

ANTICANCER RESEARCH

International Journal of Cancer Research and Treatment

ISSN: 0250-7005

Volume 27, Number 1A, January-February 2007

Contents

Experimental Studies

- Establishment of Human Cancer Cell Clones with Different Characteristics: A Model for Screening Chemopreventive Agents. J.H. WARE, Z. ZHOU, J. GUAN, A.R. KENNEDY, L. KOPELOVICH (Philadelphia, PA; Bethesda, MD, USA) 1
- Polymorphonuclear Leukocytes Increase the Adhesion of Circulating Tumor Cells to Microvascular Endothelium. M. TEN KATE, A.G.J. AALBERS, W. SLUITER, L.J. HOFLAND, P. SONNEVELD, J. JEEKEL, C.H.J. VAN EIJCK (Rotterdam, The Netherlands) 17
- Tumour Suppressor Protein (p53), Apoptosis Inhibiting Protein (Bcl-2) and Proliferating Cell Nuclear Antigen (PCNA) Expressions in a Rat Pancreatic Tumour Model. K. MÄKINEN, S. LOIMAS, T. HAKALA, M. ESKELINEN (Kuopio; Joensuu, Finland) 23
- mRNA Stability and Overexpression of Fatty Acid Synthase in Human Breast Cancer Cell Lines. D.A. HUNT, H.M. LANE, M.E. ZYGMONT, P.A. DERVAN, R.A. HENNIGAR (Oklahoma City, OK; Atlanta, GA, USA; Dublin, Ireland) 27
- Measuring Cytotoxicity: A New Perspective on LC₅₀. M. ZHANG, D. AGUILERA, C. DAS, H. VASQUEZ, P. ZAGE, V. GOPALAKRISHNAN, J. WOLFF (Houston, TX, USA) 35
- Stathmin is Overexpressed in Malignant Mesothelioma. J.Y. KIM, C. HARVARD, L. YOU, Z. XU, K. KUCHENBECKER, R. BAEHNER, D. JABLONS (San Francisco, CA, USA) 39
- Three-dimensional Cellular Spheroid Formation Provides Human Prostate Tumor Cells with Tissue-like Features. A. TAKAGI, M. WATANABE, Y. ISHII, J. MORITA, Y. HIROKAWA, T. MATSUZAKI, T. SHIRAIISHI (Tsu; Tokyo; Yokohama, Japan) 45

