- Obe, G., Ristow, H.J. & Herha, J. (1977) *Chromosomal damage by alcohol* *in vitro* and *in vivo*. In: Gross, M.M., ed., *Alcohol Intoxication and Withdrawal*, IIIa, *Biological Aspects of Ethanol*, New York, Plenum Press, pp. 47-70
- Obe, G., Ristow, H. & Herha, J. (1978) *Mutagenic activity of alcohol in man*. In: *Mutations: Their Origin, Nature and Potential Relevance to Genetic Risk in Man*, Boppard, Harald Boldt, pp. 151-161

- Obe, G., Natarajan, A.T., Meyers, M. & Den Hertog, A. (1979) Induction of chromosomal aberrations in peripheral lymphocytes of human blood *in vitro*, and of SCEs in bone-marrow cells of mice *in vivo* by ethanol and its metabolite acetaldehyde. *Mutat. Res.*, 68, 291-294
- Obe, G., Göbel, D., Engeln, H., Herha, J. & Natarajan, A.T. (1980) Chromosomal aberrations in peripheral lymphocytes of alcoholics. *Mutat. Res.*, 73, 377-386
- Obe, G., Brodmann, R., Fleischer, R., Engeln, H., Göbel, D. & Herha, J. (1985) Mutagenic and carcinogenic action of cultural materials (Ger.). In: Keup, W., ed., *Biology of Habits*, Berlin (West), Springer, pp. 31-43
- Obe, G., Jonas, R. & Schmidt, S. (1986) Metabolism of ethanol *in vitro* produces a compound which induces sister-chromatid exchanges in human peripheral lymphocytes *in vitro*: acetaldehyde not ethanol is mutagenic. *Mutat. Res.*, 174, 47-51
- O'Connell, D.L., Hulka, B.S., Chambless, L.E., Wilkinson, W.E. & Deubner, D.C. (1987) Cigarette smoking, alcohol consumption, and breast cancer risk. *J. natl Cancer Inst.*, 78, 229-234
- Oisund, J.F., Fjorden, A.-E. & Mørland, J. (1978) Is moderate ethanol consumption teratogenic in the rat? *Acta pharmacol. toxicol.*, 43, 145-155
- Okanoue, T., Ou, O., Ohta, M., Yoshida, J., Horishi, M., Yuki, T., Okuno, T. & Takino, T. (1984) Effect of chronic ethanol administration on the cytoskeleton of rat hepatocytes — including morphometric analysis (Jpn.). *Acta hepatol. jpn.*, 25, 210-213
- Olegård, R., Sabel, K.-G., Aronsson, M., Sandin, B., Johansson, P.R., Carlsson, C., Kyllerman, M., Iversen, K. & Hrbek, A. (1979) Effects on the child of alcohol abuse during pregnancy. Retrospective and prospective studies. *Acta paediatr. scand., Suppl.* 275, 112-121
- Olsen, J., Sabroe, S. & Ipsen, J. (1985a) Effect of combined alcohol and tobacco exposure on risk of cancer of the hypopharynx. *J. Epidemiol. Commun. Health*, 39, 304-307
- Olsen, J., Sabroe, S. & Fasting, U. (1985b) Interaction of alcohol and tobacco as risk factors in cancer of the laryngeal region. *J. Epidemiol. Commun. Health*, 39, 165-168
- Olson, M.J., Pounds, J.G. & Casciano, D.A. (1984) Potentiation of dimethylnitrosamine genotoxicity in rat hepatocytes isolated following ethanol treatment *in vivo*. *Chem.-biol. Interactions*, 50, 313-326
- Ong, T.M., Whong, W.-Z., Stewart, J. & Brockman, H.E. (1986) Chlorophyllin: a potent antimutagen against environmental and dietary complex mixtures. *Mutat. Res.*, 173, 111-115
- Orme-Johnson, W.H. & Ziegler, D.M. (1965) Alcohol mixed function oxidase activity of mammalian liver microsomes. *Biochem. biophys. Res. Commun.*, 21, 78-82
- Oshima, A., Tsukuma, H., Hiyama, T., Fujimoto, I., Yamano, H. & Tanaka, M. (1984) Follow-up study of HBsAg-positive blood donors with special reference to effect of drinking and smoking on development of liver cancer. *Int. J. Cancer*, 34, 775-779
- Oshino, N., Oshino, R. & Chance, B. (1973) The characteristics of the 'peroxidatic' reaction of catalase in ethanol oxidation. *Biochem. J.*, 131, 555-563
- Ouellette, E.M., Rosett, H.L., Rosman, N.P. & Weiner, L. (1977) Adverse effects on offspring of maternal alcohol abuse during pregnancy. *New Engl. J. Med.*, 297, 528-530
- Ough, C.S. (1976a) Ethylcarbamate in fermented beverages and foods. I. Naturally occurring ethylcarbamate. *J. agric. Food Chem.*, 24, 323-328
- Ough, C.S. (1976b) Ethylcarbamate in fermented beverages and foods. II. Possible formation of ethylcarbamate from diethyl dicarbonate addition to wine. *J. agric. Food Chem.*, 24, 328-331

- Ough, C.S. (1984) *Volatile nitrogen compounds in fermented beverages*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 199-225
- Ough, C.S. (1987) Chemicals used in making wine. *Chem. Eng. News*, 5 January, 19-28
- Padmanabhan, R. & Muawad, W.M.R.A. (1985) Exencephaly and axial skeletal dysmorphogenesis induced by acute doses of ethanol in mouse fetuses. *Drug Alcohol Depend.*, 16, 215-227
- Padmanabhan, R., Hameed, M.S. & Sugathan, T.N. (1984) Effects of acute doses of ethanol on pre- and postnatal development in the mouse. *Drug Alcohol Depend.*, 14, 197-208
- Paganini-Hill, A. & Ross, R.K. (1983) Breast cancer and alcohol consumption. *Lancet*, ii, 626-627
- Palamand, S.R., Hardwick, W.A. & Markl, K.S. (1969) Volatile amines in beer and their influence on beer flavor. *Am. Soc. Brew. Chem. Proc.*, 54-58
- Palamand, S.R., Markl, K.S. & Hardwick, W.A. (1971) Trace flavor compounds of beer. *Am. Soc. Brew. Chem. Proc.*, 211-218
- Palmer, K.R. & Jenkins, W.J. (1982) Impaired acetaldehyde oxidation in alcoholics. *Gut*, 23, 729-733
- Pantuck, E.J., Pantuck, C.B., Ryan, D.E. & Conney, A.H. (1985) Inhibition and stimulation of enflurane metabolism in the rat following a single dose or chronic administration of ethanol. *Anesthesiology*, 62, 255-262
- Parker, S., Udani, M., Gavaler, J.S. & Van Thiel, D.H. (1984) Adverse effects of ethanol upon the adult sexual behavior of male rats exposed *in utero*. *Neurobehav. Toxicol. Teratol.*, 6, 289-293
- Parl, F.F., Lev, R., Thomas, E. & Pitchumoni, C.S. (1979) Histologic and morphometric study of chronic gastritis in alcoholic patients. *Hum. Pathol.*, 10, 45-56
- Parrilla, R., Ohkawa, K., Lindros, K.O., Zimmerman, U.-J.P., Kobayashi, K. & Williamson, J.R. (1974) Functional compartmentation of acetaldehyde oxidation in rat liver. *J. biol. Chem.*, 249, 4926-4933
- Patschky, A. (1973) Chemical composition of imported Rumanian wines (Ger.). *Mitt. Rebe Wein Obstbau Früchteverwert. Klosterneuburg*, 23, 101-116
- Pauli, R.M. & Feldman, P.F. (1986) Major limb malformations following intrauterine exposure to ethanol: two additional cases and literature review. *Teratology*, 33, 273-280
- Peers, F.G. & Linsell, C.A. (1973) Dietary aflatoxins and liver cancer. A population-based study in Kenya. *Br. J. Cancer*, 27, 473-484
- Peiffer, J., Majewski, F., Fischbach, H., Bierich, J.R. & Volk, B. (1979) Alcohol embryo- and fetopathy. Neuropathology of 3 children and 3 fetuses. *J. neurol. Sci.*, 41, 125-137
- Pelkonen, O. & Sotaniemi, E. (1982) Drug metabolism in alcoholics. *Pharmacol. Ther.*, 16, 261-268
- Pell, S. & D'Alonzo, C.A. (1973) A five-year mortality study of alcoholics. *J. occup. Med.*, 15, 120-125
- Peng, R., Tu, Y.Y. & Yang, C.S. (1982) The induction and competitive inhibition of a high affinity microsomal nitrosodimethylamine demethylase by ethanol. *Carcinogenesis*, 3, 1457-1461
- Péquignot, G. & Cubeau, J. (1973) Methodological surveys comparing food consumption of individuals as estimated by questionnaire and by weighing food items (Fr.). *Rev. Epidémiol. Méd. soc. Santé publique*, 21, 585-608
- Péquignot, G., Tuyns, A.J. & Berta, J.L. (1978) Ascitic cirrhosis in relation to alcohol consumption. *Int. J. Epidemiol.*, 7, 113-120

- Péquignot, G., Crosignani, P., Terracini, B., Ascunce, N., Zubiri, A., Raymond, L., Estève, J. & Tuyns, A. (1988) A comparative study of smoking, drinking and dietary habits in population samples in France, Italy, Spain and Switzerland. III. Consumption of alcohol (Fr.). *Rev. Épidémiol. Méd. soc. Santé publique* (in press)
- Perin, A., Scalabrino, G., Sessa, A. & Arnaboldi, A. (1974) In vitro inhibition of protein synthesis in rat liver as a consequence of ethanol metabolism. *Biochim. biophys. Acta*, 366, 101-108
- Perloff, J.K. (1971) The cardiomyopathies — current perspectives. *Circulation*, 44, 942-949
- Pernanen, K. (1974) *Validity of survey data on alcohol use*. In: Gibbins, R.J., Israel, Y., Kalant, H., Popham, R.E., Schmidt, W. & Smart, R.G., eds, *Research Advances in Alcohol and Drug Problems*, Vol. 1, New York, John Wiley & Sons, pp. 355-374
- Phillips, M.J. (1982) Mallory bodies and the liver. *Lab. Invest.*, 47, 311-313
- Phillips, R.L., Garfinkel, L., Kuzma, J.W., Beeson, W.L., Lotz, T. & Brin, B. (1980) Mortality among California Seventh-day Adventists for selected cancer sites. *J. natl Cancer Inst.*, 65, 1097-1107
- Pieper, W.A. & Skeen, M.J. (1973) Changes in rate of ethanol elimination associated with chronic administration of ethanol to chimpanzees and rhesus monkeys. *Drug Metab. Disposition*, 1, 634-641
- Pierce, D.R. & West, J.R. (1986) Alcohol-induced microencephaly during the third trimester equivalent: relationship to dose and blood alcohol concentration. *Alcohol*, 3, 185-191
- Pikkarainen, P.H. & Lieber, C.S. (1980) Concentration dependency of ethanol elimination rates in baboons: effect of chronic alcohol consumption. *Alcohol. clin. exp. Res.*, 4, 40-43
- Pikkarainen, P.H., Gordon, E.R., Lebsack, M.E. & Lieber, C.S. (1981) Determinants of plasma free acetaldehyde levels during the oxidation of ethanol. Effects of chronic ethanol feeding. *Biochem. Pharmacol.*, 30, 799-802
- Pimstone, N.R. & French, S.W. (1984) Alcoholic liver disease. *Med. Clin. North Am.*, 68, 39-56
- Pollack, E.S., Nomura, A.M.Y., Heilbrun, L.K., Stemmermann, G.N. & Green, S.B. (1984) Prospective study of alcohol consumption and cancer. *New Engl. J. Med.*, 310, 617-621
- Popper, H. & Lieber, C.S. (1980) Histogenesis of alcoholic fibrosis and cirrhosis in the baboon. *Am. J. Pathol.*, 98, 695-716
- Porta, E.A., Markell, N. & Dorado, R.D. (1985) Chronic alcoholism enhances hepatocarcinogenicity of diethylnitrosamine in rats fed a marginally methyl-deficient diet. *Hepatology*, 5, 1120-1125
- Postel, W. & Adam, L. (1982) Gas chromatographic characterization and quantification of spirits. IV. Rum and arrak, and rum and arrak blends (Ger.). *Alkohol-Ind.*, 95, 360, 362-363
- Postel, W., Drawert, F. & Adam, L. (1972a) Gas chromatographic determination of volatile components of fermented beverages. II. The content of volatile components in beer (Ger). *Chem. mikrobiol. Technol. Lebensm.*, 1, 169-182
- Postel, W., Drawert, F. & Adam, L. (1972b) Gas chromatographic determination of volatile components of fermented beverages. III. Volatile components of wines (Ger.). *Chem. mikrobiol. Technol. Lebensm.*, 1, 224-235
- Postel, W., Drawert, F. & Adam, L. (1975) *Aroma compounds in spirits* (Ger.) In: Drawert, F., ed., *Odour and Taste Compounds*, Bad Pyrmont, Hans Nürnberg, pp. 99-111
- Potter, J.D. & McMichael, A.J. (1986) Diet and cancer of the colon and rectum: a case-control study. *J. natl Cancer Inst.*, 76, 557-569
- Potter, J.D., McMichael, A.J. & Hartshorne, J.M. (1982) Alcohol and beer consumption in relation to cancers of bowel and lung: an extended correlation analysis. *J. chron. Dis.*, 35, 833-842

