

# ANTICANCER RESEARCH

## International Journal of Cancer Research and Treatment

ISSN: 0250-7005

Volume 27, Number 4B, July-August 2007

### Contents

#### *Experimental Studies*

- Differential Resistance of Melanoma Cells to Treatment Recombinant IFN- $\alpha$ 2b and Leukocyte IFN. K. RUUTH, Å. BERGLUND, V. MUNOZ, E. LUNDGREN (*Umeå, Sweden; Penicuik, UK*) ..... 2109
- MDR1/P-glycoprotein and MRP-1 Drug Efflux Pumps in Pancreatic Carcinoma. L. O'DRISCOLL, N. WALSH, A. LARKIN, J. BALLOT, W.S. OOI, G. GULLO, R. O'CONNOR, M. CLYNES, J. CROWN, S. KENNEDY (*Dublin, Ireland*) ..... 2115
- Antigen Loading of Dendritic Cells with Apoptotic Tumor Cell-Preparations is Superior to that Using Necrotic Cells or Tumor Lysates. N. INZKIRWELI, B. GÜCKEL, C. SOHN, D. WALLWIENER, G. BASTERT, M. LINDNER (*Heidelberg; Tübingen; Mannheim, Germany*) ..... 2121
- Growth/Adhesion-regulatory Tissue Lectin Galectin-3: Stromal Presence but not Cytoplasmic/Nuclear Expression in Tumor Cells as a Negative Prognostic Factor in Breast Cancer. A. MOISA, P. FRITZ, A. ECK, H.-D. WEHNER, T. MÜRDTER, W. SIMON, H.-J. GABIUS (*Tübingen; Stuttgart; München, Germany*) ..... 2131
- \* Does Homeobox-related "Positional" Genomic Information Contribute to Implantation of Metastatic Cancer Cells at Non-random Sites? K.M. ANDERSON, M. DARWEESH, A. JAJAH, P. TSUI, P. GUINAN, M. RUBENSTEIN (*Chicago, IL, USA*) ..... 2141
- 2-Deoxy-2-[ $^{18}$ F]Fluoro-D-Glucose Uptake and Correlation to Intratumoral Heterogeneity. E. HENRIKSSON, E. KJELLEN, P. WAHLBERG, T. OHLSSON, J. WENNERBERG, E. BRUN (*Malmö; Lund, Sweden*) ..... 2155
- Exogenous Platelet-derived Growth Factor (PDGF) Induces Human Astrocytoma Cell Line Proliferation. E. RANZA, A. FACOETTI, P. MORBINI, E. BENERICETTI, R. NANO (*Pavia; Parma, Italy*) ..... 2161

