Contents

Experimental Studies

Improved Survival of Mice After Total Body Irradiation with 10 MV Photon, 2400 MU/min SRS Beam. R. KALASH, H. BERHANE, Y. YANG, M.W. EPPERLY, H. WANG, T. DIXON, B. RHIEU, J.S. GREENBERGER, M.S. HUQ (Pittsburgh, PA, USA) ................................................................. 1

Bi-directional Regulation Between Adiponectin and Plasminogen Activator-inhibitor-1 in 3T3-L1 Cells. M. KOMIYA, G. FUJII, M. TAKAHASHI, M. SHIMURA, N. NOMA, S. SHIMIZU, W. ONUMA, M. MUTOH (Tokyo; Chiba; Gunma, Japan) ........................................................................................................ 13

Minocycline Modulates Cytokine and Gene Expression Profiles in the Brain After Whole-body Exposure to Radiation. S. MEHROTRA, M.J. PECAUT, D.S. GRIDLEY (Loma Linda, CA, USA) ........................................... 21

Effect of Thioridazine on Experimental Cutaneous Staphylococcal Infections. B.L. HAHN, P.G. SOHNLE (Milwaukee, WI, USA) .................................................................................................................. 33


Chemoprevention by Celecoxib and Mutagen Sensitivity of Cyclin D1 in Patients with Oropharyngeal Carcinoma. M. REITER, P. BAUMEISTER, M. HARTMANN, S. SCHWENK-ZIEGER, U. HARRÉUS (Munich; Germany) .................................................................................................................. 49


Significance of Solvated Electrons ($e_{aq}^-$) as Promoters of Life on Earth. N. GETOFF (Vienna, Austria) ..... 61

Contents continued on the back cover
Editorial Board

N.J. AGNANTIS, Department of Pathology, University of Ioannina, Ioannina, Greece
D. ANDERSON, Department of Biomedical Sciences, University of Bradford, Bradford, West Yorkshire, UK
J.P.A. BAAK, Department of Pathology, Stavanger University Hospital, Stavanger, Norway
V. BARAK, Department of Oncology, Hadassah University Hospital, Jerusalem, Israel
M.H. BARCELLOS-HOFF, Department of Radiation Oncology, New York University School of Medicine, New York, NY, USA
Y. BECKER, Department of Biochemistry, Faculty of Medicine, Hebrew University of Jerusalem, Jerusalem, Israel
K. BEIER, Department of Histology, University of Basel, Basel, Switzerland
M. BERGQVIST, Department of Oncology, Radiology and Clinical Immunology, University Hospital, Uppsala, Sweden
R. BJERKVIG, Norlux Neuro-Oncology, Department of Biomedicine, University of Bergen, Bergen, Norway
D.A. BUTTERFIELD, Department of Biological and Physical Chemistry, University of Kentucky, Lexington, KY, USA
M. CARAGLIA, Department of Experimental Oncology, National Institute of Tumours Fondazione G. Pascale, Naples, Italy
P. CHANDRA, Department of Molecular Biology, Frankfurt University, Frankfurt am Main, Germany
J.-G. CHUNG, Department of Medicine, China Medical College, Taichung, Taiwan, ROC
L.A. COHEN, Northampton, MA, USA
A.I. CONSTANTINOU, Department of Biological Sciences, University of Cyprus, Nicosia, Cyprus
T. DALIANIS, Department of Pathology-Oncology, Karolinska Institute, Stockholm, Sweden
G. DELCONSTANTINOS, Department of Experimental Physiology, University of Athens Medical School, Athens, Greece
D.T. DENHARDT, Division of Life Sciences, Rutgers University, Bridgewater, NJ, USA
W. DEN OTTER, VUMC - Department of Urology, Amsterdam, The Netherlands
K. DE MEIRLEIR, Department of Human Physiology and Medicine, Faculty of Physical Education and Physiotherapy, Vrije Universiteit Brussel, Brussels, Belgium
L. DE RIDDER, Department of Anatomy, Embryology and Histology, University of Ghent, Ghent, Belgium
E.P. DIAMANDIS, Department of Pathology and Laboratory Medicine, University of Toronto, Toronto, Ontario, Canada
T. EFFERTH, Department of Pharmaceutical Biology, Institute of Pharmacy and Biochemistry, University of Mainz, Germany
W. ENGSTRÖM, Department of Molecular Biosciences, Swedish University of Agricultural Sciences, Uppsala, Sweden
M. ESKELINEN, Department of Surgery, University Hospital of Kuopio, Kuopio, Finland
J.A. FERNANDEZ-POL, Metalloproteomics, LLC, Chesterfield, MO, USA
S. FERRONE, Department of Immunology, University of Pittsburgh, Pittsburgh, PA, USA
G. FIORENTINI, UOC Oncologia, Azienda Ospedaliera Marche Nord, Pesaro, Italy
P.B. FISHER, Virginia Commonwealth University, School of Medicine, Richmond, VA, USA
I. FREITAS, Dipartimento di Biologia Animale, University of Pavia, Pavia, Italy
M. FRIEDRICH, Department of Obstetrics and Gynecology, Klinikum Krefeld, Krefeld, Germany
R.E. FRIEDRICH, Department of Oral and Maxillofacial Surgery, Eppendorf University Hospital, Hamburg, Germany
R. GANAPATHI, Levine Cancer Institute, Carolinas HealthCare System, Charlotte, NC, USA
Z. GATALICA, Department of Pathology and Creighton Medical Laboratories, Creighton University Medical Center, Omaha, NE, USA
D.H. GILDEN, Department of Neurology, University of Colorado Denver School of Medicine, Aurora, CO, USA
G. GITSCHE, Department of Gynecology and Obstetrics, University of Freiburg Medical Center, Freiburg, Germany
J.S. GREENBERGER, Department of Radiation Oncology, University of Pittsburgh, Pittsburgh, PA, USA
J.W. GREINER, National Cancer Institute, NIH, Bethesda, MD, USA
D.S. GRIDLEY, Department of Radiation Medicine, Radiation Research Laboratories, Loma Linda University and Medical Center, Loma Linda, CA, USA

