

# ANTICANCER RESEARCH

## International Journal of Cancer Research and Treatment

ISSN: 0250-7005

Volume 26, Number 6B, November-December 2006

### Contents

#### *Experimental Studies*

- Analysis of a Mutant p53 Protein Arising in a Medulloblastoma from a Mouse Transgenic for the JC Virus Early Region. M.K. WHITE, A. SKOWRONSKA, J. GORDON, L. DEL VALLE, S.L. DESHMANE, A. GIORDANO, K. KHALILI (*Philadelphia, PA, USA*)..... 4079
- Endogenous Expression of CD80 Co-stimulatory Molecule Facilitates *In Vivo* Tumor Regression of Oral Squamous Carcinoma. G.R. THOMAS, J. WEN (*Miami, FL, USA*) ..... 4093
- COX-independent Antineoplastic Effects of Sulindac in Oral Cancer are Mediated by Survivin Down-regulation. M.A. SCHEPER, J.J. SAUK, N.G. NIKITAKIS (*Baltimore, MD, USA*) ..... 4103
- TRAIL Expression Up-regulated by Interferon- $\gamma$  via Phosphorylation of STAT1 Induces Myeloma Cell Death. Y. MIURA, T. TSUJIOKA, Y. NISHIMURA, H. SAKAGUCHI, M. MAEDA, H. HAYASHI, M. DONG, F. HYODOH, K.-I. YATA, H. WADA, T. SUGIHARA, T. OTSUKI (*Kurashiki, Okayama, Japan*) ..... 4115
- Identification and Evaluation of Potential Anti-cancer Drugs on Human Neuroendocrine Tumor Cell Lines. D.E. LARSSON, H. LÖVBORG, L. RICKARDSON, R. LARSSON, K. ÖBERG, D. GRANBERG (*Uppsala, Sweden*) ..... 4125
- Antitumor and Antimetastatic Activity of a Novel Water-soluble Low Molecular Weight  $\beta$ -1, 3-D-Glucan (branch  $\beta$ -1,6) Isolated from *Aureobasidium pullulans* 1A1 Strain Black Yeast. Y. KIMURA, M. SUMIYOSHI, T. SUZUKI, M. SAKANAKA (*Toon, Ehime; Amagasaki, Hyogo, Japan*) ..... 4131
- Atrial Natriuretic Peptide and Long Acting Natriuretic Peptide Inhibit ERK 1/2 in Prostate Cancer Cells. Y. SUN, E.J. EICHELBAUM, H. WANG, D.L. VESELY (*Tampa, FL, USA*)..... 4143