*Contents continued on the back cover*

Expression of Cyclin D1 and Ki-67 in Squamous Cell Carcinoma of the Penis. O. PAPADOPOULOS, E. BETSI, G. TSAKISTOU, M. FANGOULIS, G. KOUVATSEAS, D. ANAGNOSTAKIS, CH. KOUVIDOU (Athens, Greece) .....	2167
Silvestrol, a Potential Anticancer Rocaglate Derivative from <i>Aglaia foveolata</i> , Induces Apoptosis in LNCaP Cells through the Mitochondrial/Apoptosome Pathway without Activation of Executioner Caspase-3 or -7. S. KIM, B.Y. HWANG, B.-N. SU, H. CHAI, Q. MI, A.D. KINGHORN, R. WILD, S.M. SWANSON (Chicago, IL; Columbus, OH; Princeton, NJ, USA) .....	2175
Chemoprevention by $\alpha$ -Santalol on UVB Radiation-induced Skin Tumor Development in Mice. A. BOMMAREDDY, J. HORA, B. CORNISH, C. DWIVEDI (Brookings, SD, USA) .....	2185
Decreased Expression of Connexin-30 and Aberrant Expression of Connexin-26 in Human Head and Neck Cancer. H. OZAWA, T. MATSUNAGA, K. KAMIYA, Y. TOKUMARU, M. FUJII, T. TOMITA, K. OGAWA (Tokyo, Japan) .....	2189
Evaluation of Carcinogenic Potential of 17 $\alpha$ -Ethinylestradiol in a Host-mediated <i>In Vivo/In Vitro</i> Assay System. A. ESMAEILI, T. CHANDRA, K. SCHLATTERER (Frankfurt am Main; Darmstadt; Greifswald, Germany) .....	2197
Effect of Copper and Role of the Copper Transporters ATP7A and CTR1 in Intracellular Accumulation of Cisplatin. S. MATSUMOTO, T. TANAKA, H. KUROKAWA, K. MATSUNO, Y. HAYASHIDA, T. TAKAHASHI (Kitakyushu; Miyazaki, Japan) .....	2209
Biodistribution, Pharmacokinetics and MicroSPECT/CT Imaging of <sup>188</sup> Re-BMEDA-Liposome in a C26 Murine Colon Carcinoma Solid Tumor Animal Model. Y.-J. CHANG, C.-H. CHANG, T.-J. CHANG, C.-Y. YU, L.-C. CHEN, M.-L. JAN, T.-Y. LUO, T.-W. LEE, G. TING (Taoyuan; Miaoli, Taiwan, ROC) .....	2217
Different Expression of Thymidylate Synthase in Primary Tumour and Metastatic Nodes in Breast Cancer Patients. D. CABIBI, A. CALASCIBETTA, A. MARTORANA, M. CAMPIONE, E. BARRESI, L. RAUSA, F. ARAGONA, R. SANGUEDOLCE (Palermo, Italy) .....	2227
Somatostatin Receptor Subtypes in Human Non-functioning Neuroendocrine Tumors and Effects of Somatostatin Analogue SOM230 on Cell Proliferation in Cell Line NCI-H727. K. ONO, T. SUZUKI, Y. MIKI, Y. TANIYAMA, Y. NAKAMURA, Y. NODA, M. WATANABE, H. SASANO (Sendai, Miyagi, Japan) .....	2231
Human Equilibrative Nucleoside Transporter 1, as a Predictor of 5-Fluorouracil Resistance in Human Pancreatic Cancer. M. TSUJIE, S. NAKAMORI, S. NAKAHIRA, Y. TAKAHASHI, N. HAYASHI, J. OKAMI, H. NAGANO, K. DONO, K. UMESHITA, M. SAKON, M. MONDEN (Osaka, Japan) .....	2241
Clarification of the Functional Significance of Human Folate-binding Protein- $\alpha$ , Peptide 191-199, based on a Correct GenBank Sequence and on Other FBP (191-199) Sequences. C.G. IOANNIDES (Houston, TX, USA) ...	2251
Mutant Epidermal Growth Factor Receptor Undergoes Less Protein Degradation Due to Diminished Binding to c-Cbl. T. HOSAKA, F. INOUE, K. ANDO, H. ISHIDA, S. KUSUMOTO, T. SUGIYAMA, T. SHIRAI, K. OKUDA, T. HIROSE, T. OHNISHI, N. HORICHI, N. SAIJO, M. ADACHI, T. NAKADATE, T. KUROKI, T. OHMORI (Tokyo; Chiba; Gifu, Japan) .....	2253
hTERT mRNA Expression Correlates with Matrix Metalloproteinase-1 and Vascular Endothelial Growth Factor Expression in Human Breast Cancer: A Correlative Study Using RT-PCR. L. MANSFIELD, A. SUBRAMANIAN, H. DEVALIA, W. JIANG, R.F. NEWBOLD, K. MOKBEL (Uxbridge, Middlesex; London; Cardiff, UK) .....	2265
Frequent Promoter Methylation of M-cadherin in Hepatocellular Carcinoma is Associated with Poor Prognosis. S. YAMADA, S. NOMOTO, T. FUJII, S. TAKEDA, N. KANAZUMI, H. SUGIMOTO, A. NAKAO (Nagoya, Japan) .....	2269

