



## BIBLIOGRAFÍA

---



- Abdulkarim, B.G. and Smith, J.S., "Heterocyclic Amines in Fresh and Processed Meat-Products", J.Agr.Food Chem. **46** (1998) 4680-4687.
- Abu-Shakra, A., Ioannides, C., and Walker, R., "Comparative mutagenicity studies on fried minced beef, grilled sausage and grilled hamburgers", J.Sci.Food Agr. **42** (1988) 343-354.
- Adachi, J., Asano, M., and Veno, Y., "Tetrahydro-beta-carboline-3-carboxilic acids and contaminants of L-tryptophan", J.Chromatogr.A **881** (2000) 501-515.
- Aleksandrov, M.L., Baram, G.I., Gall, L.M., Krasnov, N.V., Kusner, Y.S., Irgorodskaya, O.A., Nikolaiev, V.I., and Shkurov, V.A., "Formation of beams of quasi-molecular ions of peptides from solutions", Bioorg.Khim. **11** (1985) 700-704.
- Alexander, J., Fossum, B.H., Reistad, R., and Holme, J.A., "Metabolism of PhIP in rat and rodents" en "HAs in cooked foods: possible human carcinogens". Eds. R.H. Adamson; J.A. Gustafsson; N. Ito; M. Nagao; T. Sugimura; K. Wakabayashi; Y. Yamazoe. Proceedings of the 23rd International Symposium of the Princess Takamatsu Cancer Research Fundation. Princeton Scientific Publishing, Princeton, New Jersey, (1995) 251-259.
- Alexander, J., Reistad, R., Hegstad, S., Frandsen, H., Ingebrigtsen, K., Paulsen, J.E., and Becher, G., "Biomarkers of exposure to heterocyclic amines: approaches to improve the exposure assessment (Review)", Food Chem.Toxicol. **40** (2002) 1131-1137.
- Ames, B.N., McCann, J., and Yamasaki, E., "Methods for detecting carcinogens and mutagens with the salmonella mamalian-microsome mutagenicity test", Mutat.Res. **31** (1975) 347-364.
- Arthur, C.L. and Pawliszyn, J., "Solid-phase microextraction with thermal desorption using fused silica optical fibers", Anal.Chem. **62** (1990) 2145-2148.
- Arvidsson, P., Van Boekel, M.A.J.S., Skog, K., and Jägerstad, M., "Kinetics of Formation of Polar Heterocyclic Amines in a Meat Model System", J.Food Sci. **62** (1997) 911-916.
- Arvidsson, P., Van Boekel, M.A.J.S., Skog, K., Solyakov, A., and Jägerstad, M., "Formation of Heterocyclic Amines in a Meat Juice Model System", J.Food Sci. **64** (1999) 216-221.
- Ashraf-Khorassani, M., Houck, R.K., and Levy, J.M., "Cryogenically cooled adsorbent trap for off-line supercritical fluid extraction", J.Chromatogr.Sci. **30** (1992) 361-365.
- Augustsson, K., Skog, K., Jägerstad, M., and Steineck, G., "Assessment of the Human Exposure to Heterocyclic Amines", Carcinogenesis **18** (1997) 1931-1935.
- Balogh, Z., Gray, J.I., Gomaa, E.A., and Booren, A.M., "Formation and Inhibition of HAs in fried Ground Beef Patties", Food Chem.Toxicol. **38** (2000) 395-401.
- Bång, J., Nukaya, H., and Skog, K., "Blue chitin columns for the extraction of HAs from cooked meat", J.Chromatogr.A **977** (2002) 97-105.
- Barker, S.A., "Matrix Solid-Phase Dispersion", J.Chromatogr.A **885** (2000) 115-127.
- Barnes, W., Spingarn, N.E., Garvie-Gould, C., Vuolo, L.L., Wang, Y.Y., and Weisburger, J.H., "Mutagens in Cooked Foods: Possible Consequences of the Maillard Reaction" en "The Maillard Reaction in foods and nutrition". ACS Series Vol 215, American Chemical Society, Washington (1983a) 485-506.
- Barnes, W.S., Maher, J.C., and Weisburger, J.H., "HPLC for the analysis of IQ", J.Agr.Food Chem. **31** (1983b) 883-886.
- Becher, G., Knize, M.G., Nes, I.F., and Felton, J.S., "Isolation and identification of mutagens from a fried norwegian meat product", Carcinogenesis **9** (1988) 247-253.
- Berg, H., Dahlberg, L., and Mathiasson, L., "Determination of fat-content and fatty-acid composition in meat and meat products after supercritical-fluid extraction", J.AOAC Int. **85** (2002) 1064-1069.

- Bermudo, E., Puignou, L., and Galceran, M.T., "Preparation of a beef extract as laboratory reference material for the determination of heterocyclic amines", J.Chromatogr.B (2003) submitted.
- Borgen, E., Solyakov, A., and Skog, K., "Effects of Precursor Composition and Water on the Formation of Heterocyclic Amines in Meat Model Systems", Food Chem. **74** (2001) 11-19.
- Bouvier, E.S.P., Martin, D.M., Iraneta, P.C., Caparella, M., Cheng, Y.-F., and Phillips, D.J., "A novel polymeric reversed-phase sorbent for solid phase extraction", LC GC Int. **10** (1997) 577-585.
- Bovanova, L. and Brandsteterova, E., "Direct Analysis of Food Samples by High-Performance Liquid Chromatography", J.Chromatogr.A **880** (2000) 149-168.
- Breyer-Pfaff, U., Wiatr, G., Stevens, H.J., Gaertner, H.J., Mundle, G., and Mann, K., "Elevated norharman plasma levels in alcoholic patients and controls resulting from tobacco smoking", Life sci. **58** (1996) 1425-1432.
- Britt, C., Gomaa, E.A., Gray, J.I., and Booren, A.M., "Influence of Cherry Tissue on Lipid Oxidation and Heterocyclic Aromatic Amine Formation in-Ground Beef Patties", J.Agr.Food Chem. **46** (1998) 4891-4897.
- Bross, C., Springer, S., and Sontag, G., "Determination of 2-Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine in a Cigarette-Smoke Condensate by HPLC with and Electrode Array Detector", Deut.Lebensm.Rundsch. **93** (1997) 384-386.
- Burford, M.D., Hawthorne, S.B., and Miller, D.J., "Evaluation of drying agents for off-line supercritical fluid extraction", J.Chromatogr.A **657** (1993) 413-427.
- Camel, V., Tambuté, A., and Caude, M., "L'extraction en phase supercritique à l'échelle analytique: principe, mise en oeuvre et applications", Analusis **20** (1992) 503-528.
- Chaudot, X., Tambuté, A., and Caude, M., "L'extraction en phase supercritique: un nouvel outil analytique performant pour le traitement de l'échantillon", Analusis **25** (1997) 81-96.
- Chen, B.H. and Meng, C.N., "Formation of Heterocyclic Amines in a Model System During Heating", J.Food Protect. **62** (1999) 1445-1450.
- Chen, B.H. and Yang, D.J., "An Improved Analytical Method for Determination of Heterocyclic Amines in Chicken Legs", Chromatographia **48** (1998) 223-230.
- Chiu, C.P. and Chen, B.H., "Stability of Heterocyclic Amines During Heating", Food Chem. **68** (2000) 267-272.
- Chiu, C.P., Yang, D.Y., and Chen, B.H., "Formation of Heterocyclic Amines in Cooked Chicken Legs", J.Food Protect. **61** (1998) 712-719.
- Colvin, M.E., Hatch, F.T., and Felton, J.S., "Chemical and Biological Factors Affecting Mutagen Potency", Mutat.Res.Fundam.Mol.Mech.Mut. **400** (1998) 479-492.
- Crosbie, S.J., Boobis, A.R., and Gooderham, N.J., "Analysis of the N-(deoxyguanosin-8-yl) adduct of the food derived carcinogen PhIP using CE", Biochemical Society Transactions **25** (1997) 27s.
- Crosbie, S.J., Murray, S., Boobis, A.R., and Gooderham, N.J., "Mass spectrometric detection and measurement of PhIP adducts in DNA", J.Chromatogr.B **744** (2000) 55-64.
- De Bruin, L.S., Martos, P.A., and Josephy, P.D., "Detection of PhIP (2-Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine) in the Milk of Healthy Women", Chem.Res.Toxicol. **14** (2001) 1523-1528.
- De Meester, C., "Chemical-Analysis of Heterocyclic Aromatic-Amines - The Results of 2 European Projects Compared", Z.Lebensm.Unters.Forsch.A **207** (1998) 441-447.
- Dean, R., Barnabas, I.J., and Owen, S.P., "Influence of pesticide-soil interactions on the recovery of pesticides using supercritical fluid extraction", Analyst **121** (1996) 465-468.