Contents continued on the back cover

|                                                                                                                                                                                                                                                                                                                                         |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Changes in Nucleic Acid and Protein Levels in Atrophyng Skeletal Muscle in Cancer Cachexia. A.S. BHOGAL, M.L. LORITE, M.J. TISDALE ( <i>Birmingham, UK</i> ).....                                                                                                                                                                       | 4149 |
| The Proliferative Response of HeLa Cells to 2-Deoxy-D-Glucose Under Hypoxic or Anoxic Conditions: An Analogue for Studying some Properties of <i>In Vivo</i> Solid Cancers. K.M. ANDERSON, P. TSUI, P. GUINAN, M. RUBENSTEIN ( <i>Chicago, IL, USA</i> ).....                                                                           | 4155 |
| Role of Activation Peptide of Procathepsin D in Proliferation and Invasion of Lung Cancer Cells. A. VASHISHTA, S. SARASWAT OHRI, M. PROCTOR, M. FUSEK, V. VETVICKA ( <i>Louisville, KY, USA; Prague, Czech Republic</i> ).....                                                                                                          | 4163 |
| Xenotransplantation of Human Ovarian Tissue Pieces in Gonadotropin-stimulated SCID Mice: The Effect of Ovariectomy. T. MALTARIS, H. KOELBL, F. FISCHL, R. SEUFERT, M. SCHMIDT, J. KOHL, M.W. BECKMANN, H. BINDER, I. HOFFMANN, A. MUELLER, R. DITTRICH ( <i>Mainz; Frankfurt; Erlangen, Germany</i> ).....                              | 4171 |
| Evaluation of Cancer Chemopreventive Agents Using Clones Derived from a Human Prostate Cancer Cell Line. J.H. WARE, Z. ZHOU, L. KOPELOVICH, A.R. KENNEDY ( <i>Philadelphia, PA; Bethesda, MD, USA</i> ).....                                                                                                                            | 4177 |
| Regulation of Tumor Signaling Pathways by AZD3409 <i>In Vitro</i> . R. STREEPER, D. CAMPOS, G. CARRIZALES, T.C. STEPHENS, E. IZBICKA ( <i>San Antonio, TX, USA; Macclesfield, Cheshire, UK</i> ).....                                                                                                                                   | 4185 |
| Uniform <i>MDM2</i> Overexpression in a Panel of Glioblastoma Multiforme Cell Lines with Divergent <i>EGFR</i> and <i>p53</i> Expression Status. M.-E. HALATSCH, U. SCHMIDT, A. UNTERBERG, V. I. VOUGIOUKAS ( <i>Heidelberg; Hannover; Freiburg, Germany</i> ).....                                                                     | 4191 |
| Gefitinib-related Gene Signature in Bladder Cancer Cells Identified by a cDNA Microarray. R. INOUE, H. MATSUYAMA, S. YANO, Y. YAMAMOTO, N. IIZUKA, K. NAITO ( <i>Ube, Yamaguchi, Japan</i> ).....                                                                                                                                       | 4195 |
| Tumorigenic Potential and the Molecular Mechanism of the Carcinogenic Effect Exerted by 2-Nitroanisole. A. ESMAEILI, K. SCHLATTERER, I. DEMIRHAN, B. SCHLATTERER, M. NAUCK, P. CHANDRA, A. CHANDRA ( <i>Frankfurt am Main; Greifswald; Berlin, Germany; Melikazi-Kayseri, Turkey</i> ).....                                             | 4203 |
| Expression of Interleukin-17 in Human Colorectal Cancer. D. WÅGSÄTER, S. LÖFGREN, A. HUGANDER, J. DIMBERG ( <i>Stockholm; Jönköping, Sweden</i> ).....                                                                                                                                                                                  | 4213 |
| FGFR-2 and -3 Play an Important Role in Initial Stages of Oral Oncogenesis. E. VAIRAKTARIS, V. RAGOS, C. YAPIJAKIS, S. DERKA, S. VASSILIOU, E. NKENKE, A. YANNOPOULOS, S. SPYRIDONIDOU, A. VYLLIOTIS, V. PAPAKOSTA, S. LOUKERI, A. LAZARIS, C. TESSEROMATIS, C. TSIGRIS, E. PATSOURIS ( <i>Athens, Greece; Erlangen, Germany</i> )..... | 4217 |
| Preventive Effect of Fluvastatin on Ulcerative Colitis-associated Carcinogenesis in Mice. S. SUZUKI, T. TAJIMA, S. SASSA, H. KUDO, I. OKAYASU, S. SAKAMOTO ( <i>Tokyo; Saitama; Kanagawa, Japan</i> ).....                                                                                                                              | 4223 |
| Polymorphisms of 5,10-Methylenetetrahydrofolate Reductase (MTHFR C677T) and Thymidylate Synthase Enhancer Region (TSER) as a Risk Factor of Cholangiocarcinoma in a Korean Population. K.H. KO, N.K. KIM, D.J. YIM, S.P. HONG, P.W. PARK, K.S. RIM, S.Y. KIM, S.G. HWANG ( <i>Seongnam, South Korea</i> ).....                          | 4229 |
| * HER-2 and NF-κB as the Targets for Therapy-resistant Breast Cancer. K.M. AHMED, N. CAO, J.J. LI ( <i>West Lafayette, IN, USA</i> ).....                                                                                                                                                                                               | 4235 |
| COX-2 Inhibitor Celecoxib Suppresses Tumor Growth and Lung Metastasis of a Murine Mammary Cancer. R. YOSHINAKA, M.-A. SHIBATA, J. MORIMOTO, N. TANIGAWA, Y. OTSUKI ( <i>Osaka, Japan</i> ).....                                                                                                                                         | 4245 |
| Cytotoxic Efficacy and Influence on Cellular Phospholipid Metabolism of 2-Hydroxy- and 2-O-Acetyl-Octadecylphosphocholines. B. HILDENBRAND, J.T. KLEY, F. HABERSTROH, M.A. FREUDENBERG, M. AZEMAR, C. UNGER, U. MASSING ( <i>Freiburg, Germany</i> ).....                                                                               | 4255 |

