

# ANTICANCER RESEARCH

## International Journal of Cancer Research and Treatment

ISSN: 0250-7005

Volume 43, Number 11, November 2023

### Contents

#### Review

- Renal Cell Cancer – Insights in Drug Resistance Mechanisms. H. AWEYS, D. LEWIS, M. SHERIFF, R.D. RABBANI, P. LAPITAN, E. SANCHEZ, V. PAPADOPOULOS, A. GHOSE, S. BOUSSIOS (*Kent; Manchester; London; Surrey, UK; Thessaloniki, Greece*)..... 4781

#### Experimental Studies

- Non-thermal Acoustic Enhancement of Chemotherapeutic Effects of Cisplatin on Xenografted Cervical Cancer in Mice. S.-S. YOO, P. KATSARAKES, J. GASHI, E. KIM, H.-C. KIM, M. BÖHLKE (*Boston, MA, USA; Daegu, Republic of Korea*) ..... 4793
- Exploring *TBLIXR1* and *NCOR1* Expression in B-cell Lymphoma Subtypes: Interaction With DNA Damage Repair Genes. A. MANSOOR, A. AKHTER, M. HAMIDI, T.M. ROSHAN, M.-T. SHABANI-RAD, D. STEWART (*Calgary, Alberta, Canada*)..... 4801
- Intraperitoneal Administration of p53-armed Oncolytic Adenovirus Inhibits Peritoneal Metastasis of Diffuse-type Gastric Cancer Cells. N. HORI, H. TAZAWA, Y. LI, T. OKURA, S. KIKUCHI, S. KURODA, T. OHARA, K. NOMA, M. NISHIZAKI, Y. URATA, S. KAGAWA, T. FUJIWARA (*Okayama; Tokyo, Japan*) ..... 4809
- Usefulness of Biopsy Specimens for Evaluating CD103+ Tumor-resident Memory T Cells in Esophageal Cancer. S. NATSUKI, Y. MIKI, H. TANAKA, M. NISHIYAMA, H. KASASHIMA, T. FUKUOKA, M. YOSHII, T. TAMURA, M. SHIBUTANI, T. TOYOKAWA, S. LEE, K. MAEDA (*Osaka, Japan*) ..... 4823
- Interaction of Integrin  $\alpha v \beta 8$  With Type I Collagen Promotes Squamous Cell Carcinoma Cell Motility via RAC1 Activation. Y. ISHIDA, T. SHINTANI, T. NOBUMOTO, S. SAKURAI, T. HAMANA, S. YANAMOTO, Y. HAYASHIDO (*Hiroshima, Japan*) ..... 4833