continued
C.J. GRUBBS, Department of Nutrition Sciences, University of Alabama, Birmingham, AL, USA
F. GUADAGNI, IRCCS San Raffaele, Rome, Italy
R.R. HARDY, Fox Chase Cancer Center, Philadelphia, PA, USA
J. HAU, Department of Comparative Medicine, University of Copenhagen, Denmark
M. HAUER-JENSEN, Arkansas Cancer Research Center, University of Arkansas Medical Sciences, Little Rock, AR, USA
K. HIBI, Department of Surgery, Showa University Fujigaoka Hospital, Yokohama, Japan
S.A. IMAM, Huntington Medical Research Institutes, Gene Therapy Program, Pasadena, CA, USA
J.R. IZBICKI, Chirurgische Universitätsklinik, Universitätskrankenhaus Hamburg, Germany
A. JAKOBSEN, Department of Oncology, Vejle Hospital, Vejle, Denmark
K.S. JEONG, Department of Pathology, College of Veterinary Medicine, Kyungpook National University, Daegu, S. Korea
T. KAMOTO, Department of Urology, Faculty of Medicine, University of Miyazaki, Miyazaki, Japan
I. KISS, Institute of Preventive Medicine, Medical School, University of Pécs, Pécs, Hungary
E. KONDO, Division of Oncological Pathology, Aichi Cancer Center Research Institute, Nagoya, Japan
M. KOUTSILIERIS, Department of Experimental Physiology, University of Athens Medical School, Athens, Greece
G.R.F. KRUEGER, Department of Anatomy II, Center for Anatomy, The University of Cologne Medical School, Cologne, Germany
B. KRUSLIN, Department of Pathology, Ljudevit Jurak University, Sestre milosrdnice University Hospital, Zagreb, Croatia
S.A. LAMPRECHT, Division of Clinical Biochemistry, Faculty of Health Sciences, Ben Gurion University of the Negev, Beer-Sheva, Israel
G. LANDBERG, Department of Laboratory Medicine, Lund University, Lund, Sweden
I. LELONG-REBEL, Lab. de Biophysique et Pharmacologie, Université de Strasbourg, Illkirch, France
J. LEROY, IRCAD, University of Strasbourg, France
W. LICHTENEGGER, Charité Campus Virchow-Klinikum, Berlin, Germany
P. MADARNAS, Department of Pathology, University of Sherbrooke, Québec, Canada
H. MAEDA, Faculty of Pharmaceutical Sciences, Sojo University, Kumamoto, Japan
M. MAREEL, Laboratory of Experimental Cancerology, State University, Ghent, Belgium
G. MARTORANA, Policlinico S. Orsola Malpighi, University of Bologna, Bologna, Italy
D.P. MIKHAILIDIS, Department of Chemical Pathology, The Royal Free Hospital, London, UK
J. MOLNÁR, Department of Medical Microbiology and Immunobiology, Faculty of Medicine, University of Szeged, Szeged, Hungary
N. MOTOHASHI, Department of Medicinal Chemistry, Meiji Pharmaceutical University, Tokyo, Japan
R.M. NAGLER, Department of Oral and Maxillofacial Surgery, Rambam Medical Center, Haifa, Israel
S. NAKANO, Graduate School of Health and Nutritional Sciences, Nakamura Gakuen University, Fukuoka, Japan
D.-H. NAM, Department of Neurosurgery, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Republic of Korea
R. NARAYANAN, Department of Biological Sciences, Florida Atlantic University, Boca Raton, FL, USA
M.B. NICHOLL, Department of Surgery, Ellis Fischel Cancer Center, University of Missouri School of Medicine, Columbia, MO, USA
K. NILSSON, Tumor Biology Laboratory, Department of Pathology, University Hospital, Uppsala, Sweden
K.R. NORUM, Institute for Nutrition Research, University of Oslo, Oslo, Norway
R.F. NOVAK, Shriners Hospitals for Children International, Tampa, FL, USA
K. OGAWA, Department of Surgery, Tokyo Women’s Medical University Medical Center East, Tokyo, Japan
M. PAGÈ, Département de Biologie, Division de Biochimie, Université Laval, Québec, Canada
M.-F. POUPON, Institut Curie, Section de Recherche, Paris, France

