

# in vivo

**International Journal of Experimental and Clinical Pathophysiology and Drug Research**

**Volume 31, Number 4, July-August 2017**

## Contents

### Reviews

- Solid Pseudopapillary Tumor of the Pancreas: A Single-center Experience and Review of the Literature. E.A. ANTONIOU, C. DAMASKOS, N. GARMPIS, C. SALAKOS, G.-A. MARGONIS, K. KONTZOGLOU, S. LAHANIS, E. SPARTALIS, D. PATSOURAS, S. KYKALOS, A. GARMPI, N. ANDREATOS, T.M. PAWLIK, G. KOURAKLIS (*Athens, Greece; Baltimore, MD, USA; London, UK*) ..... 501

- Mitochondrial Membrane Dynamics and Inherited Optic Neuropathies. E. BAGLI, A.K. ZIKOU, N. AGNANTIS, G. KITSOS (*Ioannina, Greece*) ..... 511

- K-ras Mutations as the Earliest Driving Force in a Subset of Colorectal Carcinomas. N. MARGETIS, M. KOULOUKOUPPASA, K. PAVLOU, S. VRAKAS, T. MARIOLIS-SAPSAKOS (*Athens; Piraeus, Greece*) ..... 527

### Experimental Studies

- Enhancement of Wound Healing by the Traditional Chinese Medicine Herbal Mixture *Sophora flavescens* in a Rat Model of Perianal Ulceration. X. XU, X. LI, L. ZHANG, Z. LIU, Y. PAN, D. CHEN, D. BIN, Q. DENG, Y. SUN, R.M. HOFFMAN, Z. YANG, H. YUAN (*Hangzhou; Changsha; Nanjing, PR China; San Diego, CA, USA*) ..... 543

- Resveratrol Attenuates Nicotine-mediated Oxidative Injury by Inducing Manganese Superoxide Dismutase in Renal Proximal Tubule Cells. S. HALL, M. DIXIT, I. ARANY (*Jackson, MS, USA*) ..... 551

- Cerebral Perfusion After Repair of Congenital Diaphragmatic Hernia with Common Carotid Artery Occlusion After ECMO Therapy. C. HENZLER, F.G. ZÖLLNER, M. WEIS, F. ZIMMER, S.O. SCHÖNBERG, K. ZAHN, T. SCHÄIBLE, K.W. NEFF (*Mannheim, Germany*) ..... 557