|                                                                                                                                                                                                                                                                                             |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Highly-methylated Colorectal Cancers Show Poorly-differentiated Phenotype. K. HIBI, A. NAKAO (Yokohama; Nagoya, Japan) .....                                                                                                                                                                | 4263 |
| Aberrant Methylation of the <i>CHFR</i> Gene is Frequently Detected in Non-invasive Colorectal Cancer. Y. MORIOKA, K. HIBI, M. SAKAI, M. KOIKE, M. FUJIWARA, Y. KODERA, K. ITO, A. NAKAO (Nagoya, Japan) .....                                                                              | 4267 |
| * The Emerging World of MicroRNAs. L. O'DRISCOLL (Dublin, Ireland).....                                                                                                                                                                                                                     | 4271 |
| The Protection against Trimetrexate Cytotoxicity in Human Bone Marrow by Sequence-dependent Administration of Raloxifene, 5-Fluorouracil/Trimetrexate. J.R. DAS, E.B. FRYAR, S. GREEN, W.M. SOUTHERLAND, D. BOWEN (Washington, DC, USA) .....                                               | 4279 |
| Analyses of Promoter Hypermethylation for <i>RUNX3</i> and other Tumor Suppressor Genes in Nasopharyngeal Carcinoma. S.-H. TAN, H. IDA, B.-C. GOH, W. HSIEH, M. LOH, Y. ITO (Singapore, Singapore).....                                                                                     | 4287 |
| Relationship Between N-linked Oligosaccharide Chains of Human Serum Immunoglobulin G and Serum Tumor Markers with Non-small Cell Lung Cancer Progression. Y. KANO, T. OHARA, T. MASHIKO, T. ABE, N. MASUDA, T. AKAHOSHI (Sagamihara, Kanagawa; Chiba, Japan).....                           | 4293 |
| Homozygous Deletions of the <i>INK4a/ARF</i> Locus in Renal Cell Cancer. T. KASAHARA, V. BILIM, N. HARA, K. TAKAHASHI, Y. TOMITA (Niigata; Yamagata, Japan) .....                                                                                                                           | 4299 |
| Expression of VEGF and its Receptors and Angiogenesis in Bone and Soft Tissue Tumors. H. HARA, T. AKISUE, T. FUJIMOTO, M. IMABORI, T. KAWAMOTO, R. KURODA, H. FUJIOKA, T. YAMAMOTO, M. DOITA, M. KUROSAKA (Kobe, Hyogo; Kagawa, Japan) .....                                                | 4307 |
| Gypenosides Induced Apoptosis in Human Colon Cancer Cells through the Mitochondria-dependent Pathways and Activation of Caspase-3. J.-C. CHEN, K.-W. LU, J.-H. LEE, C.-C. YEH, J.-G. CHUNG (Taichung, Taiwan, R.O.C.) .....                                                                 | 4313 |
| OK432-activated Natural Killer Cells Enhanced Trastuzumab (Herceptin®)-mediated Antibody-dependent Cellular Cytotoxicity in Patients with Advanced Cancer. T. SUDO, A. ARUGA, K. SHIMIZU, N. MATSUSHITA, K. TAKASAKI (Tokyo, Japan).....                                                    | 4327 |
| Cytotoxic Activity of Selected Trifluoromethyl Ketones Against Oral Tumor Cells. A. IDEO, M. SASAKI, C. NAKAMURA, K. MORI, J. SHIMADA, Y. KANDA, S. KUNII, M. KAWASE, H. SAKAGAMI (Saitama; Matsuyama, Ehime, Japan) .....                                                                  | 4335 |
| <i>PAI-1</i> Expression Levels in Esophageal and Colorectal Cancers are Closely Correlated to those in Corresponding Normal Tissues. T. SAKAKIBARA, K. HIBI, M. KOIKE, M. FUJIWARA, Y. KODERA, K. ITO, A. NAKAO (Nagoya, Japan) .....                                                       | 4343 |
| Reduced Heterochromatin Protein 1-beta ( $HP1\beta$ ) Expression is Correlated with Increased Invasive Activity in Human Melanoma Cells. K. NISHIMURA, Y.S. HIROKAWA, H. MIZUTANI, T. SHIRAIISHI (Tsu, Mie, Japan).....                                                                     | 4349 |
| Lymph Node Metastases Displaying Lower Ki-67 Immunostaining Activity than the Primary Breast Cancer. D. CABIBI, V. MUSTACCHIO, A. MARTORANA, C. TRIPODO, M. CAMPIONE, A. CALASCIBETTA, R. SANGUEDOLCE, F. ARAGONA (Palermo, Italy) .....                                                    | 4357 |
| Curcumin-induced Cell Cycle Arrest and Apoptosis in Human Acute Promyelocytic Leukemia HL-60 Cells via MMP Changes and Caspase-3 Activation. T.-W. TAN, H.-R. TSAI, H.-F. LU, H.-L. LIN, M.-F. TSOU, Y.-T. LIN, H.-Y. TSAI, Y.-F. CHEN, J.-G. CHUNG (Taichung; Taipei, Taiwan, R.O.C.)..... | 4361 |
| False-positives in Fine-needle Aspiration Cytology of Breast Disease can be Reduced with p63 Immunostaining – A Preliminary Report. T. NAGAO, Y. BANDO, M. SASA, T. MORIMOTO, N. SANO, T. HIROSE, A. TANGOKU (Tokushima, Japan) .....                                                       | 4373 |