- Pottern, L.M., Morris, L.E., Blot, W.J., Ziegler, R.G. & Fraumeni, J.F., Jr (1981) Esophageal cancer among black men in Washington, DC. I. Alcohol, tobacco, and other risk factors. *J. natl Cancer Inst.*, 67, 777-783
- Pour, P.M., Reber, H.A. & Stepan, K. (1983) Modification of pancreatic carcinogenesis in the hamster model. XII. Dose-related effect of ethanol. *J. natl Cancer Inst.*, 71, 1085-1087
- Priscott, P.K. (1982) The effects of ethanol on rat embryos developing *in vitro*. *Biochem. Pharmacol.*, 31, 3641-3643
- Puech, J.-L. (1978) *Vieillissement des Eaux de Vie en Fûts de Chêne. Extraction et Evolution de la Lignine et de ses Produits de Dégradation* (Ageing of spirits in oak casks. Extraction and evolution of lignin and its degradation products), Thesis No. 2087, Toulouse, Université Paul Sabatier
- Puputti, E. & Suomalainen, H. (1969) Biogenic amines in wine (Ger.). *Mitt. Rebe Wein Obstbau Früchteverwert.* Klosterneuburg, 19, 184-192
- Quazi, Q., Masakawa, A., Milman, D., McGann, B., Chua, A. & Haller, J. (1979) Renal anomalies in fetal alcohol syndrome. *Pediatrics*, 63, 886-889
- de Raat, W.K., Davis, P.B. & Bakker, G.L. (1983) Induction of sister-chromatid exchanges by alcohol and alcoholic beverages after metabolic activation by rat-liver homogenate. *Mutat. Res.*, 124, 85-90
- Rachamin, G., Macdonald, J.A., Wahid, S., Clapp, J.J., Khanna, J.M. & Israel, Y. (1980) Modulation of alcohol dehydrogenase and ethanol metabolism by sex hormones in the spontaneously hypertensive rat. Effect of chronic ethanol administration. *Biochem. J.*, 186, 483-490
- Racker, E. (1949) Aldehyde dehydrogenase, a diphosphopyridine nucleotide-linked enzyme. *J. biol. Chem.*, 177, 883-892
- Radike, M.J., Stemmer, K.L. & Bingham, E. (1981) Effect of ethanol on vinyl chloride carcinogenesis. *Environ. Health Perspect.*, 41, 59-62
- Räihä, N.C.R. & Oura, E. (1962) Effect of ethanol oxidation on levels of pyridine nucleotides in liver and yeast. *Proc. Soc. exp. Biol. Med.*, 109, 908-910
- Randall, C.L. & Taylor, W.J. (1979) Prenatal ethanol exposure in mice: teratogenic effects. *Teratology*, 19, 305-312
- Randall, C.L., Taylor, W.J. & Walker, D.W. (1977) Ethanol-induced malformations in mice. *Alcohol. clin. exp. Res.*, 1, 219-224
- Randall, C.L., Burling, T.A., Lochry, E.A. & Sutker, P.B. (1982) The effect of paternal alcohol consumption on fetal development in mice. *Drug Alcohol Depend.*, 9, 89-95
- Randall, C.L., Becker, H.C. & Middaugh, L.D. (1986) Effect of prenatal ethanol exposure on activity and shuttle avoidance behavior in adult C57 mice. *Alcohol Drug Res.*, 6, 351-360
- Rapp, A. & Mandery, H. (1986) Wine aroma. *Experientia*, 42, 873-884
- Rapp, A., Mandery, H. & Güntert, M. (1984) *Terpene compounds in wine*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 255-274
- Rapp, A., Güntert, M. & Ullemeyer, H. (1985) Change in aroma substances during storage of white Riesling wines in bottles (Ger.). *Z. Lebensmitteluntersuch. Forsch.*, 180, 109-116

- Rasmussen, B.B. & Christensen, N. (1980) Teratogenic effect of maternal alcohol consumption in the mouse fetus: a histopathological study. *Acta pathol. microbiol. scand., Sect. A*, 88, 285-289
- Rasmussen, E.W. (1940) Effect of thirst on desorption of ethanol and ethanol content of blood after oral administration (Ger.). *Biochem. Z.*, 304, 358-370
- Raymond, L., Infante, F., Tuyns, A.J., Voirol, M. & Lowenfelds, A.B. (1987) Diet and pancreatic cancer (Fr.) *Gastroenterol. clin. biol.*, 11, 488-492
- Reazin, G.H. (1983) *Chemical analysis of whisky maturation*. In: Piggott, J.R., ed., *Flavour of Distilled Beverages: Origin and Development*, Chichester, Ellis Horwood, pp. 225-240
- Reazin, G.H., Baldwin, S., Scales, H.S., Washington, H.W. & Andreasen, A.A. (1976) Determination of the congeners produced from ethanol during whisky maturation. *J. Assoc. off. anal. Chem.*, 59, 770-776
- Rebouças, G. & Isselbacher, K.J. (1961) Studies on the pathogenesis of the ethanol-induced fatty liver. I. Synthesis and oxidation of fatty acids by the liver. *J. clin. Invest.*, 40, 1355-1362
- Redmond, G. & Cohen, G. (1971) Induction of liver acetaldehyde dehydrogenase: possible role in ethanol tolerance after exposure to barbiturates. *Science*, 171, 387-389
- Regan, T.J., Wu, C.F., Weisse, A.B., Moschos, C.B., Ahmed, S.S. & Lyons, M.M. (1975) Acute myocardial infarction in toxic cardiomyopathy without coronary obstruction. *Circulation*, 51, 453-461
- Registrar General (1958) *Decennial Supplement for England and Wales, 1951. Occupational Mortality*, Part II, Vol. 2, Tables, London, Her Majesty's Stationery Office
- Reinhard, C. (1977) Study of whisky (Ger.). *Dtsch. Lebensm.-Rundsch.*, 73, 124-129
- Reinke, L.A. & Moyer, M.J. (1985) *p*-Nitrophenol hydroxylation. A microsomal oxidation which is highly inducible by ethanol. *Drug Metab. Disposition*, 13, 548-552
- Reinke, L.A., Kauffman, F.C., Belinsky, S.A. & Thurman, R.G. (1980) Interactions between ethanol metabolism and mixed-function oxidation in perfused rat liver: inhibition of *p*-nitroanisole O-demethylation. *J. Pharmacol. exp. Ther.*, 213, 70-78
- Reinke, L.A., Moyer, M.J. & Notley, K.A. (1986) Diminished rates of glucuronidation and sulfation in perfused rat liver after chronic ethanol administration. *Biochem. Pharmacol.*, 35, 439-447
- Riboli, E., Caperle, M., Sabatino, C. & Crespi, M. (1986) Evaluation of dietary assessment methods. Pilot phase of a case-control study on colorectal polyps. *Ital. J. Gastroenterol.*, 18, 245-248
- Rieger, R. & Michaelis, A. (1960) *Radiomimetic effects of ethanol in Vicia faba* (Ger.). In: Stubbe, H., ed., *Chemical Mutagenesis. Erwin Baur Memorial Lectures*, I, July 1959, Berlin, Akademie-Verlag, pp. 54-65
- Rieger, R. & Michaelis, A. (1961) Importance of ATP for the radiomimetic effect of ethanol in *Vicia faba* (Ger.). *Naturwissenschaften*, 48, 139
- Rieger, R. & Michaelis, A. (1970) Intrachromosomal clustering of chromatid aberrations induced by maleic hydrazide and ethyl alcohol: studies with a new karyotype of *Vicia faba*. *Mutat. Res.*, 10, 162-164
- Rieger, R. & Michaelis, A. (1972) Effects of chromosome repatterning in *Vicia faba* L. I. Aberration distribution, aberration spectrum, and karyotype sensitivity after treatment with ethanol of differently reconstructed chromosome complements. *Biol. Zbl.*, 91, 151-169
- Rieger, R., Michaelis, A. & Nicoloff, H. (1982) Inducible repair processes in plant root tip meristems? 'Below-additivity effects' of unequally fractionated clastogen concentrations. *Biol. Zbl.*, 101, 125-138