*Contents continued on the back cover*

Clinical Significance of <i>INHBA</i> Gene Expression in Patients with Gastric Cancer who Receive Curative Resection Followed by Adjuvant S-1 Chemotherapy. Y. KATAYAMA, T. OSHIMA, K. SAKAMAKI, T. AOYAMA, T. SATO, K. MASUDO, M. SHIOZAWA, T. YOSHIKAWA, Y. RINO, T. IMADA, M. MASUDA ( <i>Yokohama, Japan</i> ) .....	565
Improvement Effect of Dewaxed Brown Rice on Constipation in Antibiotic-treated Mice. H. INAGAWA, T. SAIKA, N. NISHIYAMA, T. NISIZAWA, C. KOHCHI, M. UENOBE, G.-I. SOMA ( <i>Kagawa; Niigata; Aichi, Japan</i> ) .....	573
Microbicidal Effects of Stored Aqueous Ozone Solution Generated by Nano-bubble Technology. M. SEKI, T. ISHIKAWA, H. TERADA, M. NASHIMOTO ( <i>Niigata, Japan</i> ) .....	579
The Contribution of Matrix Metalloproteinase-8 Promoter Polymorphism to Oral Cancer Susceptibility. Y.-W. HUNG, C.-W. TSAI, C.-N. WU, L.-C. SHIH, Y.-Y. CHEN, Y.-F. LIU, H.-S. HUNG, M.-Y. SHEN, W.-S. CHANG, D.-T. BAU ( <i>Taichung, Taiwan, ROC</i> ) .....	585
Evaluation of Biological Activity of Mastic Extracts Based on Chemotherapeutic Indices. R. SUZUKI, H. SAKAGAMI, S. AMANO, K. FUKUCHI, K. SUNAGA, T. KANAMOTO, S. TERAKUBO, H. NAKASHIMA, Y. SHIRATAKI, M. TOMOMURA, Y. MASUDA, S. YOKOSE, A. TOMOMURA, H. WATANABE, M. OKAWARA, Y. MATAHIRA ( <i>Sakado; Tokyo; Kawasaki; Fuji, Japan</i> ) .....	591
Transcriptome Analysis of Skin from SMP30/GNL Knockout Mice Reveals the Effect of Ascorbic Acid Deficiency on Skin and Hair. K. WAKAME, K.-I. KOMATSU, A. NAKATA, K. SATO, A. TAKAGURI, H. MASUTOMI, T. NAGASHIMA, H. UCHIYAMA ( <i>Sapporo; Tokyo; Atsugi, Japan</i> ) .....	599
A Long-term Treatment with Silybin in Patients with Non-alcoholic Steatohepatitis Stimulates Catalase Activity in Human Endothelial Cells. A. FEDERICO, V. CONTI, G. RUSSOMANNO, M. DALLIO, M. MASARONE, P. STIUSO, C. TUCCILLO, M. CARAGLIA, V. MANZO, M. PERSICO, A. FILIPPELLI, C. LOGUERCIO ( <i>Naples; Salerno, Italy</i> ) .....	609
Grid-climbing Behaviour as a Pain Measure for Cancer-induced Bone Pain and Neuropathic Pain. S. FALK, S. GALLEGOPEDERSEN, N.C. PETERSEN ( <i>Copenhagen, Denmark</i> ) .....	619
MicroRNA-1 and MicroRNA-21 Individually Regulate Cellular Growth of Non-malignant and Malignant Renal Cells. H.S AHREND, A. KAUL, S. ZIEGLER, L.-O. BRANDENBURG, U. ZIMMERMANN, A. MUSTEA, M. BURCHARDT, P. ZIEGLER, M.B. STOPE ( <i>Greifswald; Aachen, Germany</i> ) .....	625
The Contribution of <i>MMP-7</i> Promoter Polymorphisms in Renal Cell Carcinoma. C.-H. LIAO, W.-S. CHANG, P.-S. HU, H.-C. WU, S.-W. HSU, Y.-F. LIU, S.-P. LIU, H.-S. HUNG, D.-T. BAU, C.-W. TSAI ( <i>Taichung; Taipei; Changhua, Taiwan, ROC</i> ) .....	631
Cortisol Levels and Gastrointestinal Disorders After Stressful Surgery in Rabbits. S.J. JANG, S.S. KANG, S.J. SON, J.Y. LEE, G. KIM, S.H. CHOI ( <i>Cheongju; Gwangju, Republic of Korea</i> ) .....	637
Chromosome 7 Multiplication in EGFR-positive Lung Carcinomas Based on Tissue Microarray Analysis. E. TSIAMBAS, N.S. MASTRONIKOLIS, A.Y. LEFAS, S.N. GEORGIANNOS, V. RAGOS, P.P. FOTIADES, N. TSOUKALAS, N. KAVANTZAS, A. KARAMERIS, D. PESCHOS, E. PATSOURIS, K. SYRIGOS ( <i>Athens; Patras; Ioannina, Greece; Southampton; London; Leicester, UK</i> ) .....	641