- Dragsted, L.O., Grivas, S., Frandsen, H., and Larsen, "Antibodies to the food mutagens, 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine and 2-amino-3,4,8-trimethylimidazo[4,5-f]quinoxaline: useful for immunoassay and immunoaffinity chromatography of biological samples", *Carcinogenesis* **16** (1995) 2795-2806.
- Edmons, C.G., Sethi, S.K., Yamaizumi, Z., Kasai, H., Nishimura, S., and McCloskey, J.A., "Analysis of mutagens from cooked foods by LC-MS", *Environ. Health Perspect.* **67** (1986) 35-40.
- Eller, K.I. and Lehotay, S.J., "Evaluation of hydromatrix and magnesium sulfate drying agents for supercritical fluid extraction of multiple pesticides in produce", *Analyst* **122** (1997) 129-235.
- Elmore, J.S., Mottram, D.S., and Hierro, E., "Two-fibre solid-phase microextraction combined with gas chromatography-mass spectrometry for the analysis of volatile aroma compounds in cooked pork", *J.Chromatogr.A* **905** (2001) 233-240.
- Fay, L.B., Ali, S., and Gross, G.A., "Determination of Heterocyclic Aromatic-Amines in Food-Products - Automation of the Sample Preparation Method Prior to HPLC and HPLC-MS Quantification", *Mutat.Res.Fundam.Mol.Mech.Mut.* **376** (1997) 29-35.
- Felton, J.S., Fultz, E., Dolbeare, F.A., and Knize, M.G., "Effect of Microwave Pretreatment on Heterocyclic Aromatic Amine Mutagens/Carcinogens in Fried Beef Patties", *Food Chem.Toxicol.* **32** (1994) 897-903.
- Felton, J.S., Healy, S.K., Stuermer, D.H., Berry, Timourian, Hatch, F.T., Morris, and Bjeldanes, L.F., "Improved extraction and characterization of mutagenic fractions", *Mutat.Res.* **88** (1981) 33-44.
- Felton, J.S., Knize, M.G., Salmon, C.P., Malfatti, M.A., and Kulp, K.S., "Human Exposure to Heterocyclic Amine Food Mutagens/Carcinogens - Relevance to Breast-Cancer", *Environ.Mol.Mutagen.* **39** (2002) 112-118.
- Felton, J.S., Knize, M.G., Shen, N.H., Andresen, B.D., Bjeldanes, L.F., and Hatch, F.T., "Identification of the mutagens in cooked beef", *Environ.Health Perspect.* **67** (1986a) 17-24.
- Felton, J.S., Knize, M.G., Shen, N.H., Lewis, P.R., Andresen, B.D., Happe, J., and Hatch, F.T., "Isolation and identification of a new mutagen: PhIP", *Carcinogenesis* **7** (1986b) 1081-1086.
- Felton, J.S., Knize, M.G., Wood, C., Wuebbles, B.J., Healy, S.K., Stuermer, D.H., Bjeldanes, L.F., Kimble, B.J., and Hatch, F.T., "Isolation and characterization of new mutagens from fried beef", *Carcinogenesis* **5** (1984) 95-102.
- Felton, J.S., Malfatti, M.A., Knize, M.G., Salmon, C.P., Hopmans, E.C., and Wu, R.W., "Health Risks of Heterocyclic Amines", *Mutat.Res.Fundam.Mol.Mech.Mut.* **376** (1997) 37-41.
- Ferguson, L.R., "Natural and Man-Made Mutagens and Carcinogens in the Human Diet", *Mutat.Res.Genet.Toxicol.E.M.* **443** (1999) 1-10.
- Fiddler, W. and Pensabene, J.W., "Supercritical fluid extraction of volatile N-nitrosamines in fried bacon and its drippings: method comparison", *J.AOAC Int.* **79** (1996) 895-901.
- Field, J.A., "Coupling derivatization reactions with supercritical fluid extraction", *J.Chromatogr.A* **785** (1997) 239-249.
- Fischer, M. and Jefferies, T.M., "Optimization of nicotine extraction from tobacco using supercritical fluid technology with dynamic extraction modeling", *J.Agr.Food Chem.* **44** (1996) 1258-1264.
- Frandsen, H. and Alexander, J., "N-acetyltransferase-dependent activation of 2-hydroxiamino-1-methyl-PhIP: formation of OH-PhIP, a possible biomarker for the reactive dose of PhIP", *Carcinogenesis* **21** (2000) 1197-1203.
- Frandsen, H., Frederiksen, H., and Alexander, J., "5-OH-PhIP, a biomarker for the genotoxic dose of the heterocyclic amine PhIP", *Food Chem.Toxicol.* **40** (2002) 1125-1130.

- Frederiksen, H. and Frandsen, H., "In-Vitro Metabolism of 2 Heterocyclic Amines, 2-Amino-9H-Pyrido(2,3-B)Indole (A-Alpha-C) and 2-Amino-3-Methyl-9H-Pyrido(2,3-B)Indole (MeA-Alpha-C) in Human and Rat Hepatic Microsomes", *Pharmacol.Toxicol.* **90** (2002) 127-134.
- Friedman, M., "Food Browning and Its Prevention - An Overview", *J.Agr.Food Chem.* **44** (1996) 631-653.
- Friesen, M.D., Rothman, N., and Strickland, P.T., "Concentration of 2-Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine (Phip) in Urine and Alkali-Hydrolyzed Urine After Consumption of Charbroiled Beef", *Cancer Lett.* **173** (2001) 43-51.
- Galceran, M.T., Moyano, E., Puignou, L., and Pais, P., "Determination of Heterocyclic Amines by Pneumatically Assisted Electrospray Liquid-Chromatography Mass-Spectrometry", *J.Chromatogr.A* **730** (1996a) 185-194.
- Galceran, M.T., Pais, P., and Puignou, L., "High-Performance Liquid-Chromatographic Determination of 10 Heterocyclic Aromatic-Amines with Electrochemical Detection", *J.Chromatogr.A* **655** (1993) 101-110.
- Galceran, M.T., Pais, P., and Puignou, L., "Isolation by Solid-Phase Extraction and Liquid-Chromatographic Determination of Mutagenic Amines in Beef Extracts", *J.Chromatogr.A* **719** (1996b) 203-212.
- Gangl, E.T., Turesky, R.J., and Vouros, P., "Detection of in Vivo Formed DNA Adducts at the Part-per-Billion Level by Capillary Liquid Chromatography/Microelectrospray Mass Spectrometry", *Anal.Chem.* **73** (2001) 2397-2404.
- Garrigós, M.C., Reche, F., Pernías, K., Sánchez, A., and Jiménez, A., "Determination of some aromatic amines in finger-paints for children's use by supercritical fluid extraction combined with gas chromatography", *Journal of Chromatography A* **819** (1998) 259-266.
- Gooderham, N.J., Murray, S., Lynch, A.M., Edwards, R.J., Yadollahifarsani, M., Bratt, C., Rich, K.J., Zhao, K., Murray, B.P., Bhadresa, S., Crosbie, S.J., Boobis, A.R., and Davies, D.S., "Heterocyclic Amines - Evaluation of Their Role in Diet Associated Human Cancer", *Brit.J.Clin.Pharmacol.* **42** (1996) 91-98.
- Grose, K.R., Grant, J.L., Bjeldanes, L.F., Andresen, B.D., Healy, S.K., Lewis, P.R., Felton, J.S., and Hatch, F.T., "Isolation of the carcinogen IQ from fried egg patties", *J.Agr.Food Chem.* **34** (1986) 201-202.
- Gross, G., "Simple methods for quantifying mutagenic HAAs in food products", *Carcinogenesis* **11** (1990) 1597-1603.
- Gross, G. and Grüter, A., "Quantitation of mutagenic HAAs in food products", *J.Chromatogr.* **592** (1992) 271-278.
- Gross, G., Philipposian, and Aeschbacher, "An efficient and convenient method for the purification of HAAs", *Carcinogenesis* **10** (1989) 1175-1182.
- Gross, G.A., Turesky, R.J., Fay, L.B., Stillwell, W.G., Skipper, P.L., and Tannenbaum, S.R., "Heterocyclic Aromatic Amine Formation in Grilled Bacon, Beef and Fish and in Grill Scrapings", *Carcinogenesis* **14** (1993) 2313-2318.
- Gu, Y.S., Kim, I.S., Ahn, J.K., Park, D.C., Yeum, D.M., Ji, C.I., and Kim, S.B., "Mutagenic and Carcinogenic Heterocyclic Amines as Affected by Muscle Types/Skin and Cooking in Pan-Roasted Mackerel", *Mutat.Res.Genet.Toxicol.E.M.* **515** (2002) 189-195.
- Gu, Y.S., Kim, I.S., Park, J.H., Lee, S.H., Park, D.C., Yeum, D.M., Ji, C.I., Kim, S.H., Wakabayashi, K., and Kim, S.B., "Effects of Seasoning and Heating Device on Mutagenicity and Heterocyclic Amines in Cooked Beef", *Biosci.Biotechnol.Biochem.* **65** (2001) 2284-2287.
- Guy, P.A., Gremaud E., Richoz, J., and Turesky, R.J., "Quantitative analysis of mutagenic heterocyclic aromatic amines in cooked meat using liquid chromatography-atmospheric pressure chemical ionisation tandem mass spectrometry.", *J.Chromatogr.A* **883** (2000) 89-102.