- Rieger, R., Michaelis, A. & Schubert, I. (1985) Heat-shocks prior to treatment of *Vicia faba* root-tip meristems with maleic hydrazide or TEM reduce the yield of chromatid aberrations. *Mutat. Res.*, 143, 79-82
- Riihimäki, V., Savolainen, K., Pfäffli, P., Pekari, K., Sippel, H.W. & Laine, A. (1982) Metabolic interaction between m-xylene and ethanol. *Arch. Toxicol.*, 49, 253-263
- Ristow, H. & Obe, G. (1978) Acetaldehyde induces cross-links in DNA and causes sister-chromatid exchanges in human cells. *Mutat. Res.*, 58, 115-119
- Robinette, C.D., Hrubec, Z. & Fraumeni, J.F., Jr (1979) Chronic alcoholism and subsequent mortality in World War II veterans. *Am. J. Epidemiol.*, 109, 687-700
- Robles, E.A., Mezey, E., Halsted, C.H. & Schuster, M.M. (1974) Effect of ethanol on motility of the small intestine. *Johns Hopkins med. J.*, 135, 17-24
- Rockwood, G.A. & Riley, E.P. (1986) Suckling deficits in rat pups exposed to alcohol *in utero*. *Teratology*, 33, 145-151
- Rohan, T.E. & Potter, J.D. (1984) Retrospective assessment of dietary intake. *Am. J. Epidemiol.*, 120, 876-887
- Room, R. (1978) *Measurement and distribution of drinking patterns and problems in general population*. In: Edwards, G., Gross, M.M., Keller, M., Moser, J. & Room, R., eds, *Alcohol-related Disabilities (WHO Offset Publication No. 32)*, Geneva, World Health Organization, pp. 61-87
- Room, R. (1979) Measurements of drinking patterns in the general population and possible applications in studies of the role of alcohol in cancer. *Cancer Res.*, 39, 2830-2833
- Room, R. (1983) *Region and urbanization as factors in drinking practices and problems*. In: Kissin, B. & Begleiter, H., eds, *The Biology of Alcoholism*, Vol. 6, *The Pathogenesis of Alcoholism: Psychosocial Factors*, New York, Plenum Press, pp. 555-604
- Room, R. (1984) Alcohol control and public health. *Ann. Rev. public Health*, 5, 293-317
- Root, A.W., Reiter, E.O., Andriola, M. & Duckett, G. (1975) Hypothalamic-pituitary function in the fetal alcohol syndrome. *J. Pediatr.*, 87, 585-588
- Rootman, I. & Moser, J. (1984) *Community Response to Alcohol-related Problems (DHHS Publication No. (ADM)85-1371)*, Washington DC, US Government Printing Office, pp. 79-81, 114-117
- Rorabaugh, W.J. (1979) *The Alcoholic Republic: An American Tradition*, New York, Oxford University Press, pp. 61-92
- Rosenberg, L., Slone, D., Shapiro, S., Kaufman, D.W., Helmrich, S.P., Miettinen, O.S., Stolley, P.D., Levy, M., Rosenshein, N.B., Schottenfeld, D. & Engle, R.L., Jr (1982) Breast cancer and alcoholic-beverage consumption. *Lancet*, i, 267-271
- Rosenkranz, H.S. (1977) Mutagenicity of halogenated alkanes and their derivatives. *Environ. Health Perspect.*, 21, 79-84
- Rosovsky, H. (1986) Public health aspects of the production, marketing and control of alcoholic beverages in Mexico. *Contemp. Drug Probl.*, 12, 659-678
- Rothman, K.J. (1976) The estimation of synergy or antagonism. *Am. J. Epidemiol.*, 103, 506-511
- Rothman, K.J. (1978) The effect of alcohol consumption on risk of cancer of the head and neck. *Laryngoscope*, 88 (Suppl. 8), 125-129
- Rothman, K.J. & Keller, A. (1972) The effect of joint exposure to alcohol and tobacco on risk of cancer of the mouth and pharynx. *J. chron. Dis.*, 25, 711-716

- Rubin, E. & Lieber, C.S. (1968) Hepatic microsomal enzymes in man and rat: induction and inhibition by ethanol. *Science*, **162**, 690-691
- Rubin, E., Hutterer, F. & Lieber, C.S. (1968) Ethanol increases hepatic smooth endoplasmic reticulum and drug-metabolizing enzymes. *Science*, **159**, 1469-1470
- Rubin, E., Gang, H., Misra, P.S. & Lieber, C.S. (1970) Inhibition of drug metabolism by acute ethanol intoxication. A hepatic microsomal mechanism. *Am. J. Med.*, **49**, 801-806
- Rubin, E., Gang, H. & Lieber, C.S. (1971) Interaction of ethanol and pyrazole with hepatic microsomes. *Biochem. biophys. Res. Commun.*, **42**, 1-8
- Rubin, E., Lieber, C.S., Altman, K., Gordon, G.G. & Southren, A.L. (1976) Prolonged ethanol consumption increases testosterone metabolism in the liver. *Science*, **191**, 563-564
- Rudeen, P.K., Kappel, C.A. & Lear, K. (1986) Postnatal or in utero ethanol exposure reduction of the volume of the sexually dimorphic nucleus of the preoptic area in male rats. *Drug Alcohol Depend.*, **18**, 247-252
- Rueff, J., Laires, A., Borba, H., Chaveca, T., Gomes, M.I. & Halpern, M. (1986) Genetic toxicology of flavonoids: the role of metabolic conditions in the induction of reverse mutation, SOS functions and sister-chromatid exchanges. *Mutagenesis*, **1**, 179-183
- Rydberg, B. (1985) *Why do Swedish youth drink less alcohol?* In: Tongue, A. & Tongue, E., eds, *Proceedings of the 31st Meeting of the International Institute on the Prevention and Treatment of Alcoholism*, Lausanne, International Council on Alcohol and Addictions, Vol. 1, pp. 475-478
- Saha, R.B., Middlekauff, J.E. & Hardwick, W.A. (1971) Quantitation of nucleic acid materials in beer and wort with particular reference to nucleosides and free bases. *Am. Soc. Brew. Chem. Proc.*, **206**-210
- Salaspuro, M.P. & Lieber, C.S. (1979) *Metabolic consequences of chronic alcohol consumption: attenuation of hepatic redox changes despite enhanced capacity to eliminate ethanol.* In: Galander, M., ed., *Currents in Alcoholism*, Vol. 5, New York, Grune & Stratton, pp. 109-118
- Salaspuro, M.P. & Lieber, C.S. (1980) *Comparison of the detrimental effects of chronic alcohol intake in mammals and animals.* In: Eriksson, K., Sinclair, J.D. & Kiiaman, K., eds, *Animal Models in Alcohol Research*, London, Academic Press, pp. 359-376
- Salaspuro, M.P. & Lindros, K. (1985) *Metabolism and toxicity of acetaldehyde.* In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 106-123
- Salaspuro, M.P. & Mäenpää, P.H. (1966) Influence of ethanol on the metabolism of perfused normal, fatty and cirrhotic rat livers. *Biochem. J.*, **100**, 768-774
- Samson, H.H. (1981) Maternal ethanol consumption and fetal development in the rat: a comparison of ethanol exposure techniques. *Alcohol. clin. exp. Res.*, **5**, 67-74
- Sanchis, R. & Guerri, C. (1986) Chronic ethanol intake in lactating rats: milk analysis. *Comp. Biochem. Physiol.*, **85C**, 107-110
- Sandor, G.G.S., Smith, D.F. & MacLeod, P.M. (1981) Cardiac malformations in the fetal alcohol syndrome. *J. Pediatr.*, **98**, 771-773
- Sandor, S., Fazakas-Todea, I. & Checiu, M. (1980) The effect of ethanol upon early development in mice and rats. II. In vitro effect upon early postimplantation rat embryos. *Morphol. Embryol.*, **26**, 315-320
- Sarles, H. & Laugier, R. (1981) *Alcoholic pancreatitis.* In: Leevy, C.M., ed., *Clinics in Gastroenterology*, Vol. 10, *Alcohol and the GI Tract*, London, W.B. Saunders, pp. 401-415

- Sato, A. & Nakajima, T. (1985) Enhanced metabolism of volatile hydrocarbons in rat liver following food deprivation, restricted carbohydrate intake, and administration of ethanol, phenobarbital, polychlorinated biphenyl and 3-methylcholanthrene: a comparative study. *Xenobiotica*, 15, 67-75
- Sato, A., Nakajima, T. & Koyama, Y. (1981) Dose-related effects of a single dose of ethanol on the metabolism in rat liver of some aromatic and chlorinated hydrocarbons. *Toxicol. appl. Pharmacol.*, 60, 8-15
- Sato, A., Yonekura, I., Asakawa, M., Nakahara, H., Nakajima, T., Ohta, S., Shirai, T. & Ito, N. (1986) Augmentation of ethanol-induced enhancement of dimethylnitrosamine and diethylnitrosamine metabolism by lowered carbohydrate intake. *Jpn. J. Cancer Res. (Gann)*, 77, 125-130
- Sato, C., Matsuda, Y. & Lieber, C.S. (1981) Increased hepatotoxicity of acetaminophen after chronic ethanol consumption in the rat. *Gastroenterology*, 80, 140-148
- Sato, C., Hasumura, Y. & Takeuchi, J. (1985) *Interaction of ethanol with drugs and xenobiotics*. In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 172-184
- Sato, M. & Lieber, C.S. (1981) Hepatic vitamin A depletion after chronic ethanol consumption in baboons and rats. *J. Nutr.*, 111, 2015-2023
- Schatzkin, A., Jones, D.Y., Hoover, R.N., Taylor, P.R., Brinton, L.A., Ziegler, R.G., Harvey, E.B., Carter, C.L., Licitra, L.M., Dufour, M.C. & Larson, D.B. (1987) Alcohol consumption and breast cancer in the epidemiologic follow-up study of the First National Health and Nutritional Examination Survey. *New Engl. J. Med.*, 316, 1169-1173
- Schmähl, D. (1976) Investigations on esophageal carcinogenicity by methylphenylnitrosamine and ethyl alcohol in rats. *Cancer Lett.*, 1, 215-218
- Schmähl, D., Thomas, C., Sattler, W. & Scheld, G.F. (1965) Experimental studies on syncarcinogenesis. III. Attempts to induce cancer in rats by administering diethylnitrosamine and CCl_4 (or ethyl alcohol) simultaneously. In addition, an experimental contribution regarding 'alcoholic cirrhosis' (Ger.). *Z. Krebsforsch.*, 66, 526-532
- Schmidt, W. & de Lint, J. (1972) Causes of death of alcoholics. *Q. J. Stud. Alcohol*, 33, 171-185
- Schmidt, W. & Popham, R.E. (1981) The role of drinking and smoking in mortality from cancer and other causes in male alcoholics. *Cancer*, 47, 1031-1041
- Schmidt, W., Popham, R.E. & Israel, Y. (1987) Dose-specific effects of alcohol on the lifespan of mice and the possible relevance to man. *Br. J. Addict.*, 82, 775-788
- Schmitt, A. (1972) Correlation between the content of compounds and sensorial properties of German wines in the province of Frankonia (Ger.). *Bayer. Landwirtsch. Jahrb.*, 49, 259-330
- Schnellmann, R.G., Wiersma, D.A., Randall, D.J., Smith, T.L. & Sipes, I.G. (1984) Hepatic mixed function oxygenase activity and glutathione S-transferase activity in mice following ethanol consumption and withdrawal. *Toxicology*, 32, 105-116
- Schoeneman, R.L. & Dyer, R.H. (1973) Analytical profile of Scotch whiskies. *J. Assoc. off. anal. Chem.*, 56, 1-10
- Schoeneman, R.L., Dyer, R.H. & Earl, E.M. (1971) Analytical profile of straight bourbon whiskies. *J. Assoc. off. anal. Chem.*, 54, 1247-1261
- Scholz, R. & Nohl, H. (1976) Mechanism of the stimulatory effect of fructose on ethanol oxidation in perfused rat liver. *Eur. J. Biochem.*, 63, 449-458