|                                                                                                                                                                                                                                                                                                                                                        |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Curcumin-induced Apoptosis of Human Colon Cancer Colo 205 Cells through the Production of ROS, Ca <sup>2+</sup> and the Activation of Caspase-3. C.-C. SU, J.-G. LIN, T.-M. LI, J.-G. CHUNG, J.-S. YANG, S.-W. IP, W.-C. LIN, G.-W. CHEN ( <i>Taichung; Hualien, Taiwan, R.O.C.</i> ) .....                                                            | 4379 |
| Decreased Expression of Tumor Protein p53-induced Nuclear Protein 1 (TP53INP1) in Breast Carcinoma. Y. ITO, Y. MOTOO, H. YOSHIDA, J. L. IOVANNA, Y. TAKAMURA, A. MIYA, K. KUMA, A. MIYAUCHI ( <i>Kanazawa, Japan; Marseille, France</i> ) .....                                                                                                        | 4391 |
| Epidermal Growth Factor Receptor Changes During Breast Cancer Metastasis. I.B. FUCHS, I. SIEMER, H. BÜHLER, A. SCHMIDER, W. HENRICH, W. LICHTENEGGER, G. SCHALLER, S. KUEMMEL ( <i>Berlin; Herne; Essen, Germany</i> ) .....                                                                                                                           | 4397 |
| Effect of Resveratrol and Mixtures of Resveratrol and Mitomycin C on Cancer Cells under Irradiation. Y. BADER, N. GETOFF ( <i>Vienna, Austria</i> ) .....                                                                                                                                                                                              | 4403 |
| Toll-like Receptor Interference in Myeloid Dendritic Cells through Head and Neck Cancer. H. FRENZEL, B. HOFFMANN, C. BROCKS, P. SCHLENKE, R. PRIES, B. WOLLENBERG ( <i>Lübeck, Germany</i> ) .....                                                                                                                                                     | 4409 |
| Cyclin A and E2F1 Overexpression Correlate with Reduced Disease-free Survival in Node-negative Breast Cancer Patients. E. BALDINI, A. CAMERINI, A. SGAMBATO, T. PROCHILO, A. CAPODANNO, F. PASQUALETTI, C. ORLANDINI, L. RESTA, G. BEVILACQUA, P. COLLECCHI ( <i>Pisa; Rome; Messina, Italy</i> ) .....                                                | 4415 |
| Inhibition of Pancreatic and Lung Adenocarcinoma Cell Survival by Curcumin is Associated with Increased Apoptosis, Down-regulation of COX-2 and EGFR and Inhibition of Erk1/2 Activity. S. LEV-ARI, A. STARR, A. VEXLER, V. KARAUSH, V. LOEW, J. GREIF, E. FENIG, D. ADERKA, R. BEN-YOSEF ( <i>Tel-Aviv; Petah-Tikva; Tel Hashomer, Israel</i> ) ..... | 4423 |
| CHS 828 Kill Tumour Cells by Inhibiting the Nuclear Factor-κB Translocation but Unlikely through Down-regulation of Proteasome. S.B. HASSAN, H. LÖVBORG, E. LINDHAGEN, M.O. KARLSSON, R. LARSSON ( <i>Uppsala, Sweden</i> ) .....                                                                                                                      | 4431 |
| Growth-suppressive Function of Phosphatidylethanolamine-binding Protein in Anaplastic Thyroid Cancer. J. AKAISHI, M. ONDA, S. ASAKA, J. OKAMOTO, S. MIYAMOTO, M. NAGAHAMA, K. ITO, O. KAWANAMI, K. SHIMIZU ( <i>Kawasaki; Tokyo, Japan</i> ) .....                                                                                                     | 4437 |
| Histamine Inhibits Cell Proliferation and Modulates the Expression of Bcl-2 Family Proteins <i>via</i> the H <sub>2</sub> Receptor in Human Pancreatic Cancer Cells. G. CRICCO, G. MARTÍN, V. MEDINA, M. NÚÑEZ, N. MOHAMAD, M. CROCI, E. CRESCENTI, R. BERGOC, E. RIVERA ( <i>Buenos Aires, Argentina</i> ) .....                                      | 4443 |
| Intratumoral Application of Standardized Mistletoe Extracts Down Regulates Tumor Weight <i>via</i> Decreased Cell Proliferation, Increased Apoptosis and Necrosis in a Murine Model. J. BEUTH, H.L. KO, H. SCHNEIDER, S. TAWADROS, H.U. KASPER, H. ZIMST, J.M. SCHIERHOLZ ( <i>Cologne; Rosenfeld, Germany</i> ) .....                                 | 4451 |
| * Anticancer Potential of Silymarin: From Bench to Bed Side. R. AGARWAL, C. AGARWAL, H. ICHIKAWA, R.P. SINGH, B.B. AGGARWAL ( <i>Denver, CO; Houston, TX, USA</i> ) .....                                                                                                                                                                              | 4457 |
| Activity of Bortezomib in Glioblastoma. J. STYCZYNSKI, D. OLSZEWSKA-SLONINA, B. KOLODZIEJ, M. NAPIERAJ, M. WYSOCKI ( <i>Bydgoszcz, Poland</i> ) .....                                                                                                                                                                                                  | 4499 |
| HIF-1α mRNA is not Associated with Histopathological Regression Following Neoadjuvant Chemoradiation in Esophageal Cancer. F.C. LING, N. LEIMBACH, S.E. BALDUS, S. BUECHEL, S. NEISS, J. BRABENDER, U. DREBBER, H.P. DIENES, R.P. MUELLER, A.H. HOELSCHER, P.M. SCHNEIDER ( <i>Cologne, Germany</i> ) .....                                            | 4505 |
| Retinoblastoma Suppressor Associated Protein 46 (RbAp46) Attenuates the β-Catenin/TCF Signaling through Up-regulation of GSK-3β Expression. G.-C. LI, Z.-Y WANG ( <i>Guangdong, China; Omaha, NE, USA</i> ) .....                                                                                                                                      | 4511 |

|                                                                                                                                                                                                                                                                                                                                                               |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| The Characterization of Gefitinib Sensitivity and Adverse Events in Patients with Non-small Cell Lung Cancer. N. KOYAMA, Y. JINN, K. TAKABE, M. YOSHIZAWA, Y. USUI, N. INASE, S. MIYAKE, Y. YOSHIZAWA, K. HAGIWARA M. KANAZAWA ( <i>Saitama, Japan</i> ) .....                                                                                                | 4519 |
| Xanthorrhizol Exhibits Antiproliferative Activity on MCF-7 Breast Cancer Cells via Apoptosis Induction. Y.H. CHEAH, L.P.A. HAWARIAH, N.R. ABDULLAH ( <i>Kuala Lumpur; Selangor, Malaysia</i> ) .....                                                                                                                                                          | 4527 |
| Expression of Erythropoietin Receptor in Human Merkel Cell Carcinoma of the Eyelid. S. KASE, K. YOSHIDA, M. OSAKI, H. ADACHI, H. ITO, S. OHNO ( <i>Sapporo; Yonago, Japan</i> ) .....                                                                                                                                                                         | 4535 |
| The Prion-like Protein Doppel (Dpl) Interacts with the Human Receptor for Activated C-Kinase 1 (RACK1) Protein. A. AZZALIN, I. DEL VECCHIO, L. FERRETTI, S. COMINCINI ( <i>Pavia, Italy</i> ) .....                                                                                                                                                           | 4539 |
| Fractionated Ionizing Radiation Exposure Induces Apoptosis through Caspase-3 Activation and Reactive Oxygen Species Generation. B. BUCCI, S. MISITI, A. CANNIZZARO, R. MARCHESE, G.H. RAZA, R. MICELI, A. STIGLIANO, D. AMENDOLA, O. MONTI, M. BIANCOLELLA, F. AMATI, G. NOVELLI, A. VECCHIONE, E. BRUNETTI, U. DE PAULA ( <i>Rome; Naples, Italy</i> ) ..... | 4549 |
| Development of Rational <i>In Vitro</i> Models for Drug Resistance in Breast Cancer and Modulation of MDR by Selected Compounds. M. DEMİREL KARS, Ö. DARCANSOY İŞERİ, U. GÜNDÜZ, A.U. URAL, F. ARPACI, J. MOLNÁR ( <i>Ankara, Turkey; Szeged, Hungary</i> ) .....                                                                                             | 4559 |
| <i>In Vitro</i> Biocompatibility between Mitomycin-C (MMC) and Bacillus Calmette-Guerin (BCG). I.C. MITSOGIANNIS, Z. PSAROUDAKI, D. PERREA, O. PANIARA, M.D. MELEKOS, A. ZERVAS, D. MITROPOULOS ( <i>Larissa; Athens, Greece</i> ) .....                                                                                                                      | 4569 |
| Effects of 2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin on Leukocyte Functionassociated Antigen-1 Mediated Splenocyte Adhesion. S.-J. PARK, W.-K. YOON, H.-Y. SON, S.-W. CHO, J.-Y. JUNG, K.-S. JEONG, T.-H. KIM, S.-H. KIM, S.-Y. RYU ( <i>Daejeon; Kwangju, South Korea</i> ) .....                                                                         | 4575 |
| Adjuvant Electrochemotherapy for the Treatment of Incompletely Resected Canine Mast Cell Tumors. E.P. SPUGNINI, B. VINCENZI, F. BALDI, G. CITRO, A. BALDI ( <i>Rome; Naples, Italy</i> ) .....                                                                                                                                                                | 4585 |
| T Lymphocyte Cytokine Production Patterns in Hashimoto Patients with Elevated Calcitonin Levels and their Relationship to Tumor Initiation. M. SCHUETZ, H. DUAN, K. WAHL, C. PIRICH, A. ANTONI, S. KOMMATA, K. KLETTER, R. DUDCZAK, G. KARANIKAS, M. WILLHEIM ( <i>Vienna, Austria</i> ) .....                                                                | 4591 |
| Cyclin D1 and MLH1 Levels in Laryngeal Cancer are Linked to Chromosomal Imbalance. M.M. SASIADEK, R. SMIGIEL, A. STEMBAŁSKA, D. RAMSEY, N. BLIN ( <i>Wroclaw, Poland; Tübingen, Germany</i> ) .....                                                                                                                                                           | 4597 |
| Treatment of Peritoneal Carcinomatosis Using Carboplatin-loaded Hydroxyapatite Particles. H. TAKEYAMA, N. MOHRI, I. MIZUNO, Y. AKAMO, H. SAWAI, T. MANABE, T. YOTSUYANAGI, S. NAKAMURA ( <i>Nagoya; Tokyo, Japan</i> ) .....                                                                                                                                  | 4603 |
| Influence of Interleukin-6 on the Invasiveness of Human Colorectal Carcinoma. C.-P. HSU, Y.-C. CHUNG ( <i>Hsinchu: Tao Yuan, Taiwan, R.O.C.</i> ) .....                                                                                                                                                                                                       | 4607 |
| Gonadotropin-releasing Hormone Analogues Alter Gene Expression of Metalloproteinases and their Tissue Inhibitors in Human Breast Cancer Epithelial Cells. F.N. LAMARI, A.A. ZOMPRA, E. PATERAKI, O.C.. KOUSIDOU, V. MAGAFA, N.K. KARAMANOS, P. CORDOPATIS ( <i>Patras, Greece</i> ) .....                                                                     | 4615 |
| <i>In Situ</i> Analysis of Doxorubicin Uptake and Cytotoxicity in a 3D Culture Model of Human HT-1080 Fibrosarcoma Cells. N. FOURRÉ, J.-M. MILLOT, R. GARNOTEL, P. JEANNESSON ( <i>Reims cedex, France</i> ) .....                                                                                                                                            | 4623 |
| Functional Analysis and Case-control Study of -160C/A Polymorphism in the <i>E-cadherin</i> Gene Promoter: Association with Cancer Risk. F. CATTANEO, T. VENESIO, S. MOLATORE, A. RUSSO, R. FIOCCA, M. FRATTINI, A.I. SCOVASSI, L. OTTINI, L. BERTARIO, G.N. RANZANI ( <i>Pavia; Candiolo; Milano; Genova; Rome, Italy</i> ) .....                            | 4627 |
| * Reviews (pages 4235, 4271, 4457)                                                                                                                                                                                                                                                                                                                            |      |