- Hao, C. and March, R.E., "A survey of recent research activity in quadrupole ion trap mass spectrometry", Int.J.Mass Spectrom. **212** (2001) 337-357.
- Hargraves, W.A. and Pariza, M.W., "Purification and Mass spectral characterization of bacterial mutagens", Cancer Res. **43** (1983) 1467-1472.
- Hasegawa, R., Kato, T., Hirose, M., Takahashi, S., Shirai, T., and Ito, N., "Enhancement of Hepatocarcinogenesis by Combined Administration of Food-Derived Heterocyclic Amines at Low-Doses in the Rat", Food Chem.Toxicol. **34** (1996) 1097-1101.
- Hatch, F.T., Knize, M.G., and Colvin, M.E., "Extended Quantitative Structure-Activity-Relationships for 80 Aromatic and Heterocyclic Amines - Structural, Electronic, and Hydropathic Factors Affecting Mutagenic Potency", Environ.Mol.Mutagen. **38** (2001) 268-291.
- Hatch, F.T., Knize, M.G., Moore, D.H., and Felton, J.S., "Quantitative correlation of mutagenic and carcinogenic potencies for HAs from cooked foods and additional aromatic amines", Mutat.Res. **271** (1992) 269-287.
- Hawthorne, S.B., Galy, A.B., Schmitt, V.O., and Miller, D.J., "Effect of SFE flow rate on extraction rates: classifying sample extraction behavior", Anal.Chem. **67** (1995) 2723-2732.
- Hawthorne, S.B., Miller, D.J., Nivens, D.E., and White, D.C., "Supercritical fluid extraction of polar analytes using in situ chemical derivatization", Anal.Chem. **64** (1992) 405-412.
- Hayatsu, H., Hayatsu, T., and Wataya, Y., "Use of blue cotton for detection of mutagenicity in human feces excreted after ingestion of cooked meat", Environ.Health Perspect. **67** (1986) 31-34.
- Heddle, J.A., Knize, M.G., Dawod, D., and Zhang, X.B., "A Test of the Mutagenicity of Cooked Meats in-Vivo", Mutagenesis **16** (2001) 103-107.
- Hedrick, J.L., Mulcahey, L.J., and Taylor, L.T., "Supercritical fluid extraction", Mikrochim.Acta **108** (1992a) 115-132.
- Hedrick, J.L. and Taylor, L.T., "Direct supercritical fluid extraction of nitrogenous bases from aqueous solution", Journal of High Resolution Cromatography **15** (1992b) 151-154.
- Hegstad, S., Reistad, R., Haug, L.S., and Alexander, J., "Eumelanin Is a Major Determinant for 2-Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine (PhIP) Incorporation into Hair of Mice", Pharmacol. Toxicol. **90** (2002) 333-337.
- Hennion, M.-C., "Solid-phase extraction: method development, sorbents, and coupling with liquid chromatography", J.Chromatogr.A **856** (1999) 3-54.
- Herikstad, "Screening for mutagens in norwegian foods by Ames Test", J.Sci.Food Agr. **35** (1984) 900-908.
- Herraiz, T., "Analysis of tetrahydro-beta-carboline-3-carboxilic acids in foods by SPE and RPLC-Fluor.", J.Chromatogr.A **871** (2000a) 23-30.
- Herraiz, T., "Analysis of the bioactive alkaloids tetrahydro-beta-carboline and beta-carboline in food", J.Chromatogr.A **881** (2000b) 483-499.
- Herraiz, T., "Tetrahydro-beta-carboline-3-carboxilic acid compounds in fish and meat: possible precursors of co-mutagenic beta-carbolines norharman and harman in cooked foods", Food Addit.Contam. **17** (2000c) 859-866.
- Holder, C.L., Preece, S.W., Conway, S.C., Pu, Y.M., and Doerge, D.R., "Quantification of Heterocyclic Amine Carcinogens in Cooked Meats Using Isotope-Dilution Liquid-Chromatography Atmospheric-Pressure Chemical-Ionization Tandem Mass-Spectrometry", Rapid.Commun.Mass Spectrom. **11** (1997) 1667-1672.
- Horning, E.C., Dzidic, I., and Stillwell, R.N., "New picogram detection system based on a mass spectrometer with an external ionization source at atmospheric pressure", Anal.Chem. **45** (1973) 936.

- Imaeda, K., Sano, M., Tamano, S., Asamoto, M., Ogawa, K., Futakuchi, M., and Shirai, T., "Organ Dependent Enhancement of Rat 3,2'-Dimethyl-4- Aminobiphenyl (DMAB) Carcinogenesis by 2-Amino-1-Methyl-6- Phenylimidazo(4,5-B)Pyridine (PhIP) - Positive Effects on the Intestine But Not the Prostate", *Carcinogenesis* **22** (2001) 1295-1299.
- Jackson, L.S., Hargraves, W.A., Stroup, W.H., and Diachenko, G.W., "Heterocyclic Aromatic Amine Content of Selected Beef Flavors", *Mutat.Res.* **320** (1994) 113-124.
- Jägerstad, M., Reutersward, A.L., Oste, R., Dahlqvist, R., Grivas, S., Olsson, K., and Nyhammar, T., "Creatinine and Maillard reaction products as precursors of mutagenic compounds", *ACS Symp.Ser.* **215** (1983) 507-519.
- Jägerstad, M., Skog, K., Arvidsson, P., and Solyakov, A., "Chemistry, Formation and Occurrence of Genotoxic Heterocyclic Amines Identified in Model Systems and Cooked Foods", *Z.Lebensm.Unters.Forsch.A* **207** (1998) 419-427.
- Janda, V., Kriz, J., Vejrosta, J., and Bartle, K.D., "Supercritical fluid extraction and chromatography of aromatic amines", *J.Chromatogr.A* **669** (1994) 241-245.
- Janoszka, B., Blaszczyk, U., Warzecha, L., Strozyk, M., Damasiewicz bodzek, A., and Bodzek, D., "Cleanup Procedures for the Analysis of Heterocyclic Aromatic-Amines (Aminoazaarenes) from Heat-Treated Meat Samples", *J.Chromatogr.A* **938** (2001) 155-165.
- Johansson, M., Skog, K., and Jägerstad, M., "Effects of Edible Oils and Fatty-Acids on the Formation of Mutagenic Heterocyclic Amines in a Model System", *Carcinogenesis* **14** (1993) 89-94.
- Johansson, M.A.E., Fay, L.B., Gross, G.A., Olsson, K., and Jägerstad, M., "Influence of Amino-Acids on the Formation of Mutagenic/ Carcinogenic Heterocyclic Amines in a Model System", *Carcinogenesis* **16** (1995a) 2553-2560.
- Johansson, M.A.E., Fredholm, L., Bjerne, I., and Jägerstad, M., "Influence of Frying Fat on the Formation of Heterocyclic Amines in Fried Beefburgers and Pan Residues", *Food Chem.Toxicol.* **33** (1995b) 993.
- Kadlubar, F.F., Butler, M.A., Kaderlik, K.R., Chou, H.C., and Lang, N.P., "Polymorphisms for Aromatic Amine Metabolism in Humans - Relevance for Human Carcinogenesis", *Environ.Health Perspect.* **98** (1992) 69-74.
- Kanai, Manabe, S., and Wada, O., "In vitro and in vivo N-acetylation of Glu-P-1 and Glu-P-2", *Carcinogenesis* **9** (1988) 2179-2184.
- Kanai, Wada, O., and Manabe, S., "Detection of carcinogenic glutamic acid pyrolysis products in cigarette smoke", *Carcinogenesis* **11** (1990) 1001-1003.
- Kasai, H., Nishimura, S., Nagao, M., Takahashi, A., and Sugimura, T., "Fractionation of a mutagenic principle from broiled fish by HPLC", *Cancer Lett.* **7** (1979) 343-348.
- Kasai, H., Yamaizumi, Z., Shiomi, T., Yokohama, S., Miyazawa, T., Wakabayashi, K., Nagao, M., Sugimura, T., and Nishimura, S., "Structure of a potent mutagen isolated from fried beef", *Chem.Lett.* 1981 485-488.
- Kataoka, H., "Methods for the Determination of Mutagenic Heterocyclic Amines and Their Applications in Environmental-Analysis", *J.Chromatogr.A* **774** (1997) 121-142.
- Kataoka, H., Hayatsu, H., Hietsch, G., Steinkellner, H., Nishioka, S., Narimatsu, S., Knasmuller, S., and Hayatsu, T., "Identification of mutagenic HA(IQ, Trp-P-1, AαC) in the water of danube river", *Mutat.Res.* **466** (2000) 27-35.
- Kataoka, H. and Kijima, K., "Analysis of Heterocyclic Amines as Their N- Dimethylaminomethylene Derivatives by Gas-Chromatography with Nitrogen-Phosphorus Selective Detection", *J.Chromatogr.A* **767** (1997) 187-194.
- Kataoka, H., Kijima, K., and Maruo, G., "Determination of Mutagenic Heterocyclic Amines in Combustion Smoke Samples", *Bull.Environ.Contam.Toxicol.* **60** (1998) 60-67.