- Schrauzer, G.N., McGinness, J.E., Ishmael, D. & Bell, L.J. (1979) Alcoholism and cancer. I. Effects of long-term exposure to alcohol on spontaneous mammary adenocarcinoma and prolactin levels in C3H/St mice. *J. Stud. Alcohol*, 40, 240-246
- Schrauzer, G.N., Hamm, D., Kuehn, K. & Nakonecny, G. (1982) Effects of long term exposure to beer on the genesis and development of spontaneous mammary adenocarcinoma and prolactin levels in female virgin C₃H/St mice. *J. Am. Coll. Nutr.*, 1, 285-291
- Schreier, P. (1984) *Formation of wine aroma*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 9-37
- Schreier, P. & Drawert, F. (1974) Gas chromatographic-mass spectrometric investigation of volatile constituents of wines. V. Alcohols, hydroxy-esters, lactones and other polar compounds of wine flavour (Ger.). *Chem. mikrobiol. Technol. Lebensm.*, 3, 154-160
- Schreier, P., Drawert, F. & Junker, A. (1975) Biosynthesis of aroma compounds by microorganisms. I. Formation of N-acetylamines by *Saccharomyces cerevisiae* (Ger.). *Z. Lebensmitteluntersuch. Forsch.*, 158, 351-360
- Schreier, P., Drawert, F. & Junker, A. (1976a) Gas chromatographic-mass spectrometric differentiation of the aroma compounds of different grape varieties of *Vitis vinefera* (Ger.). *Chem. mikrobiol. Technol. Lebensm.*, 4, 154-157
- Schreier, P., Drawert, F., Junker, A. & Reiner, L. (1976b) Application of the multiple discriminant analysis for the differentiation of grape varieties using the quantitative distribution of volatile wine constituents (Ger.). *Mitt. Rebe Wein Obstbau Früchteverwert. Klosterneuburg*, 26, 225-234
- Schreier, P., Drawert, F. & Schmid, M. (1978) Changes in the composition of neutral volatile components during the production of apple brandy. *J. Sci. Food Agric.*, 29, 728-736
- Schreier, P., Drawert, F. & Winkler, F. (1979) Composition of neutral volatile constituents in grape brandies. *J. agric. Food Chem.*, 27, 365-372
- Schubert, I., Sturelid, S., Döbel, P. & Rieger, R. (1979) Intra-chromosomal distribution patterns of mutagen-induced SCEs and chromatid aberrations in reconstructed karyotypes of *Vicia faba*. *Mutat. Res.*, 59, 27-38
- Schuller, P.L., Ockhuizen, T., Werringloer, J. & Marquardt, D. (1967) Aflatoxin B₁ and histamine in wine (Ger.). *Arzneimittelforschung*, 17, 888-890
- Schwartz, D., Denoix, P.F. & Anguera, G. (1957) Cancer sites associated with tobacco and alcohol in humans (Fr.). *Bull. Cancer*, 44, 336-361
- Schwartz, D., Lellouch, J., Flamant, R. & Denoix, P.F. (1962) Alcohol and cancer. Results of a retrospective study (Fr.). *Rev. fr. Etud. clin. biol.*, 7, 590-604
- Schwartz, J.L., Banda, M.J. & Wolff, S. (1982) 12-O-Tetradecanoylphorbol-13-acetate (TPA) induces sister-chromatid exchanges and delays in cell progression in Chinese hamster ovary and human cell lines. *Mutat. Res.*, 92, 393-409
- Schwarz, M., Buchmann, A., Wiesbeck, G. & Kunz, W. (1983) Effect of ethanol on early stages in nitrosamine carcinogenesis in rat liver. *Cancer Lett.*, 20, 305-312
- Schwarz, M., Buchmann, A., Moore, M. & Kunz, W. (1984) *The mechanism of cocarcinogenic action of ethanol in rat liver*. In: Börzsönyi, M., Lapis, K., Day, N.E. & Yamasaki, H., eds, *Models, Mechanisms and Etiology of Tumour Promotion (IARC Scientific Publications No. 56)*, Lyon, International Agency for Research on Cancer, pp. 83-90

- Schwetz, B.A., Smith, F.A. & Staples, R.E. (1978) Teratogenic potential of ethanol in mice, rats and rabbits. *Teratology*, 18, 385-392
- Scott, W.J., Jr & Fradkin, R. (1984) The effects of prenatal ethanol in cynomolgus monkeys. *Teratology*, 29, 49-56
- Seeff, L.B., Cuccherini, B.A., Zimmerman, H.J., Adler, E. & Benjamin, S.B. (1986) Acetaminophen hepatotoxicity in alcoholics. A therapeutic misadventure. *Ann. intern. Med.*, 104, 399-404
- Seitz, H.K. (1985) *Ethanol and carcinogenesis*. In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 196-212
- Seitz, H.K., Garro, A.J. & Lieber, C.S. (1978) Effect of chronic ethanol ingestion on intestinal metabolism and mutagenicity of benzo(a)pyrene. *Biochem. biophys. Res. Commun.*, 85, 1061-1066
- Seitz, H.K., Korsten, M.A. & Lieber, C.S. (1979) Ethanol oxidation by intestinal microsomes: increased activity after chronic ethanol administration. *Life Sci.*, 25, 1443-1448
- Seitz, H.K., Garro, A.J. & Lieber, C.S. (1981a) Sex dependent effect of chronic ethanol consumption in rats on hepatic microsome mediated mutagenicity of benzo[a]pyrene. *Cancer Lett.*, 13, 97-102
- Seitz, H.K., Garro, A.J. & Lieber, C.S. (1981b) Enhanced pulmonary and intestinal activation of procarcinogens and mutagens after chronic ethanol consumption in the rat. *Eur. J. clin. Invest.*, 11, 33-38
- Seitz, H.K., Bösche, J., Czygan, P., Veith, S. & Kommerell, B. (1982) Microsomal ethanol oxidation in the colonic mucosa of the rat. Effect of chronic ethanol ingestion. *Naunyn-Schmiedeberg's Arch. Pharmacol.*, 320, 81-84
- Seitz, H.K., Czygan, P., Waldherr, R., Veith, S., Raedsch, R., Kässmodel, H. & Kommerell, B. (1984) Enhancement of 1,2-dimethylhydrazine-induced rectal carcinogenesis following chronic ethanol consumption in the rat. *Gastroenterology*, 86, 886-891
- Seitz, H.K., Czygan, P., Simanowski, U., Waldherr, R., Veith, S., Raedsch, R. & Kommerell, B. (1985) Stimulation of chemically induced rectal carcinogenesis by chronic ethanol ingestion. *Alcohol Alcohol.*, 20, 427-433
- Sen, N.P. (1969) Analysis and significance of tyramine in foods. *J. Food Sci.*, 34, 22-26
- Serbus, D.C., Stull, R.E. & Light, K.E. (1986) Neonatal ethanol exposure to rat pups: resultant alterations of cortical muscarinic and cerebellar H¹-histaminergic receptor binding dynamics. *Neuro Toxicol.*, 7, 257-278
- Seshadri, R., Baker, E. & Sutherland, G.R. (1982) Sister-chromatid exchange (SCE) analysis in mothers exposed to DNA-damaging agents and their newborn infants. *Mutat. Res.*, 97, 139-146
- Sharma, A. & Rawat, A.K. (1986) Teratogenic effects of lithium and ethanol in the developing fetus. *Alcohol*, 3, 101-106
- Shaw, S., Jayatilleke, E., Ross, W.A., Gordon, E.R. & Lieber, C.S. (1981) Ethanol-induced lipid peroxidation: potentiation by long-term alcohol feeding and attenuation by methionine. *J. Lab. clin. Med.*, 98, 417-424
- Shibata, A., Hirohata, T., Toshima, H. & Tashiro, H. (1986) The role of drinking and cigarette smoking in the excess deaths from liver cancer. *Jpn. J. Cancer Res. (Gann)*, 77, 287-295
- Shigeta, Y., Nomura, F., Iida, S., Leo, M.A., Felder, M.R. & Lieber, C.S. (1984) Ethanol metabolism *in vivo* by the microsomal ethanol-oxidizing system in deermice lacking alcohol dehydrogenase (ADH). *Biochem. Pharmacol.*, 33, 807-814

- Shimizu, J. & Watanabe, M. (1978) Gas chromatographic determination of diethyl esters of succinic, malic, and tartaric acid in wine (Jpn.). *Nippon Nogeikagaku Kaishi*, 52, 289-291 [Chem. Abstr., 89, 161476n]
- Shinohara, T. & Watanabe, M. (1976) Gas chromatographic analysis of higher alcohols and ethyl acetate in table wines. *Agric. Biol. Chem. (Tokyo)*, 40, 2475-2477
- Sies, H. (1974) Biochemistry of the peroxisome of the liver cell. *Angew. Chem. int. Ed.*, 13, 706-718
- Simanowski, U.A., Seitz, H.K., Baier, B., Kommerell, B., Schmidt-Gayk, H. & Wright, N.A. (1986) Chronic ethanol consumption selectively stimulates rectal cell proliferation in the rat. *Gut*, 27, 278-282
- Simpson, R.F. & Miller, G.C. (1983) Aroma composition of aged Riesling wine. *Vitis*, 22, 51-63
- Simpson, R.F. & Miller, G.C. (1984) Aroma composition of Chardonnay wine. *Vitis*, 23, 143-158
- Sina, J.F., Bean, C.L., Dysart, G.R., Taylor, V.I. & Bradley, M.O. (1983) Evaluation of the alkaline elution/rat hepatocyte assay as a predictor of carcinogenic/mutagenic potential. *Mutat. Res.*, 113, 357-391
- Skog, O.-J. (1980) Is alcohol consumption lognormally distributed? *Br. J. Addict.*, 75, 169-173
- Skog, O.-J. (1985) The collectivity of drinking cultures: a theory of the distribution of alcohol consumption. *Br. J. Addict.*, 80, 83-99
- Slaughter, J.C. & Uvgard, A.R.A. (1971) Volatile amines of malt and beer. *J. Inst. Brew.*, 77, 446-450
- de Smedt, P., Liddle, P.A.P., Cresto, B. & Bossard, A. (1981) The analysis of non-volatile constituents of wine by glass capillary gas chromatography. *J. Inst. Brew.*, 87, 349-351
- Smith, B.A. & Gutmann, H.R. (1984) Differential effect of chronic ethanol consumption by the rat on microsomal oxidation of hepatocarcinogens and their activation to mutagens. *Biochem. Pharmacol.*, 33, 2901-2910
- Smith, D.I. (1987) Should the maximum alcohol content of beer sold in western Australia be restricted? *Aust. Drug Alcohol Rev.*, 6, 93-104
- Smith, D.M. & James, D.A. (1984) A comparison of alternative distributions of postimplantation death in the dominant lethal assay. *Mutat. Res.*, 128, 195-206
- Smith, I.E., Coles, C.D., Lancaster, J., Fernhoff, P.M. & Falek, A. (1986) The effect of volume and duration of prenatal ethanol exposure on neonatal physical and behavioral development. *Neurobehav. Toxicol. Teratol.*, 8, 375-381
- Smith, M.E. & Newman, H.W. (1959) The rate of ethanol metabolism in fed and fasting animals. *J. biol. Chem.*, 234, 1544-1549
- Smith, M., Hopkinson, D.A. & Harris, H. (1971) Developmental changes and polymorphism in human alcohol dehydrogenase. *Ann. hum. Genet.*, 34, 251-271
- Smith, M., Hopkinson, D.A. & Harris, H. (1973) Studies on the subunit structure and molecular size of the human alcohol dehydrogenase isozymes determined by the different loci, ADH₁, ADH₂ and ADH₃. *Ann. hum. Genet.*, 36, 401-414
- Smyth, H.F., Jr, Seaton, J. & Fischer, L. (1941) The single dose toxicity of some glycols and derivatives. *J. ind. Hyg. Toxicol.*, 23, 259-268
- Snyder, A.K., Singh, S.P. & Pullen, G.L. (1986) Ethanol-induced intrauterine growth retardation: correlation with placental glucose transfer. *Alcohol. clin. exp. Res.*, 10, 167-170
- Sobti, R.C., Krishan, A. & Pfaffenberger, C.D. (1982) Cytokinetic and cytogenetic effects of some agricultural chemicals on human lymphoid cells *in vitro*: organophosphates. *Mutat. Res.*, 102, 89-102

