

LITERATURA

- Alberts, B.; Bray, D.; Johnson, A.; Lewis, J.; Raff, M.; Roberts, K.; Walter, P. *Základy buněčné biologie. Úvod do molekulární biologie buňky*; Espero Publishing: Ústí nad Labem, 1998.
- Alexandrov, K.; Rojas, M.; Satarug, S. The critical DNA damage by benzo[a]pyrene in lung tissues of smokers and approaches to preventing its formation. *Toxicol. Lett.* **2010**, *198*, 63–68.
- Ames, B. N.; Gold, L. S. Chemical carcinogenesis: Too many rodent carcinogens. *Proc. Natl. Acad. Sci. U.S.A.* **1990**, *87*, 7772–7776.
- Arlt, V. M. 3-Nitrobenzanthrone, a potential human cancer hazard in diesel exhaust and urban air pollution: a review of the evidence. *Mutagenesis* **2005**, *20*, 399–410.
- Arlt, V. M.; Schmeiser, H. H.; Osborne, M. R.; Kawanishi, M.; Kanno, T.; Yagi, T.; Phillips, D. H.; Takamura-Enya, T. Identification of three major DNA adducts formed by the carcinogenic air pollutant 3-nitrobenzanthrone in rat lung at the C8 and N² position of guanine and at the N⁶ position of adenine. *Int. J. Cancer* **2006**, *118*, 2139–2146.
- Autrup, H.; Seremet, T. Excretion of benzo[a]pyrene-gua adduct in the urine of benzo[a]pyrene treated rats. *Chem.-Biol. Interact.* **1986**, *60*, 217–226.
- Bailey, E.; Farmer, P. B.; Bird, I.; Lamb, J. H.; Hayes, P. F. Acrylamide, its metabolism, developmental and reproductive effects, genotoxicity and carcinogenicity. *Mutat. Res.* **1988**, *195*, 45–77.
- Bolt, H. Vinyl chloride – A classical industrial toxicant of new interest. *Crit. Rev. Toxicol.* **2005**, *35*, 307–323.
- Borosky, G. J. Ultimate carcinogenic metabolites from aromatic and heteroaromatic amines: A computational study in relation to their mutagenic potency. *Chem. Res. Toxicol.* **2007**, *20*, 171–180.
- Boyland, E.; Busby, E. S.; Dukes, C. E.; Grover, P. L.; Manson, D. Further experiments on implantation of materials into the urinary bladder of mice. *Br. J. Cancer* **1964**, *18*, 575–581.
- Case, R. A.; Hosker, M. E.; McDonald, D. B.; Pearson, J. T. Tumors of the urinary bladder in workmen engaged in the manufacture and use of certain dyestuff intermediates in the British chemical industry. I. The role of aniline, benzidine, α-naphthylamine and β-naphthylamine. *Br. J. Ind. Med.* **1954**, *11*, 75–104.
- Cook, J. W.; Hieger, I.; Kennaway, E. L.; Mayneord, W. V. The production of cancer by pure hydrocarbons. Part I. *Proc. R. Soc. London, Ser. B* **1932**, *111*, 455–484.