- Kataoka, H. and Pawliszyn, J., "Development of in-Tube Solid-Phase Microextraction/Liquid Chromatography/Electrospray Ionization Mass-Spectrometry for the Analysis of Mutagenic Heterocyclic Amines", *Chromatographia*. **50** (1999) 532-538.
- Kato, T., Michikoshi, K., Minowa, Y., Maeda, Y., and Kikugawa, K., "Mutagenicity of Cooked Hamburger Is Reduced by Addition of Onion to Ground-Beef", *Mutat.Res.Genet.Toxicol.E.M.* **420** (1998) 109-114.
- Kidd, L.C.R., Stillwell, W.G., Yu, M.C., Wishnok, J.S., Skipper, P.L., Ross, R.K., Henderson, B.E., and Tannenbaum, S.R., "Urinary-Excretion of 2-Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine (PhIP) in White, African-American, and Asian-American Men in Los-Angeles-County", *Cancer Epidemiol.Biomarker.Prev.* **8** (1999) 439-445.
- Knize, M.G., Dolbeare, F.A., Carroll, K.L., Moore, D.H., and Felton, J.S., "Effect of Cooking Time and Temperature on the Heterocyclic Amine Content of Fried Beef Patties", *Food Chem.Toxicol.* **32** (1994) 595-603.
- Knize, M.G. and Felton, J.S., "Analysis of foods and related samples for HA mutagens/carcinogens" en "Chromatographic Analysis of Environmental and Food Toxicants" **77**. Marcel Decker, New York (1998a) 93-112.
- Knize, M.G., Felton, J.S., and Gross, G.A., "Chromatographic Methods for the Analysis of Heterocyclic Amine Food Mutagens Carcinogens", *J.Chromatogr.* **624** (1992) 253-265.
- Knize, M.G., Kulp, K.S., Malfatti, M.A., Salmon, C.P., and Felton, J.S., "Liquid Chromatography-Tandem Mass-Spectrometry Method of Urine Analysis for Determining Human Variation in Carcinogen Metabolism", *J.Chromatogr.A* **914** (2001) 95-103.
- Knize, M.G., Roper, M., Shen, N.H., and Felton, J.S., "Proposed structure for an amino-dimethylimidazo-furopyridine mutagen in cooked meats", *Carcinogenesis* **11** (1990) 2259-2262.
- Knize, M.G., Salmon, C.P., Hopmans, E.C., and Felton, J.S., "Analysis of Foods for Heterocyclic Aromatic Amine Carcinogens by Solid-Phase Extraction and High-Performance Liquid-Chromatography", *J.Chromatogr.A* **763** (1997a) 179-185.
- Knize, M.G., Salmon, C.P., Mehta, S.S., and Felton, J.S., "Analysis of Cooked Muscle Meats for Heterocyclic Aromatic Amine Carcinogens", *Mutat.Res.Fundam.Mol.Mech.Mut.* **376** (1997b) 129-134.
- Knize, M.G., Sinha, R., Brown, E.D., Salmon, C.P., Levander, O.A., Felton, J.S., and Rothman, N., "Heterocyclic Amine Content in Restaurant-Cooked Hamburgers, Steaks, Ribs, and Chicken", *J.Agr.Food Chem.* **46** (1998b) 4648-4651.
- Knize, M.G., Sinha, R., Rothman, N., Brown, E.D., Salmon, C.P., Levander, O.A., Cunningham, P.L., and Felton, J.S., "Heterocyclic Amine Content in Fast-Food Meat-Products", *Food Chem.Toxicol.* **33** (1995) 545-551.
- Krach, C. and Sontag, G., "Determination of some heterocyclic aromatic amines in soup cubes by ion-pair chromatography with coulometric electrode array detection", *Anal.Chim.Acta* **417** (2000) 77-83.
- Krone, C.A., Yeh, S.M.J., and Iwaoka, W.T., "Mutagen formation during commercial processing of foods", *Environ.Health Perspect.* **67** (1986) 75-88.
- Kurosaka, R., Wakabayashi, K., Ushiyama, H., Nukaya, H., Arakawa, N., Sugimura, T., and Nagao, M., "Detection of 2-amino-1-methyl-6-(4-hydroxyphenyl)-imidazo[4,5-b]pyridine in broiled beef", *Jpn.J.Cancer Res.* **83** (1992) 919-922.
- Lan, C.M. and Chen, B.H., "Effects of Soy-Sauce and Sugar on the Formation of Heterocyclic Amines in Marinated Foods", *Food Chem.Toxicol.* **40** (2002) 989-1000.
- Langenfeld, J.J., Burford, M.D., Hawthorne, S.B., and Miller, D.J., "Effects of collection solvent parameters and extraction cell geometry on supercritical fluid extraction efficiencies", *J.Chromatogr.* **594** (1992) 297-307.

- Langenfeld, J.J., Hawthorne, S.B., Miller, D.J., and Pawliszyn, J., "Role of Modifiers for Analytical-Scale Supercritical Fluid Extraction of Environmental Samples", *Anal.Chem.* **66** (1994) 909-915.
- Layton, D.W., Bogen, K.T., Knize, M.G., Hatch, F.T., Johnson, V.M., and Felton, J.S., "Cancer Risk of Heterocyclic Amines in Cooked Foods - An Analysis and Implications for Research", *Carcinogenesis* **16** (1995) 39-52.
- Lehotay, S.J., "Supercritical-Fluid Extraction of Pesticides in Foods", *J.Chromatogr.A* **785** (1997) 289-312.
- Levy, J.M., Storozynsky, E., and Ashraf-Khorassani, M., "Use of modifiers in supercritical fluid extraction", *ACS Symp.Ser.* **488** (1992) 336-361.
- Lynch, A.M., Knize, M.G., Boobis, A.R., Gooderham, N.J., Davies, D.S., and Murray, S., "Intra- and interindividual variability in systemic exposure in humans to MeIQx and PhIP, carcinogens present in cooked beef", *Cancer Res.* **52** (1992) 6216-6223.
- Malfatti, M.A. and Felton, J.S., "N-Glucuronidation of 2-Amino-1-Methyl-6-Phenylimidazo (4,5-B)Pyridine (PhIP) and N-Hydroxy-PhIP by Specific Human UDP- Glucuronosyltransferases", *Carcinogenesis* **22** (2001) 1087-1093.
- Malfatti, M.A., Kulp, K.S., Knize, M.G., Davis, C., Massengill, J.P., Williams, S., Nowell, S., Macleod, S., Dingley, K.H., Turteltaub, K.W., Lang, N.P., and Felton, J.S., "The Identification of (2-C-14)-Amino-1-Methyl-6- Phenylimidazo(4,5-B)Pyridine Metabolites in Humans", *Carcinogenesis* **20** (1999) 705-713.
- Manabe, S., Kurihara, N., Wada, O., Izumikawa, S., Asakuno, K., and Morita, M., "Detection of a Carcinogen, 2-Amino-1-Methyl-6-Phenylimidazo (4,5-B)Pyridine, in Airborne Particles and Diesel-Exhaust Particles", *Environ.Pollut.* **80** (1993a) 281-286.
- Manabe, S., Suzuki, H., Wada, O., and Ueki, A., "Detection of PhIP in beer and wine", *Carcinogenesis* **14** (1993b) 899-901.
- Manabe, S., Tohyama, K., Wada, O., and Aramaki, T., "Detection of a carcinogen, PhIP, in cigarette smoke condensate", *Carcinogenesis* **10** (1991) 1945-1947.
- Manabe, S., Wada, O., and Kanai, Y., "Simultaneous determination of amino-alfa-carbolines and amino-gamma-carbolines in cigarette smoke condensate by HPLC", *J.Chromatogr.* **529** (1990) 125-133.
- Manabe, S., Yanagisawa, Ishikawa, Kitagawa, Kanai, and Wada, O., "Accumulation of Glu-P-1 and Glu-P-2 in plasma of patients with uremia", *Cancer Res.* **47** (1987) 6150-6155.
- March, R.E., "Quadrupole ion trap mass spectrometry: a view at the turn of the century", *Int.J.Mass Spectrom.* **200** (2000) 285-312.
- Mardones, C., Arce, L., Rios, A., and Valcarcel, M., "Determination of Heterocyclic Aromatic-Amines in Fried Beefsteak, Meat Extract, and Fish by Capillary-Zone- Electrophoresis", *Chromatographia* **48** (1998) 700-706.
- Markell, C., Hagen, D.F., and Bunnelle, V., "New technologies in solid-phase extraction", *LC GC Int.* **4** (1991) 10-14.
- Martin, F.L., Cole, K.J., Phillips, D.H., and Grover, P.L., "The Proteolytic Release of Genotoxins from Cooked Beef", *Biochem.Biophys.Res.Commun.* **293** (2002) 1497-1501.
- Martínez, G., Ho, C.-H., and Griest, W.H., "Supercritical fluid extraction of explosives and metabolites from composted soil", *Anal.Lett.* **28** (1995) 1499-1511.
- Maxwell, R.J., Pensabene, J.W., and Fiddler, W., "Multiresidue recovery at ppb levels of 10 nitrosamines from frankfurters by supercritical fluid extraction", *J.Chromatogr.Sci.* **31** (1993) 212-213.
- Mendonsa, S.D. and Hurtubise, R.J., "Capillary-Electrophoresis (CE) Methods for the Separation of Carcinogenic Heterocyclic Aromatic-Amines", *J.Liq.Chromatogr.Relat.Techno.* **22** (1999) 1027-1040.