- Sobti, R.C., Krishan, A. & Davies, J. (1983) Cytokinetic and cytogenetic effect of agricultural chemicals on human lymphoid cells *in vitro*. II. Organochlorine pesticides. *Arch. Toxicol.*, 52, 221-231
- Sohn, O.S., Fiala, E.S., Puz, C., Hamilton, S.R. & Williams, G.M. (1987) Enhancement of rat liver microsomal metabolism of azoxymethane to methylazoxymethanol by chronic ethanol administration: similarity to the microsomal metabolism of *N*-nitrosodimethylamine. *Cancer Res.*, 47, 3123-3129
- Sokol, R.J., Miller, S.I. & Reed, G. (1980) Alcohol abuse during pregnancy: an epidemiologic study. *Alcohol. clin. exp. Res.*, 4, 135-145
- Song, B.-J., Gelboin, H.V., Park, S.-S., Yang, C.S. & Gonzalez, F.J. (1986) Complementary DNA and protein sequences of ethanol-inducible rat and human cytochrome P-450s. *J. biol. Chem.*, 261, 16689-16697
- Sorette, M.P., Maggio, C.A., Starpoli, A., Boissevain, A. & Greenwood, M.R.C. (1980) Maternal ethanol intake affects rat organ development despite adequate nutrition. *Neurobehav. Toxicol.*, 2, 181-188
- Sousa, J., Nath, J. & Ong, T.-M. (1985) Dietary factors affecting the urinary mutagenicity assay system. II. The absence of mutagenic activity in human urine following consumption of red wine or grape juice. *Mutat. Res.*, 156, 171-176
- Spalajkovic, M. (1976) Alcoholism and cancer of the larynx and hypopharynx (Fr.). *J. fr. Oto-rhino-laryngol.*, 25, 49-50
- Spector, W.S., ed. (1956) *Handbook of Toxicology*, Vol. 1, *Acute Toxicities of Solids, Liquids and Bases to Laboratory Animals*, Philadelphia, PA, W.B. Saunders, pp. 128-131
- Spettoli, P. (1971) Histamine and other biogenic amines in some Italian wines (Ital.). *Ind. agrar.*, 9, 1-5
- Spiegel, P.G., Pekman, W.M., Rich, B.H., Versteeg, C.N., Nelson, V. & Dudnikov, M. (1979) The orthopedic aspects of the fetal alcohol syndrome. *Clin. Orthop.*, 139, 58-63
- Spiegelhalder, B. & Preussmann, R. (1985) In vivo nitrosation of amidopyrine in humans: use of 'ethanol effect' for biological monitoring of *N*-nitrosodimethylamine in urine. *Carcinogenesis*, 6, 545-548
- Spiegelhalder, B., Eisenbrand, G. & Preussmann, R. (1979) Contamination of beer with trace quantities of *N*-nitrosodimethylamine. *Food Cosmet. Toxicol.*, 17, 29-31
- Spiegelhalder, B., Eisenbrand, G. & Preussmann, R. (1982) *Urinary excretion of N-nitrosamines in rats and humans*. In: Bartsch, H., O'Neill, I.K., Castegnaro, M. & Okada, M., eds, *N-Nitroso Compounds: Occurrence and Biological Effects* (IARC Scientific Publications No. 41), Lyon, International Agency for Research on Cancer, pp. 443-449
- Sponholz, W.R. (1979) Monoethylester of tartaric and malic acid in wine (Ger.). *Dtsch. Lebensm.-Rundsch.*, 75, 277-279
- Stavric, B., Stoltz, D.R. & Klassen, R. (1983) Toxicants in foods with special emphasis on mutagens in beverages, fruits and vegetables. *Toxicon, Suppl.* 3, 409-412
- Steele, C.M. & Ioannides, C. (1986) Different effects of chronic alcohol administration to rats on the activation of aromatic amines to mutagens in the Ames test. *Carcinogenesis*, 7, 825-829
- Steiner, K., Schur, F. & Pfenninger, H. (1969) Determination of formaldehyde in beer (Ger.). *Brauwissenschaft*, 22, 87-90

- Stemhagen, A., Slade, J., Altman, R. & Bill, J. (1983) Occupational risk factors and liver cancer. A retrospective case-control study of primary liver cancer in New Jersey. *Am. J. Epidemiol.*, **117**, 443-454
- Stenbäck, F. (1969) The tumorigenic effect of ethanol. *Acta pathol. microbiol. scand.*, **77**, 325-326
- Stocks, P. (1957) *Cancer incidence in North Wales and Liverpool region in relation to habits and environment*. In: *British Empire Cancer Campaign 35th Annual Report*, Part II (Suppl.), London
- Stoltz, D.R., Stavric, B., Klassen, R. & Muise, T. (1982a) *The health significance of mutagens in foods*. In: Stich, H.F., ed., *Carcinogens and Mutagens in the Environment*, Vol. 1, *Food Products*, Boca Raton, FL, CRC Press, pp. 185-197
- Stoltz, D.R., Stavric, B., Krewski, D., Klassen, R., Bendall, R. & Junkins, B. (1982b) Mutagenicity screening of foods. I. Results with beverages. *Environ. Mutagenesis*, **4**, 477-492
- Stowell, A.R., Greenway, R.M. & Batt, R.D. (1977) Acetaldehyde formation during deproteinization of human blood samples containing ethanol. *Biochem. Med.*, **18**, 392-401
- Strauss, C.R., Williams, P.J., Wilson, B. & Dimitriadis, E. (1984) *Formation and identification of aroma compounds from non-volatile precursors in grapes and wine*. In: Nykänen, L. & Lehtonen, P., eds, *Flavour Research of Alcoholic Beverages*, Vol. 3, *Instrumental and Sensory Analysis*, Helsinki, Foundation for Biotechnical and Industrial Fermentation Research, pp. 51-60
- Streissguth, A.P. (1983) Alcohol and pregnancy: an overview and an update. *Subst. Alcohol Actions Misuse*, **4**, 149-173
- Streissguth, A.P., Landesman-Dwyer, S., Martin, J.C. & Smith, D.W. (1980) Teratogenic effects of alcohol in humans and laboratory animals. *Science*, **209**, 353-361
- Streissguth, A.P., Martin, D.C., Martin, J.C. & Barr, H.M. (1981) The Seattle longitudinal prospective study on alcohol and pregnancy. *Neurobehav. Toxicol. Teratol.*, **3**, 223-233
- Streissguth, A.P., Clarren, S.K. & Jones, K.L. (1985) Natural history of the fetal alcohol syndrome: a 10-year follow-up of eleven patients. *Lancet*, **ii**, 85-91
- Strömland, K. (1981) Eyeground malformations in the fetal alcohol syndrome. *Neuropediatrics*, **12**, 97-98
- Strubelt, O., Obermeier, F. & Siegers, C.P. (1978) The influence of ethanol pretreatment on the effects of nine hepatotoxic agents. *Acta pharmacol. toxicol.*, **43**, 211-218
- Strum, W.B. & Spiro, H.M. (1971) Chronic pancreatitis. *Ann. intern. Med.*, **74**, 264-277
- Stuckey, E. & Berry, C.L. (1984) The effects of high dose sporadic (binge) alcohol intake in mice. *J. Pathol.*, **142**, 175-180
- Subden, R.E., Krizus, A. & Rancourt, D. (1984) Mutagen content of table wines made from various grape species and hybrid cultivars. *Food chem. Toxicol.*, **22**, 309-313
- Sulik, K.K. & Johnston, M.C. (1983) Sequence of developmental alterations following acute ethanol exposure in mice: craniofacial features of the fetal alcohol syndrome. *Am. J. Anat.*, **166**, 257-269
- Sulik, K.K., Johnston, M.C. & Webb, M.A. (1981) Fetal alcohol syndrome: embryogenesis in a mouse model. *Science*, **214**, 936-938
- Sundaram, K.R., Mohan, D., Advani, G.B., Sharma, H.K. & Bajaj, J.S. (1984) Alcohol abuse in a rural community in India. Part 1, epidemiological study. *Drug Alcohol Depend.*, **14**, 27-36
- Sundby, P. (1967) *Alcoholism and Mortality*, Oslo, Universitetsforlaget

- Sundheimer, D.W. & Brendel, K. (1984) Factors influencing sulfation in isolated rat hepatocytes. *Life Sci.*, 34, 23-29
- Suomalainen, H. & Nykänen, L. (1970) Investigations on the aroma of alcoholic beverages. *Noeringsmiddelindustrien*, 23, 1-15
- Swann, P.F. (1984) *Effect of ethanol on nitrosamine metabolism and distribution. Implications for the role of nitrosamines in human cancer and for the influence of alcohol consumption on cancer incidence.* In: O'Neill, I.K., von Borstel, R.C., Miller, C.T., Long, J. & Bartsch, H., eds, *N-Nitroso Compounds: Occurrence, Biological Effects and Relevance to Human Cancer* (IARC Scientific Publications No. 57), Lyon, International Agency for Research on Cancer, pp. 501-512
- Swann, P.F., Coe, A.M. & Mace, R. (1984) Ethanol and dimethylnitrosamine and diethylnitrosamine metabolism and disposition in the rat. Possible relevance to the influence of ethanol on human cancer incidence. *Carcinogenesis*, 5, 1337-1343
- Sweeny, D.J. & Reinke, L.A. (1987) Effect of ethanol feeding on hepatic microsomal UDP-glucuronyltransferase activity. *Biochem. Pharmacol.*, 36, 1381-1383
- Swiatek, K.R., Dombrowski, G.J., Jr & Chao, K.-L. (1986) The inefficient transfer of maternally fed alcohol to nursing rats. *Alcohol*, 3, 169-174
- Switzer, B.R., Anderson, J.J.B. & Pick, J.R. (1986) Effects of dietary protein and ethanol intake on pregnant beagles fed purified diets. *J. Nutr.*, 116, 689-697
- Systembolaget (Swedish Alcoholic Retailing Monopoly) (1986) *Annual Report* (Swed.), Stockholm
- Szilagyi, A. (1987) Thyroid hormones and alcoholic liver disease. *J. clin. Gastroenterol.*, 9, 189-193
- Takada, A., Nei, J., Takase, S. & Matsuda, Y. (1986) Effects of ethanol on experimental hepatocarcinogenesis. *Hepatology*, 6, 65-72
- Takahashi, D.M. (1974) Thin layer chromatographic determination of aflatoxins in wine. *J. Assoc. off. anal. Chem.*, 57, 875-879
- Takahashi, M., Hasegawa, R., Furukawa, F., Toyoda, K., Sato, H. & Hayashi, Y. (1986) Effects of ethanol, potassium metabisulfite, formaldehyde and hydrogen peroxide on gastric carcinogenesis in rats after initiation with *N*-methyl-*N'*-nitro-*N*-nitrosoguanidine. *Jpn. J. Cancer Res. (Gann)*, 77, 118-124
- Takehisa, S. & Kanaya, N. (1983) A comparison of *Vicia-faba*-root S10 and rat-liver S9 activation of ethanol, maleic hydrazide and cyclophosphamide as measured by sister-chromatid exchange induction in Chinese hamster ovary cells. *Mutat. Res.*, 124, 145-151
- Talamini, R., La Vecchia, C., Decarli, A., Franceschi, S., Grattoni, E., Grigoletto, E., Liberati, A. & Tognoni, G. (1984) Social factors, diet and breast cancer in a northern Italian population. *Br. J. Cancer*, 49, 723-729
- Tamura, G., Gold, C., Ferro-Luzzi, A. & Ames, B.N. (1980) Fecalase: a model for activation of dietary glycosides to mutagens by intestinal flora. *Proc. natl Acad. Sci. USA*, 77, 4961-4965
- Tates, A.D., de Vogel, N. & Neuteboom, I. (1980) Cytogenetic effects in hepatocytes, bone-marrow cells and blood lymphocytes of rats exposed to ethanol in the drinking water. *Mutat. Res.*, 79, 285-288
- Teschke, R., Minzlaff, M., Oldiges, H. & Frenzel, H. (1983) Effect of chronic alcohol consumption on tumor incidence due to dimethylnitrosamine administration. *J. Cancer Res. clin. Oncol.*, 106, 58-64
- Thieden, H.I.D. & Lundquist, F. (1967) The influence of fructose and its metabolites on ethanol metabolism *in vitro*. *Biochem. J.*, 102, 177-180