Contents continued on the back cover

* The Biological Relevance of FHL2 in Tumour Cells and its Role as a Putative Cancer Target. K. KLEIBER, K. STREBHARDT, B.T. MARTIN (<i>Frankfurt, Germany</i>).....	55
Correlation of DNA Mismatch Repair Protein hMSH2 Immunohistochemistry with p53 and Apoptosis in Cervical Carcinoma. F. KÖSTER, A. SCHRÖER, D. FISCHER, T. GREWELDINGER, K. DIEDRICH, M. FRIEDRICH (<i>Lübeck; Homburg/Saar, Germany</i>)	63
Short Tandem Repeat Polymorphisms of Exon 4 in Kazal-type Gene ECRG2 in Pancreatic Carcinoma and Chronic Pancreatitis. J.T. KAIFI, G. CATALDEGIRMEN, R. WACHOWIAK, P.G. SCHURR, H. KLEINHANS, G. KOSTI, E.F. YEKEBAS, O. MANN, A. KUTUP, V. KALININ, T. STRATE, J.R. IZBICKI (<i>Hamburg, Germany</i>).....	69
FTY720 Induced Bcl-associated and Fas-independent Apoptosis in Human Renal Cancer Cells <i>In Vitro</i> and Significantly Reduced <i>In Vivo</i> Tumor Growth in Mouse Xenograft. T. UBAI, H. AZUMA, Y. KOTAKE, T. INAMOTO, K. TAKAHARA, Y. ITO, S. KIYAMA, T. SAKAMOTO, S. HORIE, S. MUTO, S. TAKAHARA, Y. OTSUKI, Y. KATSUOKA (<i>Osaka; Tokyo, Japan</i>)	75
Transcriptional Regulatory Regions of the Survivin Gene Activate an Exogenous Suicide Gene in Human Tumors and Enhance the Sensitivity to a Prodrug. K. KAWAMURA, L. YU, M. TOMIZAWA, O. SHIMOZATO, G. MA, Q. LI, A. SATO, Y. YANG, T. SUZUKI, N.M. ABDEL-AZIZ, M. TAGAWA (<i>Chiba, Japan</i>)	89
Significance of Matrix Metalloproteinase-2, -11 and Tissue Inhibitor of Metalloproteinase-1 Expression in Normal, Hyperplastic and Neoplastic Endometrium. A. OBOKATA, J. WATANABE, Y. NISHIMURA, T. ARAI, M. KAWAGUCHI, H. KURAMOTO (<i>Sagamihara, Kanagawa, Japan</i>)	95
Modulation of Multidrug Resistance Gene Expression in Human Breast Cancer Cells by (-)-Gossypol-enriched Cottonseed Oil. W. YE, H.-L. CHANG, L.-S. WANG, Y.-W. HUANG, S. SHU, M.K. DOWD, P.J. WAN, Y. SUGIMOTO, Y.C. LIN (<i>Columbus, OH; New Orleans, LA, USA</i>)	107
ROS Mediates Baicalin-induced Apoptosis in Human Promyelocytic Leukemia HL-60 Cells through the Expression of the Gadd153 and Mitochondrial-dependent Pathway. H.-F. LU, S.-C. HSUEH, Y.-T. HO, M.-C. KAO, J.-S. YANG, T.-H. CHIU, S.-Y. HUANG, C.-C. LIN, J.-G. CHUNG (<i>Taipei; Taichung; Chia-Yi; Fong Yuan, Taiwan, ROC</i>)	117
Overexpression of Human X-box Binding Protein 1 (XBP-1) in Colorectal Adenomas and Adenocarcinomas. T. FUJIMOTO, K. YOSHIMATSU, K. WATANABE, H. YOKOMIZO, T. OTANI, A. MATSUMOTO, G. OSAWA, M. ONDA, K. OGAWA (<i>Tokyo; Kawasaki, Japan</i>).....	127
Tumor-specificity and Type of Cell Death Induced by Trihaloacetylazulenes in Human Tumor Cell Lines. T. SEKINE, J. TAKAHASHI, M. NISHISHIRO, A. ARAI, H. WAKABAYASHI, T. KURIHARA, M. KOBAYASHI, K. HASHIMOTO, H. KIKUCHI, T. KATAYAMA, Y. KANDA, S. KUNII, N. MOTOHASHI, H. SAKAGAMI (<i>Sakado, Saitama; Tokyo, Japan</i>)	133
Up-regulation of Matrix Metalloproteinase Family Gene Involvement in Ursolic Acid-induced Human Lung Non-small Carcinoma Cell Apoptosis. M.Y. LAI, H.W.C. LEUNG, W.H. YANG, W.H. CHEN, H.Z. LEE (<i>Taichung; Tainan, Taiwan, ROC</i>).....	145
* Comparative Biology of Human and Canine Osteosarcoma. F. MUELLER, B. FUCHS, B. KASER-HOTZ (<i>Zürich, Switzerland</i>)	155
Renal Cell Carcinoma-induced Immunosuppression: An Immunophenotypic Study of Lymphocyte Subpopulations and Circulating Dendritic Cells. C. PORTA, L. BONOMI, B. LILLAZ, C. PAGLINO, B. ROVATI, I. IMARISIO, P. MORBINI, C. VILLA, M. DANOVA, M. MENSI, B. ROVERETO (<i>Pavia, Italy</i>).....	165
Association Between Duodenal Contents Reflux and Squamous Cell Carcinoma – Establishment of an Esophageal Cancer Cell Line Derived from the Metastatic Tumor in a Rat Reflux Model. K.-H. CHEN, K.-I. MUKAISHO, Z.-Q. LING, A. SHIMOMURA, H. SUGIHARA, T. HATTORI (<i>Otsu, Shiga, Japan</i>).....	175

