Contents

Foreword ................................................................. vii
List of participants ......................................................... viii
Workshop report ............................................................. 1

Surrogate end-point biomarkers in chemopreventive drug development

Biomarkers and surrogacy: relevance to chemoprevention
T.W. Kensler, N.E. Davidson, J.D. Groopman and A. Munoz ......................... 27

Development of difluoromethylornithine and Bowman-Birk inhibitor as
chemopreventive agents by assessment of relevant biomarker modulation:
some lessons learned
F.L. Meyskens, Jr .......................................................... 49

Selection and validation of biomarkers for chemoprevention: the contribution of
epidemiology
P. Vineis and F. Veglia .................................................. 57

Skin cancer
Ultraviolet radiation-induced photoproducts in human skin DNA as biomarkers of
damage and its repair
K. Hemminki, G. Xu and F. Le Curieux .................................. 69

Intermediate-effect biomarks in prevention of skin cancer
J.-F. Doré, R. Pedeux, M. Boniol, M.-C. Chignol and P. Autier .................... 81

Genetically determined susceptibility markers in skin cancer and their application
to chemoprevention
H. Hahn ................................................................. 93

Colorectal cancer
Biomarkers in colorectal cancer
R.W. Owen .............................................................. 101

Intermediate effect markers for colorectal cancer
J.A. Baron .............................................................. 113

Susceptibility markers in colorectal cancer
J. Burn, P.D. Chapman, D.T. Bishop, S. Smalley, I. Mickleburgh, S. West and
J.C. Mathers .......................................................... 131
Biomarkers in Cancer Chemoprevention

Breast cancer
Endogenous hormone metabolism as an exposure marker in breast cancer chemoprevention studies
R. Kaaks

Mammographic density as a marker of susceptibility to breast cancer: a hypothesis

Intermediate histological effect markers for breast cancer
A.B. Miller and A.M. Borges

Inherited genetic susceptibility to breast cancer
J. Chang-Claude

Prostate cancer
High-grade prostatic intraepithelial neoplasia as an exposure biomarker for prostate cancer chemoprevention research
J.R. Marshall

Intermediate biomarkers for chemoprevention of prostate cancer
T.H. van der Kwast

The role of molecular genetics in chemoprevention studies of prostate cancer
R.K. Ross

Liver cancer
Exposure biomarkers in chemoprevention studies of liver cancer
C.P. Wild and P.C. Turner

Significance of hepatic preneoplasia for cancer chemoprevention
P. Bannasch, D. Nehrbass and A. Kopp-Schneider

Hepatocellular carcinoma: susceptibility markers
H.E. Blum

Lung and oral cavity cancer
Carcinogen biomarkers for lung or oral cancer chemoprevention trials
S.S. Hecht

Lung cancer: chemoprevention and intermediate effect markers
M.S. Tockman

Metabolic polymorphisms as susceptibility markers for lung and oral cavity cancer
U. Nair and H. Bartsch