- Cramer, J. W.; Miller, J. A.; Miller, E. C. *N*-Hydroxylation: A new metabolic reaction observed in the rat with the carcinogen 2-acetylaminofluorene. *J. Biol. Chem.* **1960**, *235*, 885–888.
- Deichmann, W. B.; Radomski, J.; Glass, E.; Coplan, M.; Woods, F. Synergism among oral carcinogens. III. *Industr. Med. Surg.* **1965**, *34*, 640–649.
- Dearfield, K. L.; Abernathy, C. O.; Ottley, M. S.; Brantner, J. H.; Hayes, P. F. Acrylamide, its metabolism, developmental and reproductive effects, genotoxicity and carcinogenicity. *Mutat. Res.* **1988**, *195*, 45–77.
- Doerge, D. R.; Young, J. F.; Chen, J. J.; DiNovi, M. J.; Henry, S. H. Using dietary exposure and physiologically based pharmacokinetic/pharmacodynamic modeling in human risk extrapolations for acrylamide toxicity. *J. Agric. Food Chem.* **2008**, *56*, 6031–6038.
- Doll, R.; Peto, R. The causes of cancer: quantitative estimates of avoidable risks of cancer in the United States today. *J. Natl. Cancer Inst.* **1981**, *66*, 1191–1308.
- Ender, F.; Favre, G.; Helgebostad, A.; Koppang, N.; Madsen, R.; Ceh, L. Isolation and identification of q hepatotoxic factor in herring. *Naturwissenschaften* **1964**, *51*, 637–638.
- Freudenthal, R. I.; Stephens, E.; Anderson, D. P. Determining the potential of aromatic amines to induce cancer of the urinary bladder. *Int. J. Toxicol.* **1999**, *18*, 353–359.
- Gates, K. S. An overview of chemical processes that damage cellular DNA: Spontaneous hydrolysis, alkylation and reactions with radicals. *Chem. Res. Toxicol.* **2009**, *22*, 1747–1760.
- Gaylor, D.W.; Kadlubar, F. F. *Quantitative Risk Assessment of Heterocyclic Amines in Cooked Food*. In: *Mutagens in Food: Detection and Prevention*; Hyatsu, H., Ed.; CRC Press: Boca Raton, Florida, 1991; pp. 229–236.
- Guengerich, F. P. *N*-Hydroxyarylamines. *Drug. Metab. Rev.* **2002**, *34*, 607–623.
- Haddow, A. Sir Ernest Laurence Kennaway FRS, 1881–1958. Chemical causation of cancer then and today. *Perspect. Biol. Med.* **1974**, *17*, 543–588.
- Hagmar, L.; Törnqvist, M.; Nordander, C.; Rosén, I.; Bruze, M.; Kautiained, A.; Magnusson, A.-L.; Malmberg, B.; Aprea, P.; Granath, F.; Axmon, A. Health effects of occupational exposure to acrylamide using hemoglobin adducts as biomarkers of internal dose. *Scand. J. Work Environ. Health* **2001**, *27*, 219–226.
- Hogy, L. L.; Guengerich, F. P. *In vivo* interaction of acrylonitrile and 2-cyanoethylene oxide with DNA in rats. *Cancer Res.* **1986**, *46*, 3932–3938.
- Hueper, W. C.; Wiley, F. H.; Wolfe, H. D. Experimental production of bladder tumors in dogs by administration of beta-naphthylamine. *J. Indust. Hyg. Toxicol.* **1938**, *20*, 46–84.

IARC: Diesel and Gasoline Engine Exhausts and Some Nitroarenes. Monographs on the Evaluation of the Carcinogenic Risks to Humans, Vol. 46; IARC: Lyon, 1989.

IARC, Fast Stats, 2010. Globocan 2008. globocan.iarc.fr/factsheets/populations/factsheet.asp?uno=968 (accessed June 26, 2011).

Jerina, D. M.; Lehr, R.; Schaefer-Riddler, M. et al. *Bay-Region Epoxides of Dihydrodiols: A Concept Explaining the Mutagenic and Carcinogenic Activity of Benzo[a]pyrene and Benzo[a]anthracene*. In: *Origins of Human Cancer*; Hiatt, H. H.; Watson, F. J. D.; Winsten, J. A., Eds.; Cold Spring Harbor Laboratory: Cold Spring Harbor, N. Y., 1977; pp. 639–658.

Kadlubar, F. F.; Unruh, L. E.; Flammang, T. J.; Sparks, D.; Mitchum, R. K.; Mulder, G. J. Alteration of urinary levels of carcinogen, N-hydroxynaphthylamine and its glucuronide in the rat by control of urinary pH, inhibition of metabolic sulfation, and changes in biliary excretion. *Chem.-Biol. Interact.* **1981**, *33*, 129–147.