Distribution of Radioiodinated Estramustine Binding Protein Antibody in Mice with DU-145 Prostate Cancer Xenograft. K. STÅLBERG, K. KAIREMO, S.-L. KARONEN, K. TAARI, S. RANNIKKO (Helsinki, Finland).....	2275
Antitumor Activity of Capecitabine and Bevacizumab Combination in a Human Estrogen Receptor-negative Breast Adenocarcinoma Xenograft Model. B. HIGGINS, K. KOLINSKY, M. LINN, V. ADAMES, Y.-E ZHANG, C. MOISA, U. DUGAN, D. HEIMBROOK, K. PACKMAN (Nutley, NJ, USA) .....	2279
Galectin-3 Expression in Colorectal Cancer: Relation to Invasion and Metastasis. K. TSUBOI, T. SHIMURA, N. MASUDA, M. IDE, S. TSUTSUMI, S. YAMAGUCHI, T. ASAO, H. KUWANO (Gunma, Maebashi, Japan) .....	2289
A New Mechanism for Primary Resistance to Gefitinib in Lung Adenocarcinoma: The Role of a Novel G796A Mutation in Exon 20 of EGFR. H. URAMOTO, T. UCHIUMI, H. IZUMI, K. KOHNO, T. OYAMA, K. SUGIO, K. YASUMOTO (Kitakyushu, Japan).....	2297
Combinatory Gene Therapy with Electrotransfer of Midkine Promoter-HSV-TK and Interleukin-21. N. HANARI, H. MATSUBARA, I. HOSHINO, Y. AKUTSU, T. NISHIMORI, K. MURAKAMI, H. SAKATA, Y. MIYAZAWA, T. OCHIAI (Chiba, Japan) .....	2305
Adenovirus Type 5 Substituted with Type 11 or 35 Fiber Structure Increases its Infectivity to Human Cells Enabling Dual Gene Transfer in CD46-dependent and -independent Manners. L. YU, O. SHIMOZATO, Q. LI, K. KAWAMURA, G. MA, M. NAMBA, T. OGAWA, I. KAIHO, M. TAGAWA (Chiba; Okayama, Japan) .....	2311
Effect of Vascular Targeting Agent Oxi4503 on Tumor Cell Kinetics in a Mouse Model of Colorectal Liver Metastasis. L.S. CHAN, C. MALCONTENTI-WILSON, V. MURALIDHARAN, C. CHRISTOPHI (Heidelberg, Victoria, Australia) .....	2317
Effect of CDT6 on Factors of Angiogenic Balance in Tumour Cell Lines. D.R.M.H. BOUÏS, W.A. DAM, C. MEIJER, N.H. MULDER, G.A.P. HOSPERS (Groningen, The Netherlands) .....	2325
A Simple Non-destructive Test of Cellular Activity (NTCA) for <i>In Vitro</i> Assessment of Cancer Cell Chemosensitivity/Resistance. I. NETIKOVA, E. BURSIKOVA, P. VESELY, M. PRCHALOVA, Z. KLEIBL, E. MATOUSKOVA (Prague, Czech Republic).....	2331
Decreased Expression of DARPP-32 in Oral Premalignant and Malignant Lesions. F.J. PIMENTA, M.C.R. HORTA, P.V. VIDIGAL, B.R. DE SOUZA, L. DE MARCO, M.A. ROMANO-SILVA, R.S. GOMEZ (Belo Horizonte, MG, Brazil) .....	2339
Alterations of the p53, Rb and p27 Tumor Suppressor Pathways in Diffuse Large B-cell Lymphomas. M. BAI, E. TSANOU, A. SKYRLAS, I. SAINIS, N. AGNANTIS, P. KANAVAROS (Ioannina, Greece).....	2345
Detrimental Effects of an Antibody Directed Against Tumor Necrosis Factor Alpha in Experimental Kidney Irradiation. C. NIEDER, A. SCHNAITER, W.A. WEBER, S. SCHILL, N.S ANDRATSCHKE, M. SCHWAIGER, M. MOLLS (Bodø, Norway; Munich, Germany; Los Angeles, CA, USA) .....	2353
VP-16 Resistance in the NCI-H460 Human Lung Cancer Cell Line is Significantly Associated with Glucose-regulated Protein78 (GRP78) Induction. Q. WANG, T. WANG, YINGYAN WANG, W. WANG, YANYAN WANG, X. HU, S. SHAO, J. ZHANG, Z. SUO (Dalian, China; Oslo, Norway).....	2359
Effects of Tumor Necrosis Factor-related Apoptosis-inducing Ligand Alone and in Combination with Fluoropyrimidine Anticancer Agent, S-1, on Tumor Growth of Human Oral Squamous Cell Carcinoma Xenografts in Nude Mice. Y. ITASHIKI, K. HARADA, T. FERDOUS, H. YOSHIDA (Tokushima, Japan) .....	2365