- Milon, H., Bur, H., and Turesky, R.J., "Thermospray LC-MS analysis of mutagenic subst. in Trp pyrolisates", J.Chromatogr. **394** (1987) 201-208.
- Mitjans, D. Máster Experimental en Química, Departamento de Química Analítica de la Universidad de Barcelona: "Evaluación de la ingesta diaria de HAs derivada del consumo de pollo cocinado", Barcelona 2002.
- Molnár, I., "Validation of robust chromatography methods using computer-assisted method development for quality control", LC GC Int. **12** (1996) 800-808.
- Monti, S.M., Ritieni, A., Sacchi, R., Skog, K., Borgen, E., and Fogliano, V., "Characterization of Phenolic-Compounds in Virgin Olive Oil and Their Effect on the Formation of Carcinogenic/Mutagenic Heterocyclic Amines in a Model System", J.Agr.Food Chem. **49** (2001) 3969-3975.
- Mulcahey, L.J., Hedrick, J.L., and Taylor, L.T., "Collection efficiency of various solid-phase traps for off-line supercritical fluid extraction", Anal.Chem. **63** (1991) 2225-2231.
- Murkovic, M., Friedrich, M., and Pfannhauser, W., "Heterocyclic Aromatic-Amines in Fried Poultry Meat", Z.Lebensm.Unters.Forsch.A **205** (1997) 347-350.
- Murkovic, M., Steinberger, D., and Pfannhauser, W., "Antioxidant Spices Reduce the Formation of Heterocyclic Amines in Fried Meat", Z.Lebensm.Unters.Forsch.A **207** (1998) 477-480.
- Murkovic, M., Weber, H.J., Geiszler, S., Frohlich, K., and Pfannhauser, W., "Formation of the Food Associated Carcinogen 2-Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine (PhIP) in Model Systems", Food Chem. **65** (1999) 233-237.
- Murray, S., Gooperham, N.J., Barnes, U.F., Boobis, A.R., and Davies, D.S., "Trp-P-2 is not detectable in cooked meat and fish", Carcinogenesis **8** (1987) 937-940.
- Murray, S., Gooperham, N.J., Boobis, A.R., and Davies, D.S., "Measurement of MeIQx and DiMeIQx in fried beef by CCGC-EC-NICIMS", Carcinogenesis **9** (1988) 321-325.
- Murray, S., Gooperham, N.J., Boobis, A.R., and Davies, D.S., "Detection and measurement of MeIQx in human urine after ingestion of a cooked meat meal", Carcinogenesis **10** (1989) 763-765.
- Murray, S., Lake, B.G., Gray, S., Edwards, A.J., Springall, C., Bowey, E.A., Williamson, G., Boobis, A.R., and Gooperham, N.J., "Effect of Cruciferous Vegetable Consumption on Heterocyclic Aromatic Amine Metabolism in Man", Carcinogenesis **22** (2001) 1413-1420.
- Murray, S., Lynch, A.M., Knize, M.G., and Gooperham, N.J., "Quantification of MeIQx, DiMeIQx and PhIP in food using a combined assay based on GC-negative ion MS", J.Chromatogr. **616** (1993a) 211-219.
- Murray, S., Lynch, A.M., Knize, M.G., and Gooperham, N.J., "Quantification of MeIQx, DiMeIQx and PhIP in food using a combined assay based on GC-negative ion MS", J.Chromatogr. **616** (1993b) 211-219.
- Nagao, M., "A New Approach to Risk-Estimation of Food-Borne Carcinogens - Heterocyclic Amines - Based on Molecular Information", Mutat.Res.Fundam.Mol.Mech.Mut. **431** (1999) 3-12.
- Nagao, M., Honda, M., Seino, Y., Yahagi, T., and Sugimura, T., "Mutagenicities of smoke condensates and the charred surface of fish and meat", Cancer Lett. **2** (1977) 221-226.
- Negishi, C., Wakabayashi, K., Tsuda, M., Sato, S., Sugimura, T., Saito, H., Maeda, M., and Jägerstad, M., "Formation of 2-amino-3,7,8-trimethylimidazo[4,5-f]quinoxaline, a new mutagen, by heating a mixture of creatinine, glucose and glycine", Mutat.Res. **140** (1984) 55-59.
- Negishi, C., Wakabayashi, K., Yamaizumi, Z., Saito, H., Sato, H., Sugimura, T., and Jägerstad, M., "Identification of 4,8-DiMeIQx, a new mutagen", Mutat.Res. **147** (1985) 267-268.
- Norat, T., Lukanova, A., Ferrari, P., and Riboli, E., "Meat Consumption and Colorectal-Cancer Risk - Dose-Response Metaanalysis of Epidemiologic Studies", Int.J.Cancer **98** (2002) 241-256.

- Norat, T. and Riboli, E., "Meat Consumption and Colorectal-Cancer - A Review of Epidemiologic Evidence", Nutr.Rev. **59** (2001) 37-47.
- Norrish, A.E., Ferguson, L.R., Knize, M.G., Felton, J.S., Sharpe, S.J., and Jackson, R.T., "Heterocyclic Amine Content of Cooked Meat and Risk of Prostate- Cancer", J.Nat.Cancer Inst. **91** (1999) 2038-2044.
- Nukaya, H., Koyota, S., Jinno, F., Ishida, H., Wakabayashi, K., Kurosaka, R., Kim, I.S., Yamaizumi, Z., Ushiyama, H., Sugimura, T., Nagao, M., and Tsuji, K., "Structural determination of a new mutagenic heterocyclic amine, 2-amino-1,7,9-trimethylimidazo[4,5-g]quinoxaline (7,9-DiMeIQx), present in beef extract", Carcinogenesis **15** (1994) 1151-1154.
- Nukaya, H., Watanabe, H., Ishida, H., Tsuji, K., Suwa, Y., Wakabayashi, K., Nagao, M., Sugimura, T., and Kosuge, T., "Isolation and structural determination of a mutagenic substance in creatine pyrolyzate", Chem.Pharmaceut.Bull. **39** (1991) 533-535.
- Oguri, A., Suda, M., Totsuka, Y., Sugimura, T., and Wakabayashi, K., "Inhibitory Effects of Antioxidants on Formation of Heterocyclic Amines", Mutat.Res.Fundam.Mol.Mech.Mut. **402** (1998) 237-245.
- Ohe, T., "Quantification of Mutagenic/Carcinogenic Heterocyclic Amines, MeIQx, Trp-P-1, Trp-P-2 and PhIP, Contributing Highly to Genotoxicity of River Water", Mutat.Res.Genet.Toxicol.E.M. **393** (1997) 73-79.
- Olsson, J.C., Dyremark, A., and Karlberg, B., "Determination of Heterocyclic Aromatic-Amines by Micellar Electrokinetic Chromatography with Amperometric Detection", J.Chromatogr.A **765** (1997) 329-335.
- Olsson, V., Solyakov, A., Skog, K., Lundstrom, K., and Jägerstad, M., "Natural Variations of Precursors in Pig Meat Affect the Yield of Heterocyclic Amines - Effects of RN Genotype, Feeding Regime, and Sex", J.Agr.Food Chem. **50** (2002) 2962-2969.
- Ono, Y., Somiya, I., and Oda, Y., "Identification of a Carcinogenic Heterocyclic Amine in River Water", Water Res. **34** (2000) 890-894.
- Oostdyk, T.S., Grob, R.L., Snyder, J.L., and McNally, M.E., "Optimization of the supercritical fluid extraction of primary aromatic amines", J.Chromatogr.Sci. **31** (1993a) 177-182.
- Oostdyk, T.S., Grob, R.L., Snyder, J.L., and McNally, M.E., "Study of sonication and supercritical fluid extraction of primary aromatic amines", Anal.Chem. **65** (1993b) 596-600.
- Oreggia, F., Destefani, E., Boffetta, P., Brennan, P., Deneopellegrini, H., and Ronco, A.L., "Meat, Fat and Risk of Laryngeal-Cancer - A Case-Control Study in Uruguay", Oral Oncol. **37** (2001) 141-145.
- Paehler, A., Richoz, J., Soglia, J., Vouros, P., and Turesky, R.J., "Analysis and Quantification of DNA-Adducts of 2-Amino-3,8- Dimethylimidazo(4,5-F)Quinoxaline in Liver of Rats by Liquid Chromatography/Electrospray Tandem Mass-Spectrometry", Chem.Res.Toxicol. **15** (2002) 551-561.
- Pais, P. Tesis Doctoral, Departamento de Química Analítica de la Universidad de Barcelona: "Desarrollo de metodología analítica para la determinación de aminas aromáticas heterocíclicas en alimentos procesados térmicamente", Barcelona, 1996.
- Pais, P. and Knize, M.G., "Chromatographic and related techniques for the determination of aromatic HAs in foods", J.Chromatogr.B **747** (2000a) 139-169.
- Pais, P., Moyano, E., Puignou, L., and Galceran, M.T., "Liquid-Chromatography Atmospheric-Pressure Chemical-Ionization Mass-Spectrometry as a Routine Method for the Analysis of Mutagenic Amines in Beef Extracts", J.Chromatogr.A **778** (1997a) 207-218.
- Pais, P., Moyano, E., Puignou, L., and Galceran, M.T., "Liquid-Chromatography Electrospray Mass-Spectrometry with in- Source Fragmentation for the Identification and Quantification of 14 Mutagenic Amines in Beef Extracts", J.Chromatogr.A **775** (1997b) 125-136.