- Thieden, H.I.D., Grunnet, N., Damgaard, S.E. & Sestoft, L. (1972) Effect of fructose and glyceraldehyde on ethanol metabolism in human liver and rat liver. *Eur. J. Biochem.*, 30, 250-261
- Thiessen, D.D., Whitworth, N.S. & Rodgers, D.A. (1966) Reproductive variables and alcohol consumption of the C57BL/Crgl female mouse. *Q. J. Stud. Alcohol*, 27, 591-595
- Thomas, D.B., Uhl, C.N. & Hartge, P. (1983) Bladder cancer and alcoholic beverage consumption. *Am. J. Epidemiol.*, 118, 720-727
- Thomas, P.E., Bandiera, S., Maines, S.L., Ryan, D.E. & Levin, W. (1987) Regulation of cytochrome P-450j, a high-affinity *N*-nitrosodimethylamine demethylase, in rat hepatic microsomes. *Biochemistry*, 26, 2280-2289
- Thomson, A. & Majumdar, S.K. (1981) *The influence of ethanol on intestinal absorption and utilization of nutrients*. In: Leevy, C.M., ed., *Clinics in Gastroenterology*, Vol. 10, *Alcohol in the GI Tract*, London, W.B. Saunders, pp. 263-293
- Thurman, R.G. (1977) Hepatic alcohol oxidation and its metabolic liability. *Fed. Proc.*, 36, 1640-1646
- Thurman, R.G., Glassman, E.B., Handler, J.A. & Forman, D. (1988) *The swift increase in alcohol metabolism (SIAM): a commentary on the regulation of alcohol metabolism in mammals*. In: Crow, C. & Batt, B., eds, *Human Alcohol Metabolism*, Boca Raton, FL, CRC Press (in press)
- Tillner, I. & Majewski, F. (1978) Furrows and dermal ridges of the hand in patients with alcohol embryopathy. *Hum. Genet.*, 42, 307-314
- Tobon, F. & Mezey, E. (1971) Effect of ethanol administration on hepatic ethanol and drug-metabolizing enzymes and on rates of ethanol degradation. *J. Lab. clin. Med.*, 77, 110-121
- Tomera, J.F., Skipper, P.L., Wishnok, J.S., Tannenbaum, S.R. & Brunengraber, H. (1984) Inhibition of *N*-nitrosodimethylamine metabolism by ethanol and other inhibitors in the isolated perfused rat liver. *Carcinogenesis*, 5, 113-116
- Topham, J.C. (1980) The detection of carcinogen-induced sperm head abnormalities in mice. *Mutat. Res.*, 69, 149-155
- Topham, J.C. (1983) *Chemically induced changes in sperm in animals and humans*. In: de Serres, F.J., ed., *Chemical Mutagens. Principles and Methods for Their Detection*, Vol. 8, New York, Plenum Press, pp. 201-234
- de Torok, D. (1972) Chromosomal irregularities in alcoholics. *Ann. N.Y. Acad. Sci.*, 197, 90-100
- Toskulkao, C. & Glinsukon, T. (1986) Effect of ethanol on the in vivo covalent binding and in vitro metabolism of aflatoxin B₁ in rats. *Toxicol. Lett.*, 30, 151-157
- Tottmar, S.O.C., Kiessling, K.-H. & Forsling, M. (1974) Effects of phenobarbital and ethanol on rat liver aldehyde dehydrogenases. *Acta pharmacol. toxicol.*, 35, 270-276
- Traiger, G.J. & Plaa, G.L. (1971) Differences in the potentiation of carbon tetrachloride in rats by ethanol and isopropanol pretreatment. *Toxicol. appl. Pharmacol.*, 20, 105-112
- Treml, V.G. (1982) *Alcohol in the USSR: A Statistical Study*, Durham, NC, Duke Press Policy Studies
- Tressl, R., Kossa, T. & Renner, R. H. (1975a) *Gas chromatographic-mass spectrometric analysis of volatile compounds of hops, wort and beer and their genesis. II. Phenols and oxygen-containing heterocyclic components in wort and beer* (Ger.). In: *Proceedings of the European Brewery Convention, Nice*, pp. 737-756
- Tressl, R., Kossa, T., Renner, R. & Köppler, H. (1975b) *Gas chromatographic-mass spectrometric analysis of volatile compounds of hops, wort and beer and their genesis. I. Organic acids in wort and beer* (Ger.). *Montasschr. Brau.*, 28, 109-118

- Tressl, R., Renner, R. & Apetz, M. (1976) Volatile phenolic compounds in beer, smoked beer and sherry (Ger.). *Z. Lebensmitteluntersuch. Forsch.*, 162, 115-122
- Tressl, R., Renner, R., Kossa, T. & Köppler, H. (1977) *Gas chromatographic-mass spectrometric analysis of volatile compounds in hops, wort and beer and their genesis. III. Nitrogen-containing aroma components in malt and beer* (Ger.). In: *Proceedings in the 16th European Brewery Convention Congress, Amsterdam*, pp. 639-707
- Tressl, R., Friese, L., Fendesack, F. & Köppler, H. (1978) Gas chromatographic-mass spectrometric investigation of hop aroma constituents in beer. *J. agric. Food Chem.*, 26, 1422-1426
- Trichopoulos, D., Ouranos, G., Day, N.E., Tzonou, A., Manousos, O., Papadimitriou, C. & Trichopoulos, A. (1985) Diet and cancer of the stomach: a case-control study in Greece. *Int. J. Cancer*, 36, 291-297
- Trichopoulos, D., Day, N.E., Kaklamani, E., Tzonou, A., Muñoz, N., Zavitsanos, X., Koumantaki, Y. & Trichopoulos, A. (1987) Hepatitis B virus, tobacco smoking and ethanol consumption in the etiology of hepatocellular carcinomas. *Int. J. Cancer*, 39, 45-49
- Truitt, E.B., Jr (1971) *Blood acetaldehyde levels after alcohol consumption by alcoholic and nonalcoholic subjects*. In: Roach, M.K., McIsaac, W.M. & Creaven, P.J., eds, *Biological Aspects of Alcohol*, Austin, TX, University of Texas, pp. 212-232
- Tsukamoto, H., French, S.W., Benson, N., Delgado, G., Rao, G.A., Larkin, E.C. & Largman, C. (1985) Severe and progressive steatosis and focal necrosis in rat liver induced by continuous intragastric infusion of ethanol and low fat diet. *Hepatology*, 5, 224-232
- Tsukamoto, H., Towner, S.J., Ciofalo, L.M. & French, S.W. (1986) Ethanol-induced liver fibrosis in rats fed high fat diet. *Hepatology*, 6, 814-822
- Tuma, D.J., Zetterman, R.K. & Sorrell, M.F. (1980) Inhibition of glycoprotein secretion by ethanol and acetaldehyde in rat liver slices. *Biochem. Pharmacol.*, 29, 35-38
- Tuttas, R. & Beye, F. (1977) The genuine compounds of *Cerasus avium* and their taste from the fruit to the distillate (Ger.). *Branntweinwirtschaft*, 117, 349-355
- Tuyns, A.J. (1970) Cancer of the esophagus: further evidence of the relation to drinking habits in France. *Int. J. Cancer*, 5, 152-156
- Tuyns, A.J. (1983) Oesophageal cancer in non-smoking drinkers and in non-drinking smokers. *Int. J. Cancer*, 32, 443-444
- Tuyns, A.J. & Massé, G. (1975) Cancer of the oesophagus in Brittany: an incidence study in Ille-et-Vilaine. *Int. J. Epidemiol.*, 4, 55-59
- Tuyns, A.J. & Péquignot, G. (1984) Greater risk of ascitic cirrhosis in females in relation to alcohol consumption. *Int. J. Epidemiol.*, 13, 53-57
- Tuyns, A.J., Péquignot, G. & Jensen, O.M. (1977) Oesophageal cancer in Ille-et-Vilaine in relation to alcohol and tobacco consumption: multiplicative risks (Fr.). *Bull. Cancer*, 64, 45-60
- Tuyns, A.J., Péquignot, G. & Abbatucci, J.S. (1979) Oesophageal cancer and alcohol consumption: importance of type of beverage. *Int. J. Cancer*, 23, 443-447
- Tuyns, A.J., Castegnaro, M., Toussaint, G., Walker, E.A., Graciute, L., Le Talaer, L.Y., Loquet, C., Guérain, J. & Drilleau, J.F. (1980) Research on etiological factors for oesophageal cancer in the west of France (Fr.). *Bull. Cancer*, 67, 15-28
- Tuyns, A.J., Péquignot, G., Gignoux, M. & Valla, A. (1982) Cancers of the digestive tract, alcohol and tobacco. *Int. J. Cancer*, 30, 9-11

- Tuyns, A.J., Hu, M.X. & Péquignot, G. (1983) Alcohol consumption patterns in the department of Calvados (France). *Rev. Epidémiol. Santé publique*, 31, 179-197
- Tuyns, A.J., Riboli, E., Doornbos, G. & Péquignot, G. (1987) Diet and esophageal cancer in Calvados (France). *Nutr. Cancer*, 9, 81-92
- Tuyns, A.J., Estève, J., Raymond, L., Berrino, F., Benhamou, E., Blanchet, F., Boffetta, P., Crosignani, P., del Moral, A., Lehmann, W., Merletti, F., Péquignot, G., Riboli, E., Sancho-Garnier, H., Terracini, B., Zubiri, A. & Zubiri, Z. (1988) Cancer of the larynx/hypopharynx, tobacco and alcohol. *Int. J. Cancer*, 41, 483-491
- Tweedie, J.H., Reber, H.A., Pour P. & Ponder, D.M. (1981) Protective effect of ethanol on the development of pancreatic cancer. *Surg. Forum*, 32, 222-224
- Tze, W.J., Friesen, H.G. & MacLeod, P.M. (1976) Growth hormone response in fetal alcohol syndrome. *Arch. Dis. Child.*, 51, 703-706
- Udani, M., Parker, S., Gavaler, J. & Van Thiel, D.H. (1985) Effects of in utero exposure to alcohol upon male rats. *Alcohol. clin. exp. Res.*, 9, 355-359
- Ueng, T.-H., Friedman, F.K., Miller, H., Park, S.S., Gelboin, H.V. & Alvares, A.P. (1987) Studies on ethanol-inducible cytochrome P-450 in rabbit liver, lungs and kidneys. *Biochem. Pharmacol.*, 36, 2689-2691
- Ugarte, G., Pereda, T., Pino, M.E. & Iturriaga, H. (1972) Influence of alcohol intake, length of abstinence and meprobamate on the rate of ethanol metabolism in man. *Q. J. Stud. Alcohol*, 33, 698-705
- Ugarte, G., Iturriaga, H. & Pereda, T. (1977) Possible relationship between the rate of ethanol metabolism and the severity of hepatic damage in chronic alcoholics. *Dig. Dis.*, 22, 406-410
- United Nations (1961) *Standard International Trade Classification*, rev., New York
- Väänänen, H., Salaspuro, M. & Lindros, K. (1984) The effect of chronic ethanol ingestion on ethanol metabolizing enzymes in isolated periportal and perivenous rat hepatocytes. *Hepatology*, 4, 862-866
- Valenzuela, A., Fernandez, N., Fernandez, V., Ugarte, G. & Videla, L.A. (1980) Effect of acute ethanol ingestion on lipoperoxidation and on the activity of the enzymes related to peroxide metabolism in rat liver. *FEBS Lett.*, 111, 11-13
- Välimäki, M., Salaspuro, M., Häkkinen, M. & Ylikahri, R. (1982) Liver damage and sex hormones in chronic male alcoholics. *Clin. Endocrinol.*, 71, 469-477
- Van Buren, J.P., Bertino, J.J., Einset, J., Remaily, G.W. & Robinson, W.B. (1970) A comparative study of the anthocyanin pigment composition in wines derived from hybrid grapes. *Am. J. Enol. Vitic.*, 21, 117-130
- Van Thiel, D.H. & Gavaler, J.S. (1985) *Ethanol and the endocrine system*. In: Seitz, H.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 324-341
- Van Thiel, D.H. & Lester, R. (1977) Therapy of sexual dysfunction in alcohol abusers: a Pandora's box. *Gastroenterology*, 72, 1354-1356
- Van Thiel, D.H., Gavaler, J.S. & Lester, R. (1978) Alcohol-induced ovarian failure in the rat. *J. clin. Invest.*, 61, 624-632
- Van Thiel, D.H., Gavaler, J.S., Cobb, C.F., Santucci, L. & Graham, T.O. (1983) Ethanol, a Leydig cell toxin: evidence obtained *in vivo* and *in vitro*. *Pharmacol. Biochem. Behav.*, 18, 317-323