Evaluation of Insulin-like Growth Factor-1 in a Mouse Model of Long-term Abdominal Radiation Toxicity. C. NIEDER, L. CAI, W.A. WEBER, S. SCHILL, N. ANDRATSCHKE, M. SCHWAIGER, M. MOLLS (Munich, Germany; Los Angeles, CA, USA)	183
Potent Cytotoxic Activity of <i>Saururus cernuus</i> Extract on Human Colon and Breast Carcinoma Cultures under Normoxic Conditions. R.B. BADISA, V.L.D. BADISA, E.H. WALKER, L.M. LATINWO (Tallahassee, FL, USA)	189
Antitumor Activity and Pharmacokinetics of Liposomes Containing Lipophilic Gemcitabine Prodrugs. P. BRUSA, M.L. IMMORDINO, F. ROCCO, L. CATTEL (Torino, Italy)	195
Macrocyclic Lathyrane Diterpenes as Antitumor Promoters. R. PUSZTAI, M.-J.U. FERREIRA, N. DUARTE, H. ENGI, J. MOLNAR (Szeged, Hungary; Lisbon, Portugal).....	201
The Proteasome Inhibitor Bortezomib Augments Anti-proliferative Effects of Mistletoe Lectin-I and the PPAR- γ Agonist Rosiglitazone in Human Melanoma Cells. C. FREUDLSPERGER, A. THIES, U. PFÜLLER, U. SCHUMACHER (Hamburg; Witten, Germany)	207
Fas/Fas-ligand Expressions in Primary Breast Cancer are Significant Predictors of its Skeletal Spread. M. BĘBENEK, D. DUŚ, J. KOŹLAK (Wroclaw, Poland)	215
Bcl-2 Expression in Breast Cancer: A Comparative Study at the mRNA and Protein Level. F. MARTÍNEZ-ARRIBAS, T. ALVAREZ, G. DEL VAL, E. MARTÍN-GARABATO, M.-J. NÚÑEZ VILLAR, R. LUCAS, J. SÁNCHEZ, A. TEJERINA, J. SCHNEIDER (Móstoles; Madrid, Spain).....	219
Cytotoxic Activity and Absence of Tumor Growth Stimulation of Standardized Mistletoe Extracts in Human Tumor Models <i>In Vitro</i> . G. KELTER, J.M. SCHIERHOLZ, I.U. FISCHER, H.-H. FIEBIG (Freiburg; Rosenfeld; Tübingen, Germany)	223
<i>CASC2a</i> Gene is Down-regulated in Endometrial Cancer. P. BALDINU, A. COSSU, A. MANCA, M.P. SATTÀ, M.C. SINI, G. PALOMBA, S. DESSOLE, P. CHERCHI, L. MARA, F. TANDA, G. PALMIERI (Li Punti; Sassari; Olmedo, Italy)	235
Involvement of Tiam1 in Apoptosis Induced by Bufalin in HeLa Cells. C. HONG, T. SHIBAYAMA-IMAZU, Y. MASUDA, T. SHINKI, S. NAKAJO, K. NAKAYA (Tokyo; Niigata, Japan)	245
Expression of Type 2 Hexokinase and Mitochondria-related Genes in Gastric Carcinoma Tissues and Cell Lines. M. RHO, J. KIM, C.D. JEE, Y.M. LEE, H.E. LEE, M.A KIM, H.S. LEE, W.H. KIM (Seoul; Gyeonggi, Korea).....	251
Maspin Expression was Involved in Colorectal Adenoma-Adenocarcinoma Sequence and Liver Metastasis of Tumors. H. ZHENG, K. TSUNAYAMA, C. CHENG, H. TAKAHASHI, Z. CUI, Y. MURAI, K. NOMOTO, Y. TAKANO (Toyama, Japan; Davis, CA, USA)	259
Regulation of Ovarian Carcinoma SKOV-3 Cell Proliferation and Secretion of MMPs by Autocrine IL-6. A. RABINOVICH, L. MEDINA, B. PIURA, S. SEGAL, M. HULEIHEL (Beer-Sheva, Israel)	267
Seliciclib (CYC202; r-Roscovitine) in Combination with Cytotoxic Agents in Human Uterine Sarcoma Cell Lines. H.M. COLEY, C.F. SHOTTON, H. THOMAS (Guildford, Surrey, UK).....	273
Prognostic Factors in Hungarian Breast Cancer Patients. E. NÁDASI, B. ANGA, J. SÁNDOR, J. MEGYESI, D. KELEMEN, M. MOTTOLESE, P.G. NATALI, G. HEGEDUS, I. ARANY, I. EMBER (Pécs, Hungary; Little Rock, AR, USA; Rome, Italy)	279
Relation between Human Papillomavirus Positivity and p16 Expression in Head and Neck Carcinomas – A Tissue Microarray Study. F. KÖNIG, G. KREKELER, J.F. HÖNIG, C. CORDON-CARDO, G. FISCHER, M. KORABIOWSKA (Krems, Austria; Freiburg; Göttingen; Wilhelmshaven, Germany; New York, NY, USA)	283