- Pais, P., Salmon, C.P., Knize, M.G., and Felton, J.S., "Formation of Mutagenic/Carcinogenic Heterocyclic Amines in Dry-Heated Model Systems, Meats, and Meat Drippings", *J.Agr.Food Chem.* **47** (1999) 1098-1108.
- Pais, P., Tanga, M.J., Salmon, C.P., and Knize, M.G., "Formation of the mutagen IFP in model systems and detection in restaurant meats", *J.Agr.Food Chem.* **48** (2000b) 1721-1726.
- Papilloud, S. and Haerdi, W., "Supercritical fluid extraction of triazine herbicides: a powerful selective analytical method", *Chromatographia* **40** (1995) 705-711.
- Peluso, Castegnaro, M., Malaveille, C., Friesen, M., Garren, L., and Hatefeuille, "32P postlabeling analysis of urinary mutagens from smokers (PhIP)", *Carcinogenesis* **12** (1991) 713-717.
- Pensabene, J.W., Fiddler, W., Maxwell, R.J., Lightfield, A.R., and Hampson, J.W., "Supercritical fluid extraction of N-nitrosamines in hams processed in elastic rubber nettings", *J.AOAC Int.* **78** (1995) 745-748.
- Peres, C., Viallon, C., and Berdagué, J.L., "Solid-phase microextraction mass spectrometry: A new approach to the rapid characterisation of cheese", *Anal.Chem.* **73** (2001) 1030-1036.
- Perfetti, G.A., "Determination of Heterocyclic Aromatic-Amines in-Process Flavors by a Modified Liquid-Chromatographic Method", *J.AOAC.Int.* **79** (1996) 813-816.
- Pesek, J.J., Matyska, M.T., Sentellas, S., Galceran, M.T., Chiari, M., and Pirri, G., "Multimodal open-tubular capillary electrochromatographic analysis of amines and peptides", *Electrophoresis* **23** (2002) 2982-2989.
- Prabhu, S., Lee, M.J., Hu, W.Y., Winnik, B., Yang, I., Buckley, B., and Hong, J.Y., "Determination of 2-Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine (PhIP) and Its Metabolite 2-Hydroxyamino-PhIP by Liquid Chromatography/Electrospray Ionization-Ion Trap Mass-Spectrometry", *Anal.Biochem.* **298** (2001) 306-313.
- Prokopczyk, B., Hoffman, D., Cox, J.E., Djordjevic, M.V., and Brunnemann, K.D., "Supercritical fluid extraction of tobacco-specific N-nitrosamines in smokeless tobacco", *Chem.Res.Toxicol.* **5** (1992) 336-340.
- Prokopczyk, B., Wu, M., Cox, J.E., Amin, S., Desai, D., Idris, A.M., and Hoffman, D., "Improved methodology for the quantitative assessment of tobacco-specific N-nitrosamines in tobacco by supercritical fluid extraction", *J.Agr.Food Chem.* **43** (1995) 916-922.
- Puignou, L., Casal, J., Santos, F.J., and Galceran, M.T., "Determination of Heterocyclic Aromatic-Amines by Capillary Zone Electrophoresis in a Meat Extract", *J.Chromatogr.A* **769** (1997) 293-299.
- Ramstrom, O., Skudar, K., Haines, J., Patel, P., and Bruggemann, O., "Food Analyses Using Molecularly Imprinted Polymers", *J.Agr.Food Chem.* **49** (2001) 2105-2114.
- Reistad, R., Rossland, O.J., Latvakala, K.J., Rasmussen, T., Vikse, R., Becher, G., and Alexander, J., "Heterocyclic Aromatic-Amines in Human Urine Following a Fried Meat Meal", *Food Chem.Toxicol.* **35** (1997) 945-955.
- Richling, E., Decker, C., Haring, D., Herderich, M., and Schreier, P., "Analysis of Heterocyclic Aromatic-Amines in Wine by High-Performance Liquid-Chromatography Electrospray Tandem Mass-Spectrometry", *J.Chromatogr.A* **791** (1997) 71-77.
- Richling, E., Haring, D., Herderich, M., and Schreier, P., "Determination of Heterocyclic Aromatic-Amines (HAA) in Commercially Available Meat-Products and Fish by High-Performance Liquid-Chromatography-Electrospray Tandem Mass-Spectrometry (HPLC-ESI-MS-MS)", *Chromatographia* **48** (1998) 258-262.
- Richling, E., Herderich, M., and Schreier, P., "High-Performance Liquid-Chromatography Electrospray Tandem Mass-Spectrometry (HPLC-ESI-MS-MS) for the Analysis of Heterocyclic Aromatic-Amines (HAA)", *Chromatographia* **42** (1996) 7-11.

- Richling, E., Kleinschmitz, M., and Schreier, P., "Analysis of Heterocyclic Aromatic-Amines by High-Resolution Gas Chromatography-Mass Spectrometry - A Suitable Technique for the Routine Control of Food and Process Flavors", Eur.Food Res.Technol. **210** (1999) 68-72.
- Rivera, L., Curto, M.J.C., Pais, P., Galceran, M.T., and Puignou, L., "Solid-Phase Extraction for the Selective Isolation of Polycyclic Aromatic-Hydrocarbons, Azaarenes and Heterocyclic Aromatic-Amines in Charcoal-Grilled Meat", J.Chromatogr.A **731** (1996) 85-94.
- Rohrmann, S., Linseisen, J., Becker, N., Norat, T., Sinha, R., Skeie, G., Lund, E., Martinez, C., Barricarte, A., Mattisson, I., Berglund, G., Welch, A., Davey, G., Overvad, K., Tjønneland, A., Clavelchapel, F., Kesse, E., Lotze, G., Klipsteingrobusch, K., Vasilopoulou, E., Polychronopoulos, E., Pala, V., Celentano, E., Bueno demesquita, H.B., Peeters, P.H.M., Riboli, E., Slimani, N., "Cooking of Meat and Fish in Europe - Results from the European Prospective Investigation into Cancer and Nutrition (Epic)", Eur.J.Clin.Nutr. **56** (2002) 1216-1230.
- Ryu, D.Y., Pratt, V.S.W., Davis, C.D., Schut, H.A.J., and Snyderwine, E.G., "In-Vivo Mutagenicity and Hepatocarcinogenicity of 2-Amino-3,8-Dimethylimidazo(4,5-F)Quinoxaline (MeIQx) in Bitransgenic C-myc/Lambda-Lacz Mice", Cancer Res. **59** (1999) 2587-2592.
- Salmon, C.P., Knize, M.G., and Felton, J.S., "Effects of Marinating on Heterocyclic Amine Carcinogen Formation in Grilled Chicken", Food Chem.Toxicol. **35** (1997) 433-441.
- Sasaki, T.A., Wilkins, J.M., Forehand, J.B., and Moldoveanu, S.C., "Analysis of Heterocyclic Amines in Mainstream Cigarette-Smoke Using a New NCI GC-MS Technique", Anal.Lett. **34** (2001) 1749-1761.
- Schwarzenbach, R. and Gubler, D., "Detection of Heterocyclic Aromatic-Amines in Food Flavors", J.Chromatogr. **624** (1992) 491-495.
- Sinha, R., Chow, W.H., Kulldorff, M., Denobile, J., Butler, J., Garciacllosas, M., Weil, R., Hoover, R.N., and Rothman, N., "Well-Done, Grilled Red Meat Increases the Risk of Colorectal Adenomas", Cancer Res. **59** (1999) 4320-4324.
- Sinha, R., Knize, M.G., Salmon, C.P., Brown, E.D., Rhodes, D., Felton, J.S., Levander, O.A., and Rothman, N., "Heterocyclic Amine Content of Pork Products Cooked by Different Methods and to Varying Degrees of Doneness", Food Chem.Toxicol. **36** (1998a) 289-297.
- Sinha, R., Rothman, N., Brown, E.D., Salmon, C.P., Knize, M.G., Swanson, C.A., Rossi, S.C., Mark, S.D., Levander, O.A., and Felton, J.S., "High-Concentrations of the Carcinogen 2-Amino-1-Methyl-6-Phenylimidazo-(4,5-B)Pyridine (PhIP) Occur in Chicken But Are Dependent on the Cooking Method", Cancer Res. **55** (1995a) 4516-4519.
- Sinha, R., Rothman, N., Mark, S.D., Murray, S., Brown, E.D., Levander, O.A., Davies, D.S., Lang, N.P., Kadlubar, F.F., and Hoover, R.N., "Lower Levels of Urinary 2-Amino-3,8-Dimethylimidazo(4,5-F)Quinoxaline (Meiqx) in Humans with Higher Cyp1A2 Activity", Carcinogenesis **16** (1995b) 2859-2861.
- Sinha, R., Rothman, N., Salmon, C.P., Knize, M.G., Brown, E.D., Swanson, C.A., Rhodes, D., Rossi, S., Felton, J.S., and Levander, O.A., "Heterocyclic Amine Content in Beef Cooked by Different Methods to Varying Degrees of Doneness and Gravy Made from Meat Drippings", Food Chem.Toxicol. **36** (1998b) 279-287.
- Skog, K., "Cooking Procedures and Food Mutagens - A Literature-Review", Food Chem.Toxicol. **31** (1993) 655-675.
- Skog, K., Augustsson, K., Steineck, G., Stenberg, M., and Jägerstad, M., "Polar and Nonpolar Heterocyclic Amines in Cooked Fish and Meat-Products and Their Corresponding Pan Residues", Food Chem.Toxicol. **35** (1997) 555-565.
- Skog, K., Jägerstad, M., and Reuterswärd, A.L., "Inhibitory effect of carbohydrates on the formation of mutagens in fried beef patties", Food Chem.Toxicol. **30** (1992a) 681-688.