Keefer, L. K.; Roller, P. P. N-Nitrosation by nitrite ion in neutral and basic medium. *Science* **1973**, *181*, 1245–1247.

Kemper, R. A.; Hayes, J. R.; Bogdanffy, M. S. *Metabolism: A Determinant of Toxicity*. In *Principles and Methods of Toxicology*; Hayes, A. W., Ed.; Informa Healthcare US, Inc.: New York, 2008; pp 103–178.

Kiyohara, C.; Hirohata, T.; Kuratsume, M.; Nagayama, J. An improved method for the detection of differential survival between normal and xeroderma pigmentosum lymphoblastoid cell lines in culture with 4-nitroquinoline-1-oxide. *Mutat. Res.* **1991**, *249*, 111–117.

Koppang, N. An outbreak of toxic liver injury in ruminants. *Nord. Vet. Med.* **1964**, *16*, 305–322.

Lijinsky, W. N-Nitroso compounds in the diet. *Mutat. Res.* **1999**, *443*, 129–138.

Linhart, I.; Hrabal, R.; Šmejkal, J.; Mitera, J. Metabolic Pathways of 1-butyl [3-¹³C] acrylate. Identification of urinary metabolites in rat using nuclear magnetic resonance and mass spectroscopy. *Chem. Res. Toxicol.* **1994**, *7*, 1–8.

Magee, P. N.; Barnes, J. M. The production of malignant hepatic tumours in the rat by feeding dimethylnitrosamine. *Br. J. Cancer* **1956**, *10*, 114–122.

Malkin, M. F.; Zahalsky, A. C. Interaction of the water-soluble carcinogen 4-nitroquinoline-N-oxide. *Science* **1966**, *154*, 1665–1667.

Miller, E. C.; Miller, J. A. Mechanisms of chemical carcinogenesis – nature of proximate carcinogens and interactions with macromolecules. *Pharmacol. Rev.* **1966**, *18*, 805–838.

Miller, J. A. Carcinogenesis by chemicals: An overview – G.H.A. Clowes Memorial Lecture. *Cancer Res.* **1970**, *30*, 559–576.