- Varma, P.K. & Persaud, T.V.N. (1979) Influence of pyrazole, an inhibitor of alcohol dehydrogenase on the prenatal toxicity of ethanol in the rat. *Res. Commun. chem. Pathol. Pharmacol.*, 26, 65-73
- Vassallo, A., Correa, P., De Stéfani, E., Cendán, M., Zavala, D., Chen, V., Carzoglio, J. & Deneo-Pellegrini, H. (1985) Oesophageal cancer in Uruguay: a case-control study. *J. natl Cancer Inst.*, 75, 1005-1009
- Véghelyi, P.V. & Osztovics, M. (1978) The alcohol syndromes: the intrarecombinogenic effect of acetaldehyde. *Experientia*, 34, 195-196
- Véghelyi, P.V., Osztovics, M., Kardos, G., Leiszter, L., Szaszovsky, E., Igali, S. & Imrei, J. (1978) The fetal alcohol syndrome: symptoms and pathogenesis. *Acta pediat. acad. sci. hung.*, 19, 171-189
- Velema, J.P., Walker, A.M. & Gold, E.B. (1986) Alcohol and pancreatic cancer. Insufficient epidemiologic evidence for a causal relationship. *Epidemiol. Rev.*, 8, 28-41
- Versluys, J.J. (1949) Cancer and occupation in the Netherlands. *Br. J. Cancer*, 3, 161-185
- Verzele, M. (1986) Centenary review, 100 years of hop chemistry and its relevance to brewing. *J. Inst. Brew.*, 92, 32-48
- Vesell, E.S., Page, J.G. & Passananti, G.T. (1971) Genetic and environmental factors affecting ethanol metabolism in man. *Clin. Pharmacol. Ther.*, 12, 192-201
- Victoria, C.G., Muñoz, N., Day, N.E., Barcelos, L.B., Peccin, D.A. & Braga, N.M. (1987) Hot beverages and oesophageal cancer in southern Brazil: a case-control study. *Int. J. Cancer*, 39, 710-716
- Videla, L.A., Fernandez, V., Ugarte, G. & Valenzuela, A. (1980) Effect of acute ethanol intoxication on the content of reduced glutathione of the liver in relation to its lipoperoxidative capacity in the rat. *FEBS Lett.*, 111, 6-10
- Viirre, E., Cain, D.P. & Ossenkopp, K.-P. (1986) Prenatal ethanol exposure alters rat brain morphology but does not affect amygdaloid kindling. *Neurobehav. Toxicol. Teratol.*, 8, 615-620
- Villeneuve, J.-P., Mavier, P. & Joly, J.-G. (1976) Ethanol-induced cytochrome P-450: catalytic activity after partial purification. *Biochem. biophys. Res. Commun.*, 70, 723-728
- Vincent, R.G. & Marchetta, F. (1963) The relationship of the use of tobacco and alcohol to cancer of the oral cavity, pharynx or larynx. *Am. J. Surg.*, 106, 501-505
- Visser, M.K. & Lindsay, R.C. (1971) Ester precursors of aldehydes associated with staling of beer. *Tech. Q. Master Brew. Assoc. Am.*, 8, 123-128
- Vogel, E. (1972) Investigations on the mutagenicity of DDT and the DDT-metabolites DDE, DDD, DDOM and DDA in *Drosophila melanogaster* (Ger.). *Mutat. Res.*, 16, 157-164
- Vogel, E. & Chandler, J.L.R. (1974) Mutagenicity testing of cyclamate and some pesticides in *Drosophila melanogaster*. *Experientia*, 30, 621-623
- Vogel, E.W., Zijlstra, J.A. & Blijlevens, W.G.H. (1983) Mutagenic activity of selected aromatic amines and polycyclic hydrocarbons in *Drosophila melanogaster*. *Mutat. Res.*, 107, 53-77
- Voirol, M., Infante, F., Raymond, L., Hollenweger, V., Conti, M.C. & Loizeau, E. (1980) *Alcohol, food and tobacco consumption in pancreatic diseases*. In: *Alcohol and the Gastrointestinal Tract (Les Colloques de l'INSERM 95)*, Paris, Institut National de Science et de la Recherche Médicale, pp. 59-62
- Vorhees, C.V. & Fernandez, K. (1986) Effects of short-term prenatal alcohol exposure on maze, activity, and olfactory orientation performance in rats. *Neurobehav. Toxicol. Teratol.*, 8, 23-28

- Wackerbauer, K., Kossa, T. & Tressl, R. (1977) *Formation of phenols by yeasts* (Ger.). In: *Proceedings of the European Brewery Convention, Amsterdam*, pp. 495-505
- Wahi, P.N. (1968) The epidemiology of oral and oropharyngeal cancer. A report of the study in Mainpuri district, Uttar Pradesh, India. *Bull. World Health Org.*, 38, 495-521
- Wainright, T. (1986a) The chemistry of nitrosamine formation: relevance to malting and brewing. *J. Inst. Brew.*, 92, 49-64
- Wainright, T. (1986b) Nitrosamines in malt and beer. *J. Inst. Brew.*, 92, 73-80
- Walker, R.M., McElligott, T.F., Power, E.M., Massey, T.E. & Racz, W.J. (1983) Increased acetaminophen-induced hepatotoxicity after chronic ethanol consumption in mice. *Toxicology*, 28, 193-206
- Wallén, M., Näslund, P.H. & Nordqvist, M.B. (1984) The effects of ethanol on the kinetics of toluene in man. *Toxicol. appl. Pharmacol.*, 76, 414-419
- Wallgren, H. & Barry, H., III (1970) *Actions of Alcohol*, Vol. 1, *Biochemical, Physiological and Psychological Aspects*, Amsterdam, Elsevier
- Wallgren, H. & Hillbom, M.E. (1969) Depressed lung evaporation and gastric evacuation of ethanol after intraperitoneal injection of glucose to rats (Abstract). *Scand. J. clin. Lab. Invest.*, 23 (Suppl. 108), 58
- Walsh, B. & Grant, M. (1985) *Public Health Implications of Alcohol Production and Trade (WHO Offset Publication No. 88)*, Geneva, World Health Organization
- Walter, S.D. & Iwane, M. (1983) Interaction of alcohol and tobacco in laryngeal cancer. *Am. J. Epidemiol.*, 117, 639-641
- Warner, R.H. & Rosett, H.L. (1975) The effects of drinking on offspring. An historical survey of the American and British literature. *Q. J. Stud. Alcohol*, 36, 1395-1420
- von Wartburg, J.P. & Schürch, P.M. (1968) Atypical human liver alcohol dehydrogenase. *Ann. N. Y. Acad. Sci.*, 151, 936-946
- von Wartburg, J.-P., Papenberg, J. & Aebi, H. (1965) An atypical human alcohol dehydrogenase. *Can. J. Biochem.*, 43, 889-898
- Washington, W.J., Cain, K.T., Cacheiro, N.L.A. & Generoso, W.M. (1985) Ethanol-induced late fetal death in mice exposed around the time of fertilization. *Mutat. Res.*, 147, 205-210
- Watanabe, M., Honda, S., Hayashi, M. & Matsuda, T. (1982) Mutagenic effects of combinations of chemical carcinogens and environmental pollutants in mice as shown by the micronucleus test. *Mutat. Res.*, 97, 43-48
- Weatherall, D.J., Ladingham, J.G.G. & Warrell, D.A. (1983) *Oxford Textbook of Medicine*, Vol. 1, Oxford, Oxford University Press
- Webster, L.A., Layde, P.M., Wingo, P.A. & Dry, H.W. (1983) Alcohol consumption and risk of breast cancer. *Lancet*, ii, 724-726
- Webster, W.S., Walsh, D.A., Lipson, A.H. & McEwen, S.E. (1980) Teratogenesis after acute alcohol exposure in inbred and outbred mice. *Neurobehav. Toxicol.*, 2, 227-234
- Webster, W.S., Walsh, D.A., McEwen, S.E. & Lipson, A.H. (1983) Some teratogenic properties of ethanol and acetaldehyde in C57BL/6J mice: implications for the study of the fetal alcohol syndrome. *Teratology*, 27, 231-243
- Webster, W.S., Germain, M.-A., Lipson, A. & Walsh, D.A. (1984) Alcohol and congenital heart defects: an experimental study in mice. *Cardiovasc. Res.*, 18, 335-338

- Wehman, H.J. & Plantholt, B.A. (1974) Asbestos fibrils in beverages. I. Gin. *Bull environ. Contam. Toxicol.*, 4, 267-272
- Weinberg, J. (1985) Effects of ethanol and maternal nutritional status on fetal development. *Alcohol. clin. exp. Res.*, 9, 49-55
- Wendell, G.D. & Thurman, R.G. (1979) Effect of ethanol concentration on rates of ethanol elimination in normal and alcohol-treated rats *in vivo*. *Biochem. Pharmacol.*, 28, 273-279
- Wendt, V.E., Ajluni, R., Bruce, T.A., Prasad, A.S. & Bing, R.J. (1966) Acute effects of alcohol on human myocardium. *Am. J. Cardiol.*, 17, 804-812
- West, J.R., Black, A.C., Jr, Reimann, P.C. & Alkana, R.L. (1981a) Polydactyly and polysyndactyly induced by prenatal exposure to ethanol. *Teratology*, 24, 13-18
- West, J.R., Hodges, C.A. & Black, A.C., Jr (1981b) Prenatal exposure to ethanol alters the organization of hippocampal mossy fibers in rats. *Science*, 211, 957-959
- West, R.O. (1966) Epidemiologic study of malignancies of the ovaries. *Cancer*, 19, 1001-1007
- White, F.H. & Wainwright, T. (1975) Analysis of diacetyl and related compounds in fermentations. *J. Inst. Brew.*, 81, 37-45
- Wiberg, G.S., Trenholm, H.L. & Coldwell, B.B. (1970) Increased ethanol toxicity in old rats: changes in LD50, *in vivo* and *in vitro* metabolism, and liver alcohol dehydrogenase activity. *Toxicol. appl. Pharmacol.*, 16, 718-727
- Wickramasinghe, S.N., Barden, G. & Levy, L. (1987) The capacity of macrophages from different murine tissues to metabolise ethanol and generate an ethanol-dependent non-dialysable cytotoxic activity *in vitro*. *Alcohol Alcohol.*, 22, 31-39
- Wienbeck, M. & Berges, W. (1985) *Esophageal and gastric lesions in the alcoholic*. In: Seitz, A.K. & Kommerell, B., eds, *Alcohol Related Diseases in Gastroenterology*, Berlin (West), Springer, pp. 361-375
- Willemse, G., Vansteekiste, Y. & Smets, P.H. (1971) Effects of ethanol on the cell proliferation kinetics in the fundic mucosa of dogs. *Am. J. dig. Dis.*, 16, 1057-1063
- Willett, W.C., Stampfer, M.J., Colditz, G.A., Rosner, B.A., Hennekens, C.H. & Speizer, F.E. (1987) Moderate alcohol consumption and the risk of breast cancer. *New Engl. J. Med.*, 316, 1174-1180
- Williams, A.A. (1982) Recent developments in the field of wine flavour research. *J. Inst. Brew.*, 88, 43-53
- Williams, P.J., Strauss, C.R., Wilson, B. & Dimitriadis, E. (1985) *Recent studies into grape terpene glycosides*. In: Adda, J., ed., *Progress in Flavour Research 1984*, Amsterdam, Elsevier, pp. 349-357
- Williams, R.R. & Horm, J.W. (1977) Association of cancer sites with tobacco and alcohol consumption and socioeconomic status of patients: interview study from the Third National Cancer Survey. *J. natl Cancer Inst.*, 58, 525-547
- Wilson, B., Strauss, C.R. & Williams, P.J. (1984) Changes in free and glycosidically bound monoterpenes in developing muscat grapes. *J. agric. Food Chem.*, 32, 919-924
- Wilson, B., Strauss, C.R. & Williams, P.J. (1986) The distribution of free and glycosidically-bound monoterpenes among skin, juice, and pulp fractions of some white grape varieties. *Am. J. Enol. Vitic.*, 37, 107-111
- Wilson, F.A. & Hoyumpa, A.M., Jr (1979) Ethanol and small intestinal transport. *Prog. Gastroenterol.*, 76, 388-403