Contents continued on the back cover

# ANTICANCER RESEARCH

## International Journal of Cancer Research and Treatment



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

### Editorial Board

- P. A. ABRAHAMSSON, Malmö, Sweden  
B. B. AGGARWAL, San Diego, CA, USA  
T. AKIMOTO, Kashiwa, Chiba, Japan  
P. Z. ANASTASIADIS, Jacksonville, FL, USA  
A. ARGIRIS, San Antonio, TX, USA  
J. P. ARMAND, Paris, France  
V. I. AVRAMIS, Los Angeles, CA, USA  
D.-T. BAU, Taichung, Taiwan, ROC  
G. BAUER, Freiburg, Germany  
E. E. BAULIEU, Le Kremlin-Bicetre, France  
E. J. BENZ, Jr., Boston, MA, USA  
J.-Y. BLAY, Lyon, France  
J. BERGH, Stockholm, Sweden  
F. T. BOSMAN, Lausanne, Switzerland  
M. BOUVET, La Jolla, CA, USA  
J. BOYD, Miami, FL, USA  
G. BROICH, Monza, Italy  
Ø. S. BRULAND, Oslo, Norway  
J. M. BUATTI, Iowa City, IA, USA  
M. CARBONE, Honolulu, HI, USA  
C. CARLBERG, Kuopio, Finland  
A. F. CHAMBERS, London, ON, Canada  
P. CHANDRA, Frankfurt am Main, Germany  
L. CHENG, Indianapolis, IN, USA  
J.-G. CHUNG, Taichung, Taiwan, ROC  
R. CLARKE, Washington, DC, USA  
A.P. CONLEY, Houston, TX, USA  
E. DE CLERCQ, Leuven, Belgium  
E. P. DIAMANDIS, Toronto, ON, Canada  
G. TH. DIAMANDOPOULOS, Boston, MA, USA  
L. EGEVAD, Stockholm, Sweden  
D. W. FELSHER, Stanford, CA, USA  
H. FU, Atlanta, GA, USA  
B. FUCHS, Zurich, Switzerland  
D. FUCHS, Innsbruck, Austria  
D. FUKUMURA, Boston, MA, USA  
G. GABBIANI, Geneva, Switzerland  
R. GANAPATHI, Charlotte, NC, USA  
A. GIORDANO, Philadelphia, PA, USA  
M. GNANT, Vienna, Austria  
R. H. GOLDFARB, Guilford, CT, USA  
J.S. GREENBERGER, Pittsburgh, PA, USA  
A. HELLAND, Oslo, Norway  
L. HELSON, Quakertown, PA, USA  
R. HENRIKSSON, Umeå, Sweden  
R. M. HOFFMAN, San Diego, CA, USA  
P. HOHENBERGER, Mannheim, Germany  
F. JANKU, Boston, MA, USA  
S. C. JHANWAR, New York, NY, USA  
J. V. JOHANNESSEN, Oslo, Norway  
R. JONES, London, UK  
B. KAINA, Mainz, Germany  
D. G. KIEBACK, Schleswig, Germany  
R. KLAPDOR, Hamburg, Germany  
K.L. KNUTSON, Jacksonville, FL, USA  
H. KOBAYASHI, Bethesda, MD, USA  
S. D. KOTTARIDIS, Athens, Greece  
G. R. F. KRUEGER, Köln, Germany  
Pat M. KUMAR, Manchester, UK  
Shant KUMAR, Manchester, UK  
O. D. LAERUM, Bergen, Norway  
F. J. LEJEUNE, Lausanne, Switzerland  
S. LINDER, Linköping, Sweden  
D. M. LOPEZ, Miami, FL, USA  
E. LUNDGREN, Umeå, Sweden  
Y. MAEHARA, Fukuoka, Japan  
J. MAHER, London, UK  
J. MARESCAUX, Strasbourg, France  
S. S. MARTIN, Baltimore, MD, USA  
S. MITRA, Houston, TX, USA  
S. MIYAMOTO, Fukuoka, Japan  
S. MONCADA, Manchester, UK  
M. MUELLER, Villingen-Schwenningen, Germany  
M. NAMIKI, Kanazawa, Ishikawa, Japan  
K. NILSSON, Uppsala, Sweden  
S. PATHAK, Houston, TX, USA  
J.L. PERSSON, Malmö, Sweden  
G. J. PILKINGTON, Portsmouth, UK  
C. D. PLATSOUKAS, Norfolk, VA, USA  
A. POLLIACK, Jerusalem, Israel  
D. RADES, Lübeck, Germany  
M. RIGAUD, Limoges, France  
U. RINGBORG, Stockholm, Sweden  
M. ROSELLI, Rome, Italy  
S.T. ROSEN, Duarte, CA, USA  
M. SCHAUER, Düsseldorf, Germany  
M. SCHNEIDER, Wuppertal, Germany  
J. SEHOULI, Berlin, Germany  
A. SETH, Toronto, ON, Canada  
G. V. SHERBET, Newcastle-upon-Tyne, UK  
A. SLOMINSKI, Birmingham, AL, USA  
G.-I. SOMA, Kagawa, Japan  
G. S. STEIN, Burlington, VT, USA  
T. STIGBRAND, Umeå, Sweden  
T. M. THEOPHANIDES, Athens, Greece  
P. M. UELAND, Bergen, Norway  
H. VAN VLIERBERGHE, Ghent, Belgium  
R. G. VILE, Rochester, MN, USA  
M. WELLER, Zurich, Switzerland  
J. WESTERMARCK, Turku, Finland  
B. WESTERMARCK, Uppsala, Sweden  
Y. YEN, Taipei, Taiwan, ROC  
M.R.I. YOUNG, Charleston, SC, USA  
G. J. DELINASIOS, Athens, Greece  
Managing Editor and  
Executive Publisher  
J. G. DELINASIOS, Athens, Greece  
Managing Editor (1981-2016)

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

**U.S. Branch:** Anticancer Research USA, Inc., 111 Bay Avenue, Highlands, NJ 07732, USA.

E-mails: Editorial Office: journals@iia-anticancer.org  
Managing Editor: editor@iia-anticancer.org

ANTICANCER RESEARCH supports: (a) the establishment and the activities of the INTERNATIONAL INSTITUTE OF ANTICANCER RESEARCH (IAR; Kapandriti, Attiki, Greece); and (b) the organization of the International Conferences of Anticancer Research. The IAR is a member of IUCC. For more information about ANTICANCER RESEARCH, IAR and the Conferences, please visit the IAR website: [www.iia-anticancer.org](http://www.iia-anticancer.org)

**Publication Data:** ANTICANCER RESEARCH (AR) is published bimonthly from January 1981 to December 2008 and monthly from January 2009. Each annual volume comprises 12 issues. Annual Author and Subject Indices are included in the last issue of each volume. ANTICANCER RESEARCH Vol. 24 (2004) and onwards appears online with Stanford University HighWire Press from April 2009. All published articles are deposited in PubMed Central.

**Copyright:** On publication of a manuscript in AR, which is a copyrighted publication, the legal ownership of all published parts of the paper passes from the Author(s) to the Journal.

**Annual Subscription Rates 2023 per volume:** Institutional subscription US\$ 1,898.00 (online) or US\$ 2,277.00 (print & online). Personal subscription US\$ 897.00 (online) or US\$ 1,277.00 (print & online). Prices include rapid delivery and insurance. The complete previous volumes of Anticancer Research (Vol. 1-42, 1981-2022) are available at 50% discount on the above rates.

**Subscription Orders:** Orders can be placed at agencies, bookstores, or directly with the Publisher. (e-mail: [subscriptions@iia-anticancer.org](mailto:subscriptions@iia-anticancer.org))

**Advertising:** All correspondence and rate requests should be addressed to the Editorial Office.

**Book Reviews:** Recently published books and journals should be sent to the Editorial Office. Reviews will be published within 2-4 months.

Articles in ANTICANCER RESEARCH are regularly indexed in all bibliographic services, including Current Contents Life Sciences and Medical Sciences, Science Citation Index Expanded, Index Medicus, Biological Abstracts, PubMed, PubMed Central, Chemical Abstracts, BIOSIS, Previews, Essential Science Indicators, Excerpta Medica, University of Sheffield Biomedical Information Service, Current Clinical Cancer, AIDS Abstracts, Elsevier Bibliographic Database, EMBASE, Compendex, GEOBASE, EMBiology, Elsevier BIOBASE, FLUIDEX, World Textiles, Scopus, Progress in Palliative Care, Cambridge Scientific Abstracts, Cancergram (International Cancer Research Data Bank), MEDLINE, Reference Update - RIS Inc., PASCAL-CNRS, Inpharma-Reactions (Datastar, BRS), CABS, Immunology Abstracts, Telegen Abstracts, Genetics Abstracts, Nutrition Research Newsletter, Dairy Science Abstracts, Current Titles in Dentistry, Inpharma Weekly, BioBase, MedBase, CAB Abstracts/Global Health Databases, Investigational Drugs Database, VINITI Abstracts Journal, Leeds Medical Information, PubsHub, Sociedad Iberoamericana de Información Científica (SIIC) Data Bases.

Obtaining permission to reuse or reproduce our content: AR has partnered with Copyright Clearance Center (CCC) to make it easy to secure permissions to reuse its content. Please visit [www.copyright.com](http://www.copyright.com) and enter the title that you are requesting permission for in the 'Get Permission' search box. For assistance in placing a permission request, Copyright Clearance Center can be contacted directly at: Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923 USA. Phone: +1-978-750-8400. Fax: +1-978-646-8600. E-mail: [info@copyright.com](mailto:info@copyright.com).

The Editors and Publishers of ANTICANCER RESEARCH accept no responsibility for the opinions expressed by the contributors or for the content of advertisements appearing therein.

Copyright© 2023, International Institute of Anticancer Research

(Dr. George J. Delinasios), All rights reserved.

D.T.P. BY IAR

PRINTED BY ENTYP0, ATHENS, GREECE. PRINTED ON ACID-FREE PAPER

Review