Crude Extracts of <i>Euchresta formosana</i> Radix Inhibit Invasion and Migration of Human Hepatocellular Carcinoma Cells. S.-C. HSU, C.-L. KUO, J.-P. LIN, J.-H. LEE, C.-C. LIN, C.-C. SU, M.-D. YANG, J.-G. CHUNG (Taichung; Fong Yuan City; Hualien, Taiwan, ROC) .....	2377
<i>In Vitro</i> Antitumor Lymphocyte Generation Using Dendritic Cells and Innate Immunity Mechanisms as Tumor Cell Treatments. A. GERVAIS, O. TOUTIRAIS, F. BOUET-TOUSSAINT, C.T. DE LA PINTIERE, N. GENETET, V. CATROS-QUEMENER (Rennes, France) .....	2385
Anticancer Effects of Licofelone (ML-3000) in Prostate Cancer Cells. N.K. NARAYANAN, D. NARGI, M. ATTUR, S.B. ABRAMSON, B.A. NARAYANAN (New York, NY, USA).....	2393
Cytotoxic Effects of Treosulfan on Prostate Cancer Cell Lines. S. FEYERABEND, G. FEIL, J. KRUG, A. KASSEN, A. STENZL (Tübingen; Wedel, Germany) .....	2403
Prognostic Significance of Platelet-derived Growth Factor-BB Expression in Human Esophageal Squamous Cell Carcinomas S. MATSUMOTO, Y. YAMADA, M. NARIKIYO, M. UENO, H. TAMAKI, K. MIKI, K. WAKATSUKI, K. ENOMOTO, T. YOKOTANI, Y. NAKAJIMA (Nara, Japan) .....	2409
Crude Extracts of <i>Euchresta formosana</i> Radix Induce Cytotoxicity and Apoptosis in Human Hepatocellular Carcinoma Cell Line (Hep3B). S.-C. HSU, C.-L. KUO, J.-P. LIN, J.-H. LEE, C.-C. LIN, C.-C. SU, H.-J. LIN, J.-G. CHUNG (Taichung; Fong Yuan City; Hualien, Taiwan, ROC).....	2415
Induction of Apoptosis in Human Hepatocellular Carcinoma Cells by Synthetic Antineoplaston A10. X.-J. QU, S.-X. CUI, Z. TIAN, X. LI, M.-H. CHEN, W.-F. XU, Y. INAGAKI, Y.-B. DENG, M. MAKUUCHI, M. NAKATA, W. TANG (Jinan, China; Kanagawa; Tokyo, Japan) .....	2427
Tobacco and Inflammation Effects in Immunoexpression of hMSH2 and hMLH1 in Epithelium of Oral Mucosa. A.M. FERNANDES, V.R.D C. DE SOUZA, C.R.A. SPRINGER, S.V. CARDOSO, A.M. LOYOLA, R.A. MESQUITA, M.C.F. AGUIAR (Belo Horizonte, MG; Uberlândia, Brazil) .....	2433
Andrographolide Inhibits the Adhesion of Gastric Cancer Cells to Endothelial Cells by Blocking E-selectin Expression. C.-G. JIANG, J.-B. LI, F.-R. LIU, T. WU, M. YU, H.-M. XU (Shenyang, Liaoning, China) .....	2439
Coagulation-related Factors Thrombomodulin and Protein Z are not Associated with Risk for Oral Cancer. E. VAIRAKTARIS, Z. SEREFOGLOU, C. YAPIJAKIS, E. NKENKE, S. VASSILIOU, S. SPYRIDONIDOU, A. VYLLIOTIS, A.M. NIXON, F.W. NEUKAM, E. PATSOURIS (Athens, Greece; Nurnberg, Germany) .....	2449
Lack of Association of XRCC1 Codon 399Gln Polymorphism with Chronic Myelogenous Leukemia. U. DELIGEZER, E.E. AKISIK, N. DALAY (Istanbul, Turkey) .....	2453
Immunophenotypic Profile of Biomarkers Related to Anti-apoptotic and Neural Development Pathways in the Ewing's Family of Tumors (EFT) and their Therapeutic Implications. S. NAVARRO, P. GIRAUDDO, A.I. KARSELADZE, A. SMIRNOV, N. PETROVICHEV, N. SAVELOV, I. ALVARADO-CABRERO, A. LLOMBART-BOSCH (Valencia, Spain; Moscow, Russia; México DF, México) .....	2457
Mast Cells in Invasive Ductal Breast Cancer: Different Behavior in High and Minimum Hormone-receptive Cancers. F. DELLA ROVERE, A. GRANATA, D. FAMILIARI, G. D'ARRIGO, B. MONDELLO, G. BASILE (Messina, Italy).....	2465
A Novel Cycloheptapeptide Exerts Strong Anticancer Activity via Stimulation of Multiple Apoptotic Pathways in Caspase-3 Deficient Cancer Cells. S. UBOL, J. KRAMYU, P. MASRINOUL, C. KACHANGCHAENG, P. PITTAYANURAK, S. SOPHASAN, V. REUTRAKUL (Bangkok, Thailand) .....	2473

