Volume 100 of the IARC Monographs, A Review of Human Carcinogens, covers all agents previously classified by IARC as “carcinogenic to humans (Group 1)” and was developed by six separate Working Groups: Pharmaceuticals; Biological Agents; Arsenic, Metals, Fibres, and Dusts; Radiation; Personal Habits and Indoor Combustions; Chemical, Agents and Related Occupations.

This Volume 100F covers Chemical Agents and Related Occupations, specifically 4-Aminoazobenzene, Benzidine, 2,4-Dinitrotoluene, 4,4’-Methylenebis(2-chloroaniline), 2-Naphthylamine, Ortho-Toluidine, Auramine and Auramine Production, Magenta and Magenta Production, Benz(a)pyrene, Coal Gasification, Occupational Exposures During Coal-Tar Distillation, Coal-Tar Pitch, Coke Production, Untreated or Mildly Treated Mineral Oils, Shale Oils, Soot, as found in Occupational Exposure of Chimney-Sweeps, Occupational Exposures During Aluminium Production, Aflatoxins, Benzene, Bis(chloromethyl)ether and Chloromethy1 Methyl Ether, 1,3-Butadiene, 2,3,7,8-Tetrachlorodibenzo-p-Dioxin, 2,3,4,7,8-Pentachlorodibenzofuran, and 3,3’4,4’5-Pentachlorobiphenyl, Ethylene Oxide, Formaldehyde, Sulfur Mustard, Vinyl Chloride, Isomers, Alcohols Manufacture by the Strong-Acid Process, Mists from Strong Inorganic Acids, Occupational Exposures During Iron and Steel Founding, Occupational Exposure as a Painter, Occupational Exposures in the Rubber Manufacturing Industry.

Because the scope of Volume 100 is so broad, its Monographs are focused on key information. Each Monograph presents a description of a carcinogenic agent and how people are exposed, critical overviews of the epidemiological studies and animal cancer bioassays, and a concise review of the agent’s toxicokinetics, plausible mechanisms of carcinogenesis, and potentially susceptible populations, and life-stages. Details of the design and results of individual epidemiological studies and animal cancer bioassays are summarized in tables. Short tables that highlight key results are printed in Volume 100, and more extensive tables that include all studies appear on the Monographs programme website (http://monographs.iarc.fr).

It is hoped that this volume, by compiling the knowledge accumulated through several decades of cancer research, will stimulate cancer prevention activities worldwide, and will be a valued resource for future research to identify other agents suspected of causing cancer in humans.
CHEMICAL AGENTS AND RELATED OCCUPATIONS
VOLUME 100 F
A REVIEW OF HUMAN CARCINOGENS

This publication represents the views and expert opinions of an IARC Working Group on the Evaluation of Carcinogenic Risks to Humans, which met in Lyon, 20-27 October 2009

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IARC MONOGRAPHS ON THE EVALUATION OF CARCINOGENIC RISKS TO HUMANS
In 1969, the International Agency for Research on Cancer (IARC) initiated a programme on the evaluation of the carcinogenic risk of chemicals to humans involving the production of critically evaluated monographs on individual chemicals. The programme was subsequently expanded to include evaluations of carcinogenic risks associated with exposures to complex mixtures, lifestyle factors and biological and physical agents, as well as those in specific occupations. The objective of the programme is to elaborate and publish in the form of monographs critical reviews of data on carcinogenicity for agents to which humans are known to be exposed and on specific exposure situations; to evaluate these data in terms of human risk with the help of international working groups of experts in chemical carcinogenesis and related fields; and to indicate where additional research efforts are needed. The lists of IARC evaluations are regularly updated and are available on the Internet at http://monographs.iarc.fr/.

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Lorenzo Tomatis, MD, with other colleagues knowledgeable in primary prevention and environmental carcinogenesis, perceived in the 1960s the growing need to objectively evaluate carcinogenic risks by international groups of experts in chemical carcinogenesis. His vision and determination to provide a reliable source of knowledge and information on environmental and occupational causes of cancer led to his creating the *IARC Monographs* Programme for evaluating cancer risks to humans from exposures to chemicals. The first meeting, held in Geneva in December 1971, resulted in Volume 1 of the *IARC Monographs* on the Evaluation of Carcinogenic Risk of Chemicals to Man [1972], a series known affectionately since as the “orange books”. As a champion of chemical carcinogenesis bioassays, Tomatis defined and promoted the applicability and utility of experimental animal findings for identifying carcinogens and for preventing cancers in humans, especially in workers and children, and to eliminate inequalities in judging cancer risks between industrialized and developing countries. Tomatis’ foresight, guidance, leadership, and staunch belief in primary prevention continued to influence the *IARC Monographs* as they expanded to encompass personal habits, as well as physical and biological agents. Lorenzo Tomatis had a distinguished career at the Agency, arriving in 1967 and heading the Unit of Chemical Carcinogenesis, before being Director from 1982 to 1993.

Volume 100 of the *IARC Monographs* Series is respectfully dedicated to him.

(photograph: Roland Dray)