- Miller, E. C.; Miller, J. A. Searches for ultimate chemical carcinogens and their reactions with cellular macromolecules. *Cancer* **1981**, *47*, 2327–2345.
- Nebert, D. W.; Dalton, P. T.; Okey, A. B.; Gonzales, F. J. Role of aryl hydrocarbon receptor-mediated induction of CYP1 enzymes in environmental toxicity and cancer. *J. Biol. Chem.* **2004**, *279*, 23847–23850.
- Novak, M.; Toth, K.; Rajagopal, S.; Brooks, M.; Hott, L. L.; Moslener, M. Reactivity and selectivity of the *N*-acetyl-Glu-P-1, *N*-acetyl-Glu-P-2, *N*-acetyl-MeIQx, and *N*-acetyl-IQx nitrenium ions: Comparison to carbocyclic *N*-arylnitrenium ions. *J. Am. Chem. Soc.* **2002**, *124*, 7972–7981.
- Pitot, H. C. III; Dragan, Y. P. *Chemical Carcinogenesis*. In *Casarett & Doull's Essentials of Toxicology*; Klaasen, C. D., Watkins III, J. B., Eds.; McGraw-Hill: New York, 2003; pp 111–130.
- Pitts, Jr., J. N.; van Cauwenberghe, K. A.; Grosjean, D.; Schmidt, J. P.; Fitz, D. R.; Belser, Jr., W. L.; Knudson, G. B.; Hynds, P. M. Atmospheric reaction of polycyclic aromatic hydrocarbons: Facile formation of mutagenic nitro derivatives. *Science* **1978**, *202*, 515–519.
- Preston, R. J.; Hoffmann, G.R. *Genetic Toxicology*. In *Casarett & Doull's Essentials of Toxicology*; Klaasen, C. D., Watkins III, J. B., Eds.; McGraw-Hill: New York, 2003; pp 131–145.
- Preston-Martin, S.; Henderson, B. E. *N*-nitroso compounds and human intracranial tumours. *IARC Sci. Publ.* **1984**, *57*, 887–894.
- Purohit, V.; Basu, A. K. Mutagenicity of nitroaromatic compounds. *Chem. Res. Toxicol.* **2000**, *13*, 673–692.
- Rehn, L. Blasengeschwulste bei Fuchsinarbeitern. *Arch. Klin. Chir.* **1895**, *50*, 588–600.
- Reynisson, J.; Stiborová, M.; Martínek, V.; da Costa, G. G.; Phillips, D. H.; Arlt, V. M. Mutagenic potential of nitrenium ions of nitrobenzanthrones: Correlation between theory and experiment.. *Environ. Mol. Mutagen.* **2008**, *49*, 659–667.
- Segerback, D.; Calleman, C. J.; Schroeder, J. L.; Costa, L. G.; Faustman, E. M. Formation of *N*-7-(2-carbamoyl-2-hydroxyethyl)guanines in DNA of the mouse and the rat following intraperitoneal administration of [¹⁴C]acrylamide. *Carcinogenesis* **1995**, *16*, 1161–1165.
- Setlow, R. B. Repair deficient human disorders and cancer. *Nature* **1978**, *271*, 713–717.
- Schärer, O. D. DNA interstrand crosslinks: Natural and drug-induced DNA adducts that induce unique cellular responses. *ChemBioChem* **2005**, *6*, 27–32.
- Stiborová, M.; Frei, E.; Beiler, C. A.; Schmeiser, H. H. ³²P-Postlabelling: A sensitive technique for the detection of DNA adducts. *Chem. Listy* **1998**, *92*, 661.

Stiborová, M. Aromatické nitrosloučeniny: Kontaminanty životního prostředí a potenciální karcinogeny pro člověka. *Chem. Listy* **2002**, *96*, 784–791.

Stiborová, M.; Martínek, V.; Svobodová, M.; Šístková, J.; Dvořák, Z.; Ulrichová, J.; Šimánek, V.; Frei, E.; Schmeiser, H. H.; Phillips, D. H.; Arlt, V. N. Mechanisms of the different DNA adduct forming potentials of the urban air pollutants 2-nitrobenzanthrone and carcinogenic 3-nitrobenzanthrone. *Chem. Res. Toxicol.* **2010**, *23*, 1192–1201.

Sumner, S. C. J.; MacNeela, J. P.; Fennel, T. R. Characterization and quantitation of urinary metabolites of [1,2,3-¹³C]acrylamide in rats and mice using ¹³C nuclear magnetic resonance spectroscopy. *Chem. Res. Toxicol.* **1992**, *5*, 81–89.

Sugimura, T.; Kawachi, T.; Honda, M; Yahagi, T.; Seina, Y.; Stao, S.; Matsukura, N.; Matsushima, T.; Shrai, A.; Sawamura, M.; atsumoto, H. *Mutagens-Carcinogens in Food, with Special Reference to Highly Mutagenic Pyrolytic Products in Broiled Foods*. In *Origins of Human Cancer, Book C*; Hiatt,, H. H., Watson, J. D., Winstein, J. A., Eds.; Cold Spring Harbor Laboratory: Cold Spring Harbor, N. Y., 1977; pp 1561–1577.

Sugimura, T. Wakabayashi, K.; Nakagama, H.; Nagao, M. Heterocyclic amines: Mutagens/carcinogens produced during cooking of meat and fish. *Cancer Sci.* **2005**, *95*, 290-299.