Signal Transducer and Activator of Transcription 1 in Breast Cancer: Analysis with Tissue Microarray. S.-M. SHEEN-CHEN, C.-C. HUANG, R.-P. TANG, C.-H. YANG, F.-F. CHOU, H.-L. ENG ( <i>Kaohsiung, Taiwan, ROC</i> ) .....	2481
Dichlorotetra- $\mu$ -Isobutytratodirhenium(III): Enhancement of Cisplatin Action and RBC-stabilizing Properties. N. SHTEMENKO, P. COLLERY, A. SHTEMENKO ( <i>Dnepropetrovsk, Ukraine; Bastia, France</i> ) .....	2487
High Gene Expression of Matrix Metalloproteinase-7 is Associated with Early Stages of Oral Cancer. E. VAIRAKTARIS, Z. SEREFOGLOU, C. YAPIJAKIS, A. VYLLIOTIS, E. NKENKE, S. DERKA, S. VASSILIOU, D. AVGOUSTIDIS, F.W. NEUKAM, E. PATSOURIS ( <i>Athens, Greece; Erlangen; Nürnberg, Germany</i> ) .....	2493
The Missing Kiss of Life: Transcriptional Activity of the Metastasis Suppressor Gene KiSS1 in Early Breast Cancer. L. KOSTADIMA, G. PENTHEROUDAKIS, N. PAVLIDIS ( <i>Ioannina, Greece</i> ) .....	2499
Ethyl 2-[N-m-chlorobenzyl-(2'-methyl)]anilino-4-oxo-4,5-dihydrofuran- 3-carboxylate (JOT01006) Induces Apoptosis in Human Cervical Cancer HeLa Cells. A.-C. HUANG, T.-P. LIN, Y.-S. WENG, Y.-T. HO, H.-J. LIN, L.-J. HUANG, S.-C. KUO, J.-G. CHUNG ( <i>Taichung; Changhwa, Taiwan, ROC</i> ).....	2505
Radioiodide Imaging and Treatment of ARO Cancer Xenograft in a Mouse Model after Expression of Human Sodium Iodide Symporter. Y.-J. HSIEH, C.-C. KE, R.-S. LIU, F.-H. WANG, K.-T. TANG, C.-W. CHI, F.-D. CHEN, C.-H. LEE ( <i>Taipei; Taichung, Taiwan, ROC</i> ).....	2515
Immunohistochemical Expression and Prognostic Significance of Fatty Acid Synthase in Pancreatic Carcinoma. P.L. ALO, M. AMINI, F. PIRO, L. PIZZUTI, V. SEBASTIANI, C. BOTTI, R. MURARI, G. ZOTTI, U. DI TONDO ( <i>Rome; Frosinone, Italy</i> ).....	2523
Apoptosis and Cytolysis Induced by Giganteosides and Hederacolchisides in HL-60 Cells. P.C. GERKENS, R. DOBSON, N. TABATADZE, V. MSHVILADZADE, R. ELIAS, O.J. PEULEN, O.M. JOLOIS, M.-C.A. DE PAUW-GILLET ( <i>Liège, Belgium; Tbilisi, Georgia; Marseille, France</i> ) .....	2529
Gender-specific Association of the <i>VEGF</i> -2578C>A Polymorphism in Korean Patients with Colon Cancer. H.M. PARK, S.H. HONG, J.W. KIM, D. OH, S.G. HWANG, H.J. AN, N.K. KIM ( <i>Seongnam; Jeju, South Korea</i> ) .....	2535
STEALTH <sup>®</sup> Liposomal CKD-602, a Topoisomerase I Inhibitor, Improves the Therapeutic Index in Human Tumor Xenograft Models. N.Y. YU, C. CONWAY, R.L.S. PENA, J.Y. CHEN ( <i>Mountain View, CA, USA</i> ) .....	2541
Celecoxib Increased Expression of 14-3-3 $\sigma$ and Induced Apoptosis of Glioma Cells. J.-C. CHEN, Y. CHEN, Y.-H. SU, S.-H. TSENG ( <i>Chia-Yi; Taoyuan; Taipei, Taiwan, ROC</i> ) .....	2547
Effects of Anti-malarial Drugs on MCF-7 and Vero Cell Replication. T. ROSSI, A. COPPI, E. BRUNI, A. RUBERTO, S. SANTACHIARA, G. BAGGIO ( <i>Modena, Italy</i> ) .....	2555

\* Review (page 2141)