Ascorbic Acid Induces Apoptosis in Adult T-cell Leukemia. S. HARAKEH, M. DIAB-ASSAF, J.C. KHALIFE, K.A. ABU-EL-ARDAT, E. BAYDOUN, A. NIEDZWIECKI, M.E. EL-SABBAN, M. RATH (<i>Beirut, Lebanon; Santa Clara, CA, USA</i>)	289
Antitumor Efficacy of the Cytotoxic RNase, Ranpirnase, on A549 Human Lung Cancer Xenografts of Nude Mice. I. LEE, A. KALOTA, A.M. GEWIRTZ, K. SHOGEN (<i>Philadelphia, PA; Bloomfield, NJ, USA</i>)	299
<i>In Vitro</i> Gene Transfer Using Cationic Vectors, Electroporation and their Combination. W. WEECHARANGSAN, P. OPANASOPIT, R.J. LEE (<i>Columbus, Ohio, USA; Nakhon-Pathom, Thailand</i>)	309
Inhibition of Angiogenesis <i>via</i> FGF-2 Blockage in Primitive and Bone Metastatic Renal Cell Carcinoma. E. CENNI, F. PERUT, D. GRANCHI, S. AVNET, I. AMATO, M.L. BRANDI, A. GIUNTI, N. BALDINI (<i>Bologna; Florence, Italy</i>)	315
<i>In Vitro</i> Histoculture Drug Response Assay and <i>In Vivo</i> Blood Chemistry of a Novel Pt(IV) Compound, K104. Y.-E. KWON, J.-Y. PARK, W.-K. KIM (<i>Jeonbuk; Kyunggi-do; Seoul, South Korea</i>)	321
NF- κ B-independent Induction of Endothelial Cell Apoptosis by the Vascular Disrupting Agent DMXAA. S.-T. WOON, S.S.-C. HUNG, D.C.F. WU, M.A. SCHOOLTINK, R. SUTHERLAND, B.C. BAGULEY, Q. CHEN, L.W. CHAMLEY, L.-M. CHING (<i>Auckland, New Zealand</i>)	327
Prognostic Significance of Metallothionein, p53 Protein and Ki-67 Antigen Expression in Laryngeal Cancer. W. PASTUSZEWSKI, P. DZIEGIEL, T. KRECICKI, M. PODHORSKA-OKOLOW, U. CIESIELSKA, E. GORZYNSKA, M. ZABEL (<i>Wroclaw; Poznan, Poland</i>)	335
(2 <i>E</i>)- <i>N,N</i> -dibutyl-3-(4-hydroxy-3-methoxyphenyl)acrylamide Induces Apoptosis and Cell Cycle Arrest in HL-60 Cells. C.-J. CHEN, M.-H. HSU, S.-C. KUO, Y.-Y. LAI, J.-G. CHUNG, L.-J. HUANG (<i>Taichung, Taiwan, ROC</i>)	343
Modulatory Effects of Heparin on Cellular Accumulation and Cytotoxicity of Doxorubicin in MRP1-overexpressing HL60/doxo Cells. A. ANGELINI, G. CIOFANI, G. BACCANTE, C. DI FEBBO, C. DI ILIO, F. CUCCURULLO, E. PORRECA (<i>Chieti-Pescara, Italy</i>)	351
Inhibition of Breast Cancer Cell Proliferation by Style Constituents of Different <i>Crocus</i> Species. D.G. CHRYSSANTHI, F.N. LAMARI, G. IATROU, A. PYLARA, N.K. KARAMANOS, P. CORDOPATIS (<i>Patras, Greece</i>)	357
Comparative Cytotoxicity and ROS Generation by Curcumin and Tetrahydrocurcumin Following Visible-light Irradiation or Treatment with Horseradish Peroxidase. T. ATSUMI, K. TONOSAKI, S. FUJISAWA (<i>Sakado, Saitama, Japan</i>)	363
A Role for DHX32 in Regulating T-cell Apoptosis. Z. ALLI, Y. CHEN, S.A. WAJID, B. AL-SAUD, M. ABDELHALEEM (<i>Toronto, ON, Canada</i>)	373
The Role of Ca ⁺² on Rhein-induced Apoptosis in Human Cervical Cancer Ca Ski Cells. S.-W. IP, Y.-S. WENG, S.-Y. LIN, M. DUEYANG, N.-Y. TANG, C.-C. SU, J.-G. CHUNG (<i>Taichung; Hualien, Taiwan, ROC</i>)	379
Mast Cell and Eosinophil Interaction in Gastric Carcinomas: Ultrastructural Observations. R.A. CARUSO, F. FEDELE, V. ZUCCALÀ, M.G. FRACASSI, A. VENUTI (<i>Messina, Italy</i>)	391
Morin Inhibits the Growth of Human Leukemia HL-60 Cells <i>via</i> Cell Cycle Arrest and Induction of Apoptosis through Mitochondria Dependent Pathway. H.-M. KUO, L.-S. CHANG, Y.-L. LIN, H.-F. LU, J.-S. YANG, J.-H. LEE, J.-G. CHUNG (<i>Taichung; Taipei, Taiwan, ROC</i>)	395
Primary Cultured Human Breast Epithelial Cells Up-regulate Protein Disulfide Isomerase in Response to Zeranol. M.S. UPDIKE, J.C. SAWDY, L.-S. WANG, S. LIU, Y.-W. HUANG, W. YE, W.B. FARRAR, Y.C. LIN, M. WICK (<i>Columbus, OH; Ann Arbor, MI, USA</i>)	407