Taioli, E.; Šrám, R.; Binková, B.; Kalina, I.; Popov, T. A.; Garte, S.; Farmer, P. B. Biomarkers of exposure to carcinogenic PAHs and their relationship with environmental factors. *Mutat. Res.* **2007**, *620*, 16–21.

Takamura-Enya, T.; Suzuki, H.; Hisamatsu, Y. Mutagenic activities and physico-chemical properties of selected nitrobenzanthrones. *Mutagenesis* **2006**, *21*, 399–401.

Takamura-Enya, T.; Kawanishi, M.; Yagi, T.; Hisamatsu, Y. Structural identification of DNA adducts derived from 3-nitrobenzanthrone, a potent carcinogen present in the atmosphere. *Chem. Asian J.* **2007**, *2*, 1174–1185.

Tanaka, T. Transplacental induction of tumours and malformations in rats treated with some chemical carcinogens. *IARC Sci. Publ.* **1973**, *4*, 100–111.

Tareke, E.; Rydberg, P.; Karlsson, P.; Eriksson, S.; Tornqvist, M. Acrylamide: A cooking carcinogen?. *Chem. Res. Toxicol.* **2000**, *13*, 517–522.

Tareke, E.; Rydberg, P.; Karlsson, P.; Eriksson, S.; Tornqvist, M. Analysis of acrylamide, a carcinogen formed in heated foodstuffs. *J. Agric. Food Chem.* **2002**, *50*, 4998–5006.

Tokiwa, H.; Ohnishi, Y. Mutagenicity and carcinogenicity of nitroarenes and their sources in the environment. *Crit. Rev. Toxicol.* **1986**, *17*, 23–60.

Turesky, R. J.; Le Marchand, L. Metabolism and biomarkers of heterocyclic aromatic amines in molecular epidemiology studies: Lessons learned from aromatic amines. *Chem. Res. Toxicol.* **2011**,

US EPA Toxicological Review of Acrolein, 2003. Integrated Risk Information System. www.epa.gov/iris/toxreviews/0364tr.pdf (accessed July 16, 2011).

US EPA Acrylonitrile, 2003. Integrated Risk Information System. www.epa.gov/iris/subst/0206.htm - carc (accessed July 16, 2011).

US-EPA 2005. Guidelines for Carcinogenic Risk Assessment. EPA/630/P-03/001F, March 2005. Washington DC: Risk Assessment Forum, U.S. Environmental Protection Agency, 2005. www.epa.gov/raf/publications/pdfs/CANCER_GUIDELINES_FINAL_3-25-05.PDF (accessed Feb 10, 2011).

Walker, K.; Ginsberg, G.; Hattis, D.; Johns, D. O.; Guyton, K. Z.; Sonewane, B. Genetic polymorphism in N-acetyltransferase (NAT): Population distribution of NAT1 and NAT2 activity. *J. Toxicol. Environ. Health, Part B* **2009**, *12*, 440–472.

Watson, F. J. D.; Winsten, J. A., Eds. *Origins of Human Cancer, Book C*, Cold Spring Harbor Laboratory: Cold Spring Harbor, N. Y., 1977; pp. 1561–1577.

Weisburger, J. H.; Grantham, P. H.; Vanhorn, E.; Steigbigel, N. H.; Rall, D. P.; Weisburger, E. K. Activation and detoxication of *N*-2-fluorenylacetamide in man. *Cancer Res.* **1964**, *49*, 1970–1984.

Whitlock, J. P., Jr.; Chichester, C. H.; Bedgood, R. M.; Okino, S. T.; Ko, H. P.; Ma, Q.; Dong, L.; Li, H.; Clarke-Katzenberg, R. Induction of drug metabolizing enzymes by dioxin. *Drug. Metab. Rev.* **1997**, *29*, 1107–1127.

Yamagiwa, K; Ichikawa, K. Experimental study of the pathogenesis of carcinoma. *J. Cancer Res.* **1918**, *3*, 1–29.