Adipose Tissue Graft Improves Early but not Late Stages of Nerve Regeneration. V. BLOANCA, A.R. CEAUŞU, A.A. JITARIU, A. BARMAYOUN, R. MOŞ, Z. CRĂINICEANU, T. BRATU ( <i>Timişoara, Romania</i> ) .....	649
Elevated IL-4 and IFN- $\gamma$ Levels in Muscle Tissue of Patients with Dermatomyositis. M. GIRIŞ, H. DURMUŞ, B. YETIMLER, H. TAŞLI, Y. PARMAN, E. TÜZÜN ( <i>Istanbul, Turkey</i> ) .....	657
<b>Clinical Studies</b>	
Breast Cancer Prognosis for Young Patients. M. OWRANG, R.L. COPELAND JR, L.J. RICKS-SANTI, M. GASKINS, D. BEYENE, R.L. DEWITTY JR, Y.M. KANAAN ( <i>Washington, DC; Hampton, VA, USA</i> ) .....	661
Corrupted Colonic Crypts Bordering Regenerating Mucosal Ulcers in Ulcerative Colitis. C.A. RUBIO ( <i>Stockholm, Sweden</i> ) .....	669
Increased Resistance of Skin Flora to Antimicrobial Prophylaxis in Patients Undergoing Hip Revision Arthroplasty. H.M.L. MÜHLHOFER, L. DEISS, P. MAYER-KUCKUK, F. POHLIG, N. HARRASSER, U. LENZE, H. GOLLWITZER, C. SUREN, P. PRODINGER, R. VON EISENHART-ROTHE, J. SCHAUWECKER ( <i>Munich, Germany</i> ) .....	673
A Head to Head Comparison Between SurgiMend® – Fetal Bovine Acellular Dermal Matrix and Tutomesh® – A Bovine Pericardium Collagen Membrane in Breast Reconstruction in 45 Cases. C. EICHLER, J. EFREMOVA, K. BRUNNERT, C.M. KURBACHER, O. GLUZ, J. PUPPE, M. WARM ( <i>Cologne; Osnabrueck; Bonn; Moenchengladbach, Germany</i> ) .....	677
Which Is the Safer Anastomotic Method for Colon Surgery? – Ten-year Results. M. KOSUGE, K. ETO, R. HASHIZUME, M. TAKEDA, K. TOMORI, K. NEKI, N. MITSUMORI, K. YANAGI ( <i>Tokyo, Japan</i> ) .....	683
A Survival Score Based on Symptoms and Performance Status for Patients with High-grade Gliomas Receiving Radiochemotherapy. P.C. PHUONG, L.V. NAM, S.E. SCHILD, D. RADES, M.T. KHOA ( <i>Hanoi, Vietnam; Scottsdale, AZ, USA; Lübeck, Germany</i> ) .....	689
Diagnostic Accuracy of PIVKA-II, Alpha-Fetoprotein and a Combination of both in Diagnosis of Hepatocellular Carcinoma in Patients Affected by Chronic HCV Infection. I. GENTILE, A.R. BUONOMO, R. SCOTTO, E. ZAPPULO, C. CARRIERO, M. PICCIRILLO, F. IZZO, M. RIZZO, D. CERASUOLO, G. BORGIA, E. CAVALCANTI ( <i>Naples, Italy</i> ) .....	695
Primary Gastric ALK-negative EBV-negative Anaplastic Large Cell Lymphoma Presenting with Iron Deficiency Anemia. W. ZHANG, S. BURTON, S. WU, X. QIAN, M.N. RAJEH, K. SCHROEDER, M. SHULDBERG, A. MERANDO, J.-P. LAI ( <i>St. Louis, MO; Gainesville, FL, USA</i> ) .....	701
Rare Case of Cecal Signet Ring Cell Carcinoma with Distal Intramural Spread. K. ONO, M. MURAKAMI, M. WATANABE, A. FUJIMORI, K. OTSUKA, T. AOKI, T. YAMOCHI-ONIZUKA, M. TAKIMOTO ( <i>Tokyo, Japan</i> ) .....	705
Reticulocyte Hemoglobin Content Helps Avoid Iron Overload in Hemodialysis Patients: A Retrospective Observational Study. D. CAPONE, M. CATALDI, M. VINCIGUERRA, T. MOSCA, S. BARRETTA, A. RAGOSTA, A. SORRENTINO, A. VECCHIONE, L. BARRETTA, G. TARANTINO ( <i>Naples; Pozzuoli, Italy</i> ) ...	709