Telomere Length and Telomerase Activity in Extra-abdominal Desmoid Tumors. T. MATSUO, E. HIYAMA, T. SUGITA, S. SHIMOSE, T. KUBO, Y. MOCHIZUKI, N. ADACHI, M. OCHI (<i>Hiroshima, Japan</i>)	411
Pharmacokinetics of Albendazole in New Zealand White Rabbits: Oral <i>versus</i> Intraperitoneal Administration. Z.-Y. CAI, P. GALETTIS, Y. LU, D.L. MORRIS, M.H. POURGHOLAMI (<i>Sydney, NSW, Australia</i>)	417
Imatinib Mesylate Inhibits Tumorigenicity of Malignant Fibrous Histiocytoma Cells <i>In Vivo</i> . I. IRSAN, T. AKISUE, H. HARA, T. FUJIMOTO, M. IMABORI, M. DOITA, R. KURODA, H. FUJIOKA, T. KAWAMOTO, T. YAMAMOTO, M. KUROSAKA (<i>Hyogo; Kagawa, Japan</i>)	423
Biodistribution and Radioimmunotherapy of SCCHN in Xenotransplanted SCID Mice with a ¹³¹ I-labelled Anti-EpCAM Monoclonal Antibody. M. ANDRATSCHKE, F.J. GILDEHAUS, V. JOHANNSON, B. SCHMITT, B. MACK, G. REISBACH, S. LANG, H. LINDHOFER, R. ZEIDLER, B. WOLLENBERG, C.W. LUEBBERS (<i>Munich; Lübeck; Martinsried, Germany</i>)	431
* Apoptosis in Brain Tumors: Prognostic and Therapeutic Considerations. M. MELLAI, D. SCHIFFER (<i>Vercelli, Italy</i>)	437
Expression of High Mobility Group Box Chromosomal Protein-1 (HMGB-1) in Gastric Cancer. H. AKAIKE, K. KONO, H. SUGAI, A. TAKAHASHI, K. MIMURA, Y. KAWAGUCHI, H. FUJII (<i>Yamanashi, Japan</i>)	449
Association of Matrix Metalloproteinase-1 (-1607 1G/2G) Polymorphism with Increased Risk for Oral Squamous Cell Carcinoma. E. VAIRAKTARIS, C. YAPIJAKIS, S. DERKA, Z. SEREFOGLOU, S. VASSILIOU, E. NKENKE, V. RAGOS, A. VYLLIOTIS, S. SPYRIDONIDOU, C. TSIGRIS, A. YANNOPOULOS, C. TESSEROMATIS, F.W. NEUKAM, E. PATSOURIS (<i>Athens, Greece; Nürnberg, Germany</i>)	459
Histone Deacetylase Inhibitors, but not Vincristine, Cooperate with Radiotherapy to Induce Cell Death in Medulloblastoma. K.S. KUMAR, J. SONNEMANN, L.T.T. HONG, C. BUURMAN, F. ADLER, M. MAASS, U. VÖLKER, J.F. BECK (<i>Greifswald, Germany</i>)	465
Pharmacokinetics of Liposomal Cisplatin (Lipoplatin) in Combination with 5-FU in Patients with Advanced Head and Neck Cancer: First Results of a Phase III Study. C.F. JEHN, T. BOULIKAS, A. KOURVETARIS, K. POSSINGER, D. LÜFTNER (<i>Berlin, Germany; Mountain View, CA, USA</i>)	471
Similar Patterns of Loss of Heterozygosity in Serum of Adenocarcinoma of the Distal Oesophagus and the Cardia in Early Diagnosis. R. WACHOWIAK, J.T. KAIFI, P.G. SCHURR, P. MERKERT, E. YEKEBAS, H. SCHWARZENBACH, T. STRATE, G. SAUTER, J.R. IZBICKI (<i>Hamburg, Germany</i>)	477
* Reviews (pages 55, 155, 437)	