- Skog, K., Johansson, M.A.E., and Jägerstad, M.I., "Carcinogenic Heterocyclic Amines in Model Systems and Cooked Foods - A Review on Formation, Occurrence and Intake", *Food Chem.Toxicol.* **36** (1998a) 879-896.
- Skog, K., Knize, M.G., Felton, J.S., and Jägerstad, M., "Formation of new HAAs by heating creat+Ala+Thr+Glu", *Mutat.Res.* **268** (1992b) 191-197.
- Skog, K. and Solyakov, A., "heterocyclic amines in poultry products: a literature review", *Food Chem.Toxicol.* **40** (2002) 1213-1221.
- Skog, K., Solyakov, A., Arvidsson, P., and Jägerstad, M., "Analysis of Nonpolar Heterocyclic Amines in Cooked Foods and Meat Extracts Using Gas-Chromatography Mass-Spectrometry", *J.Chromatogr.A* **803** (1998b) 227-233.
- Skog, K., Solyakov, A., and Jägerstad, M., "Effects of Heating Conditions and Additives on the Formation of Heterocyclic Amines with Reference to Amino-Carbolines in a Meat Juice Model System", *Food Chem.* **68** (2000) 299-308.
- Skog, K., Steineck, G., Augustsson, K., and Jägerstad, M., "Effect of Cooking Temperature on the Formation of Heterocyclic Amines in Fried Meat-Products and Pan Residues", *Carcinogenesis* **16** (1995) 861-867.
- Snyderwine, E.G., Schut, H.A.J., Adamson, R.H., Thorgeirsson, U.P., and Thorgeirsson, S.S., "Metabolic activation and genotoxicity of heterocyclic arilamines", *Cancer Res.Suppl* **52** (1992) 2099-2102.
- Snyderwine, E.G., Turesky, R.J., Turteltaub, K.W., Davis, C.D., Sadrieh, N., Schut, H.A.J., Nagao, M., Sugimura, T., Thorgeirsson, U.P., Adamson, R.H., and Thorgeirsson, S.S., "Metabolism of Food-Derived Heterocyclic Amines in Nonhuman- Primates", *Mutat.Res.Fundam.Mol.Mech.Mut.* **376** (1997) 203-210.
- Soglia, J.R., Turesky, R.J., Paehler, A., and Vouros, P., "Quantification of the HAA DNA adduct N-deoxyguanosin-8-yl-2-amino-3-methylimidazo[4,5-f]quinoline in livers of rats using capillary liquid chromatography/microelectrospray mass spectrometry: A dose response study", *Anal.Chem.* **73** (2001) 2819-2827.
- Solyakov, A. and Skog, K., "Screening for HAAs in chicken cooked in various ways (Review)", *Food Chem.Toxicol.* **40** (2002) 1205-1211.
- Solyakov, A., Skog, K., and Jägerstad, M., "Heterocyclic Amines in-Process Flavors, Process Flavor Ingredients, Bouillon Concentrates and a Pan Residue", *Food Chem.Toxicol.* **37** (1999) 1-11.
- Song, S. and Ashley, D.L., "Supercritical fluid extraction and gas chromatography/mass spectrometry for the analysis of tobacco-specific nitrosamines in cigarettes", *Anal.Chem.* **71** (1999) 1303-1308.
- Stavric, B., "Biological Significance of Trace Levels of Mutagenic Heterocyclic Aromatic-Amines in Human Diet - A Critical-Review", *Food Chem.Toxicol.* **32** (1994) 977-994.
- Stavric, B., Lau, B.P.Y., Matula, T.I., Klassen, R., Lewis, D., and Downie, R.H., "Heterocyclic Aromatic Amine Content in Pre-Processed Meat Cuts Produced in Canada", *Food Chem.Toxicol.* **35** (1997a) 199-206.
- Stavric, B., Lau, B.P.Y., Matula, T.I., Klassen, R., Lewis, D., and Downie, R.H., "Mutagenic Heterocyclic Aromatic-Amines (HAAs) in Processed Food Flavor Samples", *Food Chem.Toxicol.* **35** (1997b) 185-197.
- Stillwell, W.G., Kidd, L.C.R., Wishnok, J.S., Tannenbaum, S.R., and Sinha, R., "Urinary-Excretion of Unmetabolized and Phase-II Conjugates of 2- Amino-1-Methyl-6-Phenylimidazo(4,5-B)Pyridine and 2-Amino-3,8- Dimethylimidazo(4,5-F)Quinoxaline in Humans - Relationship to Cytochrome P4501A2 and N-Acetyltransferase Activity", *Cancer Res.* **57** (1997) 3457-3464.
- Stillwell, W.G., Turesky, R.J., Sinha, R., Skipper, P.L., and Tannenbaum, S.R., "Biomonitoring of Heterocyclic Aromatic Amine Metabolites in Human Urine", *Cancer Lett.* **143** (1999a) 145-148.

- Stillwell, W.G., Turesky, R.J., Sinha, R., and Tannenbaum, S.R., "N-oxidative metabolism of MeIQx in humans: excretion of the N2-glucoronide conjugate of 2-hydroxiarnino-MeIQx in urine", *Cancer Res.* **59** (1999b) 5154-5159.
- Stormer, Alexander, and Becher, "Fluorometric detection of IQ, MeIQ and their metabolites", *Carcinogenesis* **8** (1987) 1277-1280.
- Strickland, P.T. and Groopman, J.D., "Biomarkers for Assessing Environmental Exposure to Carcinogens in the Diet", *Amer.J.Clin.Nutr.* **61** (1995) S710-S720.
- Sugimura, T., "History: present and future of HAS" en "Cooked food mutagens". Eds. R.H. Adamson; J.A. Gustafsson; N. Ito; M. Nagao; T. Sugimura; K. Wakabayashi; Y. Yamazoe. Proceedings of the 23rd International Symposium of the Princess Takamatsu Cancer Research Fundation. Princeton Scientific Publishing, Princeton, New Jersey, (1995) 214-231.
- Sugimura, T., Kawachi, T., Nagao, M., Yahagi, T., Seino, Y., Okamoto, T., Shudo, K., Kosuge, T., Tsuki, K., Wakabayashi, K., Iitaka, Y., and Itai, A., "Mutagenic principle(s) in tryptophan and phenylalanine pyrolysis products", *Proc.Japan Acad.* **53** (1977) 58-61.
- Sugimura, T., Nagao, M., and Wakabayashi, K., "How we should deal with unavoidable exposure of man to environmental mutagens: cooked food mutagen discovery, facts and lessons for cancer prevention", *Mutat.Res.* **447** (2000) 15-25.
- Sugimura, T. and Sato, H., "Mutagens-carcinogens in food", *Cancer Res.Suppl* **43** (1983a) 2415S-2421S.
- Sugimura, T. and Sato, S., "New mutagenic heterocyclic amines found in amino acid and protein pyrolyzates and in cooked food" en "Environmental Aspects of Cancer: Role of Macro and Microcomponents in Foods". Ed. E.L. Wynder, Proceedings of International Conferences, Food & Nutr.Press, Westport, CT, 1983b.
- Tai, C.Y., Lee, K.H., and Chen, B.H., "Effects of Various Additives on the Formation of Heterocyclic Amines in Fried Fish Fiber", *Food Chem.* **75** (2001) 309-316.
- Takahashi, Wakabayashi, K., Nagao, M., Yamamoto, Masui, T., Goto, Kinae, N., Tomita, and Sugimura, T., "Quantification of IQ and MeIQx in beef extracts by HPLC-ED", *Carcinogenesis* **6** (1985) 1195-1199.
- Tannenbaum, S.R., Stillwell, W.G., Ji, H., Skipper, P.L., Yu, M.C., Ross, R.K., Henderson, B.E., Turesky, R.J., and Gross, G.A., "MeIQx: metabolism in human and urinary metabolites in human population" en "Cooked food mutagens". Eds. R.H. Adamson; J.A. Gustafsson; N. Ito; M. Nagao; T. Sugimura; K. Wakabayashi; Y. Yamazoe. Proceedings of the 23rd International Symposium of the Princess Takamatsu Cancer Research Fundation. Princeton Scientific Publishing, Princeton, New Jersey, (1995) 197-205.
- Taylor, R.T., Fultz, E., and Knize, M.G., "Mutagen formation in a model beef boiling system", *J.Environ.Sci.Health* **A20** (1985) 135-148.
- Thiebaud, H.P., Knize, M.G., Kuzmicky, P.A., Felton, J.S., and Hsieh, D.P., "Mutagenicity and Chemical-Analysis of Fumes from Cooking Meat", *J.Agr.Food Chem.* **42** (1994) 1502-1510.
- Thiebaud, H.P., Knize, M.G., Kuzmicky, P.A., Hsieh, D.P., and Felton, J.S., "Airborne Mutagens Produced by Frying Beef, Pork and a Soy-Based Food", *Food Chem.Toxicol.* **33** (1995) 821-828.
- Tikkanen, L.M., Latva-Kala, K.J., and Heinio, R.L., "Effect of Commercial Marinades on the Mutagenic Activity, Sensory Quality and Amount of Heterocyclic Amines in Chicken Grilled Under Different Conditions", *Food Chem.Toxicol.* **34** (1996) 725-730.
- Tikkanen, L.M., Sauri, T.M., and Latva-Kala, K.J., "Screening of heat-processed finnish foods for the mutagens MeIQx, PhIP and 4,8-DiMeIQx", *Food Chem.Toxicol.* **31** (1993) 717-721.
- Toribio, F. Máster Experimental en Química, Departamento de Química Analítica de la Universidad de Barcelona, "Diferentes métodos de extracción en fase sólida para el análisis de aminas aromáticas heterocíclicas en alimentos tratados térmicamente". Barcelona, 1998.