in vivo 28: (2014) continued
Instructions to Authors 2014

General Policy. IN VIVO is a multidisciplinary journal designed to bring together original high quality works and reviews on experimental and clinical biomedical research. The principal aim of IN VIVO is to provide prompt (print and online) publication for accepted articles, generally within 1-2 months from final acceptance.

Manuscripts will be accepted on the understanding that they report original unpublished works that are not under consideration for publication by another journal, and that they will not be published again in the same form.

All authors should sign a submission letter confirming the approval of their article contents. All material submitted to IN VIVO will be subject to review, when appropriate, by two members of the Editorial Board. The Editors reserve the right to improve manuscripts on grammar and style.

The use of animals in biomedical research should take place under careful supervision of a person adequately trained in this field and the animals must be treated humanely at all times. Such research should adhere to the Guiding Principles in the Care and Use of Animals approved by the Council of the American Physiological Society.

The Editors and Publishers of IN VIVO accept no responsibility for the contents and opinions expressed by the contributors. Authors should guarantee due diligence in the creation and issuance of their work.

NIH Open Access Policy. The journal acknowledges that authors of NIH funded research retain the right to provide a copy of the final manuscript to the NIH four months after publication in IN VIVO, for public archiving in PubMed Central.

Copyright. Once a manuscript has been published in IN VIVO, which is a copyrighted publication, the legal ownership of all published parts of the paper has been transferred from the Author(s) to the journal. Material published in the journal may not be reproduced or published elsewhere without written consent of the Managing Editor or Publisher.

Format. Two types of papers may be submitted: (i) Full papers containing completed original work, and (ii) review articles concerning fields of recognizable progress. Papers should contain all essential data in order to make the presentation clear. Reasonable economy should be exercised with respect to the number of tables and illustrations used. Papers should be written in clear, concise English. Spelling should follow that given in the "Shorter Oxford English Dictionary".

Manuscripts. Submitted manuscripts should not exceed fourteen (14) pages (approximately 250 words per double-spaced typed page), including abstract, text, tables, figures, and references (corresponding to 4 printed pages). Papers exceeding four printed pages will be subject to excess page charges. All manuscripts should be divided into the following sections: (a) First page including the title of the presented work [not exceeding fifteen (15) words], full names and full postal addresses of all Authors, name of the Author to whom proofs are to be sent, key words, an abbreviated running title, an indication "review", "clinical", "epidemiological", or "experimental" study, and the date of submission. (Note: The order of the Authors is not necessarily indicative of their contribution to the work. Authors may note their individual contribution(s) in the appropriate section(s) of the presented work); (b) Abstract not exceeding 150 words, organized according to the following headings: Background/Aim - Materials and Methods/Patients and Methods - Results - Conclusion; (c) Introduction; (d) Materials and Methods/Patients and Methods; (e) Results; (f) Discussion; (g) Acknowledgements; (h) References. All pages must be numbered consecutively. Footnotes should be avoