

Contents**Reviews**Pathophysiological Mechanisms of Renal Fibrosis: A Review of Animal Models and Therapeutic Strategies. A. NOGUEIRA, M.J. PIRES, P.A. OLIVEIRA (*Vila Real; Bragança, Portugal*)

1

Prevalence of EGFR Tyrosine Kinase Domain Mutations in Head and Neck Squamous Cell Carcinoma: Cohort Study and Systematic Review. C. PERISANIDIS (*Venice; Austria*)

23

Clinical Factors Associated with Treatment Outcomes following Whole-brain Irradiation in Patients with Prostate Cancer. L. DZIGGET, S.E. SCHILD, T. VENINGA, A. BAIROVIC, D. RADES (*Lübeck; Hamburg, Germany; Scottsdale, AZ, USA; Tilburg, the Netherlands*)

35

Experimental StudiesEffectiveness of Analogs of the GS-Nitroodite JPI6-039, or Total Body Irradiation Mitigators. M.W. EPPERLY, J.R. SACHER, T. KIRANZ, X. ZHANG, P. WIEFF, M. LIANG, R. FISHER, S. LI, H. WANG, J.S. GREENBERGER (*Pittsburgh, PA, USA*)

39

Active and Passive Immunization Against *Staphylococcus aureus* Periprosthetic Osteomyelitis in Rats. N.H. SOE, N.V. JENSEN, A.L. JENSEN, J. ROCH, S.S. POULSEN, G.B. PIER, H.K. JOHANSEN (*Holte; Copenhagen; Hørsholm, Denmark; Boston, MA, USA*)

45

Gene Expression Analysis of Cultured Rat-Endothelial Cells after Nd-YAG Laser Irradiation by Affymetrix GeneChip Array. Y. MASUDA, S. YOKOSE, H. SAKAGAMI (*Saitama, Japan*)

51

Wound Healing Delay in the ZSDR Rat. M.A. SCHOW, T.A. GOBBETT, R.G. PETERSON (*St. Paul, MN; Indianapolis, IN, USA*)

55

Pulsed Electromagnetic Field Stimulation Promotes Anti-cell Proliferative Activity in Doxorubicin-treated Mouse Osteosarcoma Cells. Y. MURAMATSU, T. MATSUI, M. DEIE, K. SATO (*Aichi, Japan*)

61

Contents continued on the back cover

ISSN (online): 1791-7549

General Policy

- **IN VIVO** is a multidisciplinary journal designed to bring together original high quality works and reviews on experimental and clinical biomedical research within the frames of human physiology, pathology and disease management. A special focus of the journal is the publication of works on: (a) Experimental development and application of new diagnostic procedures; (b) Pharmacological and toxicological evaluation of new drugs and drug combinations; (c) Clinical trials; (d) Development and characterization of models of biomedical research.
- The principal aim of **IN VIVO** is to provide prompt online publication for accepted articles, generally within 1-2 months from final acceptance.
- **Editorial Office:** International Institute of Anticancer Research, 1st km Kapandritiou-Kalamou Rd., P.O. Box 22, Kapandriti, Attiki 19014, Greece. Tel: +30 22950 52945, Fax: +30 22950 53389.
- **U.S. Branch:** Anticancer Research Inc., USA, 111 Bay Avenue, Highlands, NJ, USA.
- **E-mail:** journals@iar-anticancer.org; Iiar WEBSITES: www.iar-anticancer.org and www.iarjournals.org

- **International Journal of Experimental and Clinical Pathophysiology and Drug Research**
- **Published bimonthly by the International Institute of Anticancer Research**
- **Available online only and open access with Stanford University HighWire Press**

● Selection of Recent Articles

Challenges in the Analysis of Outcomes for Surgical Compared to Radiotherapy Treatment of Prostate Cancer. S.M. GLASER, R. KALASH, D.R. BONGIORNI, M.S. ROBERTS, G.K. BALASUBRAMANI, B.L. JACOBS, S. BERIWAL, D.E. HERON, J.S. GREENBERGER (*Duarte, CA; Pittsburgh, PA, USA*)

Morphological Distinction of Histiocytic Sarcoma from Other Tumor Types in Bernese Mountain Dogs and Flatcoated Retrievers. S.A. ERICH, F. CONSTANTINO-CASAS, J.M. DOBSON, E. TESKE (*Utrecht, The Netherlands; Cambridge, UK*)

Tissue-directed Implantation Using Ultrasound Visualization for Development of Biologically Relevant Metastatic Tumor Xenografts. R.A. VAN NOORD, T. THOMAS, M. KROOK, S. CHUKKAPALLI, M.J. HOENERHOFF, J.R. DILLMAN, E.R. LAWLOR, V.P. OPIPARI, E.A. NEWMAN (*Ann Arbor, MI, USA*)

Re-evaluation of Culture Condition of PC12 and SH-SY5Y Cells Based on Growth Rate and Amino Acid Consumption. H. SAKAGAMI, R. SUZUKI, Y. SHIRATAKI, S. IWAMA, M. NAKAGAWA, H. SUZUKI, K. TANAKA, N. TAMURA, H. TAKESHIMA (*Sakado, Japan*)

Clinical Impact of Rest Dual-Energy Computed Tomography Myocardial Perfusion in Patients with Coronary Artery Disease. S. BAUMANN, *et al.* (*Mannheim, Germany*)

Effects of 2,3-Bis(4-hydroxyphenyl)-propionitrile on Induction of Polyovular Follicles in the Mouse Ovary. T. SATO, H. KIM, H. KAKUTA, T. IGUCHI (*Yokohama, Japan*)

Cell-cycle Checkpoints and Aneuploidy on the Path to Cancer. E.S. WENZEL, A.T.K. SINGH (*Kenosha, WI, USA*)

The Association of MMP-8 Genotypes with Pterygium. P.-S. HU, W.-S. CHANG, A.-K. CHOU, N.-Y. HSIA, Y.-W. HUNG, C.-W. LIN, C.-W. WU, C.-Y. HUANG, M.-F. WU, C.-H. LIAO, C.-W. TSAI, D.-T. BAU, C.-L. GONG (*Changhua; Taichung; Taoyuan, Taiwan, ROC*)

Profiling Neutrophil-to-Lymphocyte Ratio Changes in Response to Nucleoside Analog Therapy for Chronic Hepatitis B Infection. M. MARALLAG, A. PATEL, M. CHOI, M.N. WONG, A.B. SEETHARAM (*Phoenix; Tempe, AZ, USA*)

Comparison of the Grip Strength Using the Martin-Vigorimeter and the JAMAR-Dynamometer: Establishment of Normal Values. S. NEUMANN, S. KWISDA, C. KRETTEK, R. GAULKE (*Hannover; Hamburg, Germany; Zurich, Switzerland*)

Role for Neutrophil Extracellular Traps (NETs) and Platelet Aggregation in Early Sepsis-induced Hepatic Dysfunction. K. SAKURAI, T. MIYASHITA, *et al.* (*Ishikawa, Japan; Baltimore, MD, USA*)

Netrin-4 Promotes Differentiation and Migration of Osteoblasts. Y. ENOKI, T. SATO, S. KOKABU, N. HAYASHI, T. IWATA, M. YAMATO, M. USUI, M. MATSUMOTO, T. TOMODA, W. ARIYOSHI, T. NISHIHARA, T. YODA (*Saitama; Fukuoka; Tokyo, Japan*)

Early PET-CT After Stereotactic Radiotherapy for Stage1 Non-small-cell Lung Carcinoma Is Predictive of Local Control. M. TYRAN, N. CHARRIER, J. DARREON, A. MADROSZYK, A. TALLET, N. SALEM (*Marseille, France*)

Plasma Electrolytic Oxidation of Titanium Implant Surfaces: Microgroove-Structures Improve Cellular Adhesion and Viability. P. HARTJEN, A. HOFFMANN, A. HENNINGSSEN, M. BARBECK, A. KOPP, L. KLUWE, C. PRECHT, O. QUATELA, R. GAUDIN, M. HEILAND, R.E. FRIEDRICH, D. GRUBEANU, R. SMEETS, O. JUNG (*Hamburg-Eppendorf; Idstein; Berlin; Aachen, Germany*)

ANTICANCER RESEARCH

International Journal of Cancer Research and Treatment

ISSN: 0250-7005

Contents

Reviews

Optimizing Selenium for Modulation of Cancer Treatments. S.O. EVANS, P.F. KHAIRUDDIN, M.B. JAMESON (Hamilton, New Zealand).....	6497
MERNA-210: A Current Overview. A. BAVELLONI, G. RAMAZZOTTI, A. POLI, M. PIAZZI, E. FOCACCIA, W. BLALOCK, I. FAENZA (Bologna; Milan, Italy).....	6511
¹⁸ F-FDG-PET-guided Planning and Re-Planning (Adaptive) Radiotherapy in Head and Neck Cancer: Current State of Art. E. FARINA, M. FERIOLI, P. CASTELLUCCI, A. FARINA, G. ZANIRATO RAMBALDI, S. CILLA, S. CAMELLI, S. FANTI, A.G. MORGANTI (Bologna; Complesso, Italy).....	6523
The Role of the Androgen Receptor Signaling in Breast Malignancies. P.F. CHRISTOPoulos, N.J. VLACHOGIANNIS, C.T. VOGRIOU, M. KOUTSILERIS (Athens, Greece).....	6533
Clinical, Histopathological and Cytogenetic Prognosticators in Uveal Melanoma - A Comprehensive Review. T. BERUS, A. HALON, A. MARKIEWICZ, J. ORLOWSKA-HEITZMAN, B. ROMANOWSKA-DIXON, P. DONIZY (Wroclaw; Krakow, Poland).....	6541
Risk Factors for Cytomegalovirus Infection After Allogeneic Hematopoietic Cell Transplantation in Malignancies: Proposal for Classification. M. DZIEDZIC, I. SADOWSKA-KRAWCZENKO, J. STYCZYNSKI (Bydgoszcz, Poland).....	6551
The "Yin and Yang" of Platelet-rich Plasma in Breast Reconstruction After Mastectomy or Lumpectomy: for Breast Cancer. E. SPARTALIS, D.J. TSILIMIGRAS, P. CHARALAMPOUDIS, G.S. KARACHALIOU, D. MORIS, A. ATHANASOU, M. SPARTALIS, V. BOLKAS, D. DEMITROULIS, N. NIKITEVAS (Athens, Greece; London; Birmingham, UK; Columbus, OH, USA).....	6557

Contents continued on the back cover

ISSN (online): 1791-7530 / ISSN (print): 0250-7005

General Policy

● **ANTICANCER RESEARCH** is an independent international forum devoted to the rapid publication of original high quality articles and reviews on all aspects of experimental and clinical oncology. Prompt evaluation of all submitted articles in confidence and rapid publication within 1-2 months from acceptance are guaranteed.

● **ANTICANCER RESEARCH** is published monthly by the International Institute of Anticancer Research and is available online with Stanford University HighWire Press. The IIAR is a member of UICC.

● **Editorial Office:** International Institute of Anticancer Research, 1st km Kapandritiou-Kalamou Rd., P.O. Box 22, Kapandriti, Attiki 19014, Greece. Tel: +30 22950 52945, Fax: +30 22950 53389.

U.S. Branch: Anticancer Research Inc., USA, 111 Bay Avenue, Highlands, NJ, USA.

● **E-mail:** journals@iilar-anticancer.org; IIAR WEBSITES: www.iilar-anticancer.org and www.iiarjournals.org

● Selection of Recent Articles

Paclitaxel, Carboplatin and 1,25-D3 Inhibit Proliferation of Endometrial Cancer Cells *In Vitro*. T. KUITTINEN, P. ROVIO, S. STAFF, T. LUUKKAALA, A. KALLIONIEMI, S. GRÉNMAN, M. LAURILA, J. MÄENPÄÄ (*Tampere; Turku, Finland*)

Sensitization of rhTRAIL-Resistant Triple Negative Breast Carcinoma Through Silibinin Co-Treatment. J.M. MANOUCHEHRI, M. KALAFATIS (*Cleveland, OH, USA*)

Resection of Colonic Liver Metastases. L. SPELT, A. SASOR, D. ANSARI, K.S. HILMERSSON, R. ANDERSSON (*Lund, Sweden*)

The Long Noncoding RNA OIP5-AS1 Is Involved in the Regulation of Cell Proliferation. M. NAEMURA, M. KUROKI, T. TSUNODA, N. ARIKAWA, Y. SAWATA, S. SHIRASAWA, Y. KOTAKE (*Iizuka; Fukuoka, Japan*)

ESE-1 Knockdown Attenuates Growth in Trastuzumab-Resistant HER2+ Breast Cancer Cells. A. KAR, B. LIU, A. GUTIERREZ-HARTMANN (*Aurora, CO, USA*)

Fluorescence-guided Surgery with Splenic Preservation Prevents Tumor Recurrence in An Orthotopic Human Pancreatic Cancer Nude Mouse Model. H.K. HWANG, C.M. KANG, S.H. LEE, T. MURAKAMI, T. KIYUNA, S.H. KIM, R.M. HOFFMAN, M. BOUVET (*San Diego, CA, USA; Yokohama; Okinawa, Japan; Seoul, Republic of Korea*)

Pacifastin-Derived Peptides Target Tumors for Use in *In Vivo* Imaging. T.L. SOTTERO, E.J. GIRARD, C. MYERS, G. HOPPING, A.J. MHYRE, J.M. OLSON (*Seattle, WA, USA*)

Natural Killer Cell's Viability After Hyperthermia Alone or Combined with Radiotherapy with or without Cytokines. T. HIETANEN, M. KAPANEN, P.-L. KELLOKUMPU-LEHTINEN (*Tampere, Finland*)

Highly Activated PD-1/PD-L1 Pathway in Gastric Cancer with PD-L1 Expression. H. SAITO, Y. KONO, Y. MURAKAMI, Y. SHISHIDO, H. KURODA, T. MATSUNAGA, Y. FUKUMOTO, T. OSAKI, K. ASHIDA, Y. FUJIWARA (*Yonago, Japan*)

Effects of MERTK Inhibitors UNC569 and UNC1062 on the Growth of Acute Myeloid Leukaemia Cells. Y. KODA, M. ITOH, S. TOHDA (*Tokyo, Japan*)

A Review of the Evidence Supporting the Vitamin D-Cancer Prevention Hypothesis in 2017. W.B. GRANT (*San Francisco, CA, USA*)

Manganese Inhibits Viability of Prostate Cancer Cells. B. HERNROTH, I. HOLM, A. GONDIKAS, H. TASSIDIS (*Fiskebäckskil; Göteborg, Sweden*)

Strong Prolyl Hydroxylase Domain 1 Expression Predicts Poor Outcome in Radiotherapy-treated Patients with Classical Hodgkin's Lymphoma. H. BUR, K.-M. HAAPASAARI, T. TURPEENNIEMI-HUJANEN, O. KUITTINEN, P. AUVINEN, K. MARIN, Y. SOINI, P. KARIHTALA (*Oulu; Kuopio, Finland*)

In Vitro Evaluation of Humanized/De-immunized Anti-PSMA Immunotoxins for the Treatment of Prostate Cancer. M. MICHALSKA, S. SCHULTZE-SEEMANN, I. KUCKUCK, P. WOLF (*Freiburg, Germany*)

The Expression of Matrix Metalloproteinases in Receptor Activator of Nuclear Factor Kappa-B Ligand (RANKL)-expressing Cancer of Apocrine Origin. Y. KAMBAYASHI, T. FUJIMURA, S. FURUDATE, C. LYU, T. HIDAKA, A. KAKIZAKI, Y. SATO, K. TANITA, S. AIBA (*Sendai, Japan*)

Novel Metabolically Stable PCA-1/ALKB3 Inhibitor Has Potent Antiproliferative Effects on DU145 Cells *In Vivo*. M. UEDA, T. SHIMIZU, M. MABUCHI, K. HORIIKE, K. KITAE, H. HASE, Y. UEDA, K. TSUJKAWA, A. TANAKA (*Kobe; Suita, Japan*)

Should Adjuvant Radiation Therapy Be Systematically Proposed for Male Breast Cancer? A Systematic Review. P. JARDEL, S. VIGNOT, B. CUTULI, A. CREISSON, S. VASS, E. BARRANGER, J. THARIAT (*Saguenay, QC, Canada; Le Coudray; Reims; Nice; Caen, France*)