- Wilson, J.S., Korsten, M.A. & Lieber, C.S. (1986) The combined effects of protein deficiency and chronic ethanol administration on rat ethanol metabolism. *Hepatology*, 6, 823-829
- Windholz, M. (1983) *The Merck Index*, 10th ed., Rahway, NJ, Merck & Co., pp. 34-35
- Winship, D.H., Caflish, C.R., Zboralske, F.F. & Hogan, W.J. (1968) Deterioration of esophageal peristalsis in patients with alcoholic neuropathy. *Gastroenterology*, 55, 173-178
- Wisniewski, K., Damska, M., Sher, J.H. & Quazi, Q. (1983) A clinical neuropathological study of the fetal alcohol syndrome. *Neuropediatrics*, 14, 197-201
- Withycombe, D.A. & Lindsay, R.C. (1973) Determination of trans-2-nonenal in stale beer. *Tech. Q. Master Brew. Assoc. Am.*, 10, XIX-XX
- Wohleb, R., Jennings, W.G. & Lewis, M.J. (1972) Some observations on *trans*-2-nonenal in beer as determined by a headspace sampling technique for gas-liquid chromatography. *Am. Soc. Brew. Chem. Proc.*, 1-3
- Woidich, H., Pfannhauser, W., Blaicher, G. & Pechaner, U. (1980) Investigations concerning biogenic amines in red and white wines (Ger.) *Mitt. Rebe Wein Obstbau Früchteverwert.* Klosterneuburg, 30, 27-31
- Wolf, E. (1982) *Europe and the People Without History*, Berkeley-Los Angeles, CA, University of California Press
- Woodhouse, K.W., Williams, F.M., Mutch, E., Wright, P., James, O.F.W. & Rawlins, M.D. (1983) The effect of alcoholic cirrhosis on the activities of microsomal aldrin epoxidase, 7-ethoxycoumarin *O*-de-ethylase and epoxide hydrolase, and on the concentrations of reduced glutathione in human liver. *Br. J. clin. Pharmacol.*, 15, 667-672
- Woodruff, R.C., Mason, J.M., Valencia, R. & Zimmering, S. (1984) Chemical mutagenesis testing in *Drosophila*: I. Comparison of positive and negative control data for sex-linked recessive lethal mutations and reciprocal translocations in three laboratories. *Environ. Mutagenesis*, 6, 189-202
- World Health Organization (1980) *Problems Related to Alcohol Consumption: Report of a WHO Expert Committee (WHO Technical Report Series No. 650)*, Geneva
- Woutersen, R.A., van Garderen-Hoetmer, A., Bax, J., Feringa, A.W. & Scherer, E. (1986) Modulation of putative preneoplastic foci in exocrine pancreas of rats and hamsters. I. Interaction of dietary fat and ethanol. *Carcinogenesis*, 7, 1587-1593
- Wright, J.T., Macrae, K.D., Barrison, I.G. & Waterson, E.J. (1984) Effects of moderate alcohol consumption and smoking on fetal outcome. In: *Mechanisms of Alcohol Damage In Utero (Ciba Foundation Symposium 105)*, London, Pitman, pp. 240-253
- Wu, A.H., Paganini-Hill, A., Ross, R.K. & Henderson, B.E. (1987) Alcohol, physical activity and other risk factors for colorectal cancer: a prospective study. *Br. J. Cancer*, 55, 687-694
- Wucherpfennig, K. & Semmler, G. (1972) On the SO₂ needs of wine from various wine growing areas in the world and its dependence on the treatment of grapes (Ger.). *Alimenta*, 11, 31-42
- Wucherpfennig, K. & Semmler, G. (1973) On the SO₂ needs of wine from various wine growing areas in the world and its dependence on formation of acetaldehyde in the process of fermentation (Ger.). *Dtsch. Weinbau*, 24, 846, 851-855
- Wynder, E.L. & Bross, I.J. (1957) Etiological factors in mouth cancer. An approach to its prevention. *Br. med. J.*, i, 1137-1143
- Wynder, E.L. & Bross, I.J. (1961) A study of etiological factors in cancer of the esophagus. *Cancer*, 14, 389-413

- Wynder, E.L. & Shigematsu, T. (1967) Environmental factors of cancer of the colon and rectum. *Cancer*, 20, 1520-1561
- Wynder, E.L., Bross, I.J. & Day, E. (1956) A study of environmental factors in cancer of the larynx. *Cancer*, 9, 86-110
- Wynder, E.L., Bross, I.J. & Feldman, R.M. (1957a) A study of etiological factors in cancer of the mouth. *Cancer*, 10, 1300-1323
- Wynder, E.L., Hultberg, S., Jacobsson, F. & Bross, I.J. (1957b) Environmental factors in cancer of the upper alimentary tract. A Swedish study with special reference to Plummer-Vinson (Paterson-Kelly) syndrome. *Cancer*, 10, 470-487
- Wynder, E.L., Lemon, F.R. & Bross, I.J. (1959) Cancer and coronary artery disease among Seventh-day Adventists. *Cancer*, 12, 1016-1028
- Wynder, E.L., Kmet, J., Dungal, N. & Segi, M. (1963a) An epidemiological investigation of gastric cancer. *Cancer*, 16, 1461-1497
- Wynder, E.L., Onderdonk, J. & Mantel, N. (1963b) An epidemiological investigation of cancer of the bladder. *Cancer*, 16, 1388-1407
- Wynder, E.L., Mabuchi, K. & Whitmore, W.F., Jr (1971) Epidemiology of cancer of the prostate. *Cancer*, 28, 344-360
- Wynder, E.L., Mabuchi, K., Maruchi, N. & Fortner, J.G. (1973a) A case-control study of cancer of the pancreas. *Cancer*, 31, 641-648
- Wynder, E.L., Mabuchi, K., Maruchi, N. & Fortner, J.G. (1973b) Epidemiology of cancer of the pancreas. *J. natl Cancer Inst.*, 50, 645-667
- Wynder, E.L., Covey, L.S., Mabuchi, K. & Mushinski, M. (1976) Environmental factors in cancer of the larynx. A second look. *Cancer*, 38, 1591-1601
- Wynder, E.L., Hall, N.E.L. & Polansky, M. (1983) Epidemiology of coffee and pancreatic cancer. *Cancer Res.*, 43, 3900-3906
- Wynter, J.M., Walsh, D.A., Webster, W.S., McEwen, S.E. & Lipson, A.H. (1983) Teratogenesis after acute alcohol exposure in cultured rat embryos. *Teratog. Carcinog. Mutagenesis*, 3, 421-428
- Yamamoto, R.S., Korzis, J. & Weisburger, J.H. (1967) Chronic ethanol ingestion and the hepatocarcinogenicity of N-hydroxy-N-2-fluorenylacetamide. *Int. J. Cancer*, 2, 337-343
- Yanai, J. & Ginsburg, B.E. (1976) Audiogenic seizures in mice whose parents drank alcohol. *Q. J. Stud. Alcohol*, 37, 1564-1571
- Yang, C.S., Koop, D.R., Wang, T. & Coon, M.J. (1985a) Immunochemical studies on the metabolism of nitrosamines by ethanol-inducible cytochrome P-450. *Biochem. biophys. Res. Commun.*, 128, 1007-1013
- Yang, C.S., Tu, Y.Y., Koop, D.R. & Coon, M.J. (1985b) Metabolism of nitrosamines by purified rabbit liver cytochrome P-450 isozymes. *Cancer Res.*, 45, 1140-1145
- Ylikahri, R.H., Huttunen, M.O. & Häkkinen, M. (1980) Hormonal changes during alcohol intoxication and withdrawal. *Pharmacol. Biochem. Behav.*, 13 Suppl. 1, 131-137
- Yoshida, A., Impraim, C.C. & Huang, I.-Y. (1981) Enzymatic and structural differences between usual and atypical human liver alcohol dehydrogenases. *J. biol. Chem.*, 256, 12430-12436
- Yost, G.S. & Finley, B.L. (1983) Ethanol as an inducer of UDP-glucuronyltransferase: a comparison with phenobarbital and 3-methylcholanthrene induction in rabbit hepatic microsomes. *Biochem. biophys. Res. Commun.*, 111, 219-223

- Younes, M., Schlichting, R. & Siegers, C.-P. (1980) Glutathione S-transferase activities in rat liver: effect of some factors influencing the metabolism of xenobiotics. *Pharmacol. Res. Commun.*, 12, 115-129
- Young, M. & Russell, W.T. (1926) *An Investigation into the Statistics of Cancer in Different Trades and Professions*, London, Her Majesty's Stationery Office
- Yu, C.-L., Swaminathan, B., Butler, L.G. & Pratt, D.E. (1986) Isolation and identification of rutin as the major mutagen of red wine. *Mutat. Res.*, 170, 103-113
- Yu, M.C., Mack, T., Hanisch, R., Peters, R.L., Henderson, B.E. & Pike, M.C. (1983) Hepatitis, alcohol consumption, cigarette smoking, and hepatocellular carcinoma in Los Angeles. *Cancer Res.*, 43, 6077-6079
- Yuki, T. & Thurman, R.G. (1980) The swift increase in alcohol metabolism. Time course for the increase in hepatic oxygen uptake and the involvement of glycolysis. *Biochem. J.*, 186, 119-126
- Zagraniski, R.T., Kelsey, J.L. & Walter, S.D. (1986) Occupational risk factors for laryngeal carcinoma, Connecticut, 1975-1980. *Am. J. Epidemiol.*, 124, 67-76
- Ziegler, L. & Piendl, A. (1976) Nucleobases and nucleosides in beer. *Tech. Q. Master Brew. Assoc. Am.*, 13, 177-181
- Ziegler, R.G. (1986) Alcohol-nutrient interactions in cancer etiology. *Cancer*, 58, 1942-1948
- Zimmerberg, B., Riley, E.P. & Glick, S.D. (1986) Differential effects of prenatal exposure to alcohol on activity and circling behavior in rats. *Pharmacol. Biochem. Behav.*, 25, 1021-1025
- Zimmerman, H.J. (1986) Effects of alcohol on other hepatotoxins. *Alcohol. clin. exp. Res.*, 10, 3-15