Increased Copy Number Variation of mtDNA in an Array-based Digital PCR Assay Predicts Ulcerative Colitis-associated Colorectal Cancer. T. TANAKA, T. KOBUNAI, Y. YAMAMOTO, K. MURONO, K. OTANI, K. YASUDA, T. NISHIKAWA, T. KIYOMATSU, K. KAWAI, K. HATA, H. NOZAWA, S. ISHIHARA, T. WATANABE ( <i>Tokyo, Japan</i> ).....	713
Debulking Surgery for High-grade Serous Endometrial Cancer with Disseminated Peritoneal Lesions. N. BACALBASA, I. BALESCU, A. FILIPESCU ( <i>Bucharest, Romania</i> ).....	719
Clinical Predictors for Neutrophil-to-Lymphocyte Ratio Changes in Patients with Chronic Hepatitis B Receiving Peginterferon Treatment. P.-H. LE, K.-H. LIANG, M.-L. CHANG, C.-W. HSU, Y.-C. CHEN, C.-L. LIN, W.-R. LIN, M.-W. LAI, C.-T. YEH ( <i>Taoyuan, Taiwan, ROC</i> ).....	723
Locally Advanced or Metastatic Pancreatic Adenocarcinoma: Easily Available Factors of Predictive Prolonged Survival Under Gemcitabine. A. PLOQUIN, S. TRUANT, G. PIESSEN, P. VUAGNAT, C. BALDINI, S. CATTAN, M. HEBBAR ( <i>Lille, France</i> ) .....	731
Combined Use of Mammography and FNA Eliminates Pitfalls in the Management of Metaplastic Breast Carcinoma. D.I. TSILIMIGRAS, I. NTANASIS-STATHOPOULOS, D. SCHIZAS, A. BAKOPOULOS, D. MORIS, G.-M. STANC, A. TENTOLOURIS, S. NASSAR, C. SALLA ( <i>Athens, Greece; Columbus, OH, USA</i> ).....	737
Factors Impacting the Overall Survival of Patients Irradiated for Invasive Carcinoma of the Urinary Bladder. D. RADES, L. MANIG, S. JANSSEN, S.E. SCHILD ( <i>Lübeck, Germany; Scottsdale, AZ, USA</i> ).....	741
A New Prognostic Tool for Patients Undergoing Radiotherapy plus Upfront Transurethral Resection for Bladder Cancer. L. MANIG, S. JANSSEN, S.E. SCHILD, D. RADES ( <i>Lübeck, Germany; Scottsdale, AZ, USA</i> ) .....	745
Correlation Between Infection Status of Epstein-Barr Virus and $^{18}\text{F}$ -Fluorodeoxyglucose Uptake in Patients with Advanced Gastric Cancer. S.J. NA, H.L. PARK, J.H. O, S.Y. LEE, K.Y. SONG, S.H. KIM ( <i>Seoul, Republic of Korea</i> ).....	749
Predictive Factors for Prolonged Urination Disorder After Permanent $^{125}\text{I}$ Brachytherapy for Localized Prostate Cancer. H. MORI, T. FUKUMORI, K. DAIZUMOTO, M. TSUDA, Y. KUSUHARA, T. FUKAWA, Y. YAMAMOTO, K. YAMAGUCHI, M. TAKAHASHI, A. KUBO, T. KAWANAKA, S. FURUTANI, H. IKUSHIMA, H.-O. KANAYAMA ( <i>Tokushima, Japan</i> ) .....	755
Hepatic Epithelioid Hemangioendothelioma – a Rare Tumor and Diagnostic Dilemma. V. TRESKA, O. DAUM, M. SVAJDLER, V. LISKA, J. FERDA, J. BAXA ( <i>Pilsen, Czech Republic</i> ) .....	763
Rapid Progressive Disease After Nivolumab Therapy in Three Patients with Metastatic Renal Cell Carcinoma. Y. KOBARI, T. KONDO, T. TAKAGI, K. OMAE, H. NAKAZAWA, K. TANABE ( <i>Tokyo, Japan</i> ) .....	769
Lung Cancer in Patients with Severe Idiopathic Pulmonary Fibrosis: Critical Aspects. E. BARGAGLI, V. BONTI, K. FERRARI, E. ROSI, A. BINDI, M. BARTOLUCCI, M. CHIARA, L. VOLTOLINI ( <i>Florence, Italy</i> ).....	773