- Toribio, F., Moyano, E., Puignou, L., and Galceran, M.T., "Comparison of different commercial SPE cartridges used to extract HAs from a lyophilised meat extract", J.Chromatogr.A **880** (2000a) 101-112.
- Toribio, F., Moyano, E., Puignou, L., and Galceran, M.T., "Determination of HAs in meat extracts by LC-APCI-MS", J.Chromatogr.A **869** (2000b) 307-317.
- Toribio, F., Moyano, E., Puignou, L., and Galceran, M.T., "Ion-Trap Tandem Mass-Spectrometry for the Determination of Heterocyclic Amines in Food", J.Chromatogr.A **948** (2002) 267-281.
- Toribio, F., Puignou, L., and Galceran, M.T., "Evaluation of Different Cleanup Procedures for the Analysis of Heterocyclic Aromatic-Amines in a Lyophilized Meat Extract", J.Chromatogr.A **836** (1999) 223-233.
- Totsuka, Y., Ushiyama, H., Ishihara, J., Sinha, R., Goto, S., Sugimura, T., and Wakabayashi, K., "Quantification of the Comutagenic Beta-Carbolines, Norharman and Harman, in Cigarette-Smoke Condensates and Cooked Foods", Cancer Lett. **143** (1999) 139-143.
- Turesky, R.J., Bur, H., Huynh-Ba, T., Aeschbacher, H.U., and Milon, H., "Analysis of HAAs in beef products by HPLC-MS", Food Chem.Toxicol. **26** (1988) 501-509.
- Turesky, R.J., Fay, L.B., and Welti, D.H., "Metabolism of HAs and strategies of human biomonitoring" en "Cooked food mutagens". Eds. R.H. Adamson; J.A. Gustafsson; N. Ito; M. Nagao; T. Sugimura; K. Wakabayashi; Y. Yamazoe. Proceedings of the 23rd International Symposium of the Princess Takamatsu Cancer Research Fundation. Princeton Scientific Publishing, Princeton, New Jersey, (1995) 59-68.
- Turesky, R.J., Stillwell, W.G.S., Skipper, P.L., and Tannenbaum, S.R., "Metabolism of the Food-Borne Carcinogens 2-Amino-3- Methylimidazo-(4,5-F)Quinoline and 2-Amino-3,8- Dimethylimidazo(4,5-F)-Quinoxaline in the Rat as a Model for Human Biomonitoring", Environ.Health Perspect. **99** (1993) 123-128.
- Ushiyama, H., Wakabayashi, K., Hirose, Itoh, S., Sugimura, T., and Nagao, M., "Presence of carcinogenic heterocyclic amines in urine", Carcinogenesis **12** (1991) 1417-1422.
- Vainiotalo, S., Matveinen, K., and Reunanen, A., "GC MS Determination of the Mutagenic Heterocyclic Amines MelQx and DiMeIQx in Cooking Fumes", Fresenius J.Anal.Chem. **345** (1993) 462-466.
- Vanderlaan, M., Alexander, J., Thomas, C., Djanegara, T., Hwang, Watkins, and Wallin, H., "Immunochemical detection of rodent hepatic and urinary metabolites of cooking-induced food mutagens", Carcinogenesis **12** (1991) 349-354.
- Vanderlaan, M., Watkins, P.B., Hwan, Knize, M.G., and Felton, J.S., "Monoclonal antibodies for the immunoassay of mutagenic aromatic amines", Carcinogenesis **9** (1988) 153-160.
- Vavrek and Weisburger, "Efficient method for the isolation by HPLC of a major metabolite of IQ: 5-hydroxyderivate", Cancer Lett. **51** (1990) 79-83.
- Vollenbroker, M. and Eichner, K., "A New Quick Solid-Phase Extraction Method for the Quantification of Heterocyclic Aromatic-Amines", Eur.Food Res.Technol. **212** (2000) 122-125.
- Wakabayashi, K. and Sugimura, T., "Heterocyclic Amines Formed in the Diet - Carcinogenicity and Its Modulation by Dietary Factors", J.Nutr.Biochem. **9** (1998) 604-612.
- Wakabayashi, K., Tsuji, K., Kosuge, T., Takeda, K., Yamaguchi, K., Shudo, K., Iitaka, Y., Okamoto, T., Yahagi, T., Nagao, M., and Sugimura, T., "Isolation and structure determination of a mutagenic substance in L-lysine pyrolysatate", Proc.Japan Acad. **54** (1978) 569-571.
- Wakabayashi, K., Ushiyama, H., Takahashi, M., Nukaya, H., Kim, S.B., Hirose, M., Ochiai, M., Sugimura, T., and Nagao, M., "Exposure to Heterocyclic Amines", Environ.Health Perspect. **99** (1993) 129-133.

- Weisburger, J.H., Rivenson, A., Kingston, D.G.I., Wilkins, T.D., Van Tassell, R.L., Nagao, M., Sugimura, T., and Hara, Y., "Dietary modulation of the carcinogenicity of HAs" en "Cooked food mutagens". Eds. R.H. Adamson; J.A. Gustafsson; N. Ito; M. Nagao; T. Sugimura; K. Wakabayashi; Y. Yamazoe. Proceedings of the 23rd International Symposium of the Princess Takamatsu Cancer Research Fundation. Princeton Scientific Publishing, Princeton, New Jersey, (1995) 240-250.
- Wells, D.A., "96-Well plate products for solid-phase extraction", LC GC Europe **12** (1999) 704-715.
- White, J.L., Conner, B.T., Perfetti, T.A., Bombick, B.R., Avalos, J.T., Fowler, K.W., Smith, C.J., and Doolittle, D.J., "Effect of Pyrolysis Temperature on the Mutagenicity of Tobacco-Smoke Condensate", Food Chem.Toxicol. **39** (2001) 499-505.
- Wu, Wong, Lee, Shi, and Ong, "Determination of HAs in flame-grilled fish patty by CE", Food Addit.Contam. **13** (1996) 851-861.
- Wu, J., Wong, M.K., Lee, H.K., and Ong, C.N., "Capillary Zone Electrophoretic Determination of Heterocyclic Aromatic-Amines in Rain", J.Chromatogr.Sci. **33** (1995) 712-716.
- Yamagishi, M., Natsume, M., Nagaki, A., Adachi, T., Osakabe, N., Takizawa, T., Kumon, H., and Osawa, T., "Antimutagenic activity of cacao: inhibitory effect of cacao liquor polyphenols on the mutagenic action of HAs", J.Agr.Food Chem. **48** (2000) 5074-5078.
- Yamamoto, T., Tsuji, K., Kosuge, T., Okamoto, T., Shudo, K., Takeda, K., Iitaka, Y., Yamaguchi, K., Seino, Y., Yahagi, T., Nagao, M., and Sugimura, T., "Isolation and structure determination of mutagenic substances in L-glutamic acid pyrolysat", Proc.Japan Acad. **54** (1978) 248-250.
- Yamashita, M. and Fenn, J.B., "Electrospray ion source. Another variation on the free-jet theme", J.Phys.Chem. **88** (1984) 4451-4459.
- Yamashita, M., Wakabayashi, K., Nagao, M., Sato, S., Yamaizumi, Z., Takahashi, M., Kinae, N., Tomita, I., and Sugimura, T., "Detection of IQ in cigarette smoke condensate", Jpn.J.Cancer Res. **77** (1986) 419-422.
- Yarita, T., Horimoto, Y., Nomura, A., and Gonda, S., "Supercritical fluid extraction of triazine herbicides from soil matrices", Chromatographia **42** (1996) 551-554.
- Yoshida, D., Matsumoto, R., and Matsuzaki, T., "Mutagenicity of amino- $\alpha$ -carbolines in pyrolysis products of soybean globulin", Biochem.Biophys.Res.Commun. **83** (1978) 915-920.
- Zhao, Y.I., Schelfaut, M., Sandra, P., and Banks, F., "Capillary-Electrophoresis and Capillary-Electrophoresis Electrospray - Mass-Spectroscopy for the Analysis of Heterocyclic Amines", Electrophoresis **19** (1998) 2213-2219.
- Zimmerli, B., Rhyn, P., Zoller, O., and Schlatter, J., "Occurrence of Heterocyclic Aromatic-Amines in the Swiss Diet - Analytical Method, Exposure Estimation and Risk Assessment", Food Addit.Contam. **18** (2001) 533-551.
- Zochling, S. and Murkovic, M., "Formation of the heterocyclic amine PhIP: identification of precursors and intermediates", Food Chem. **79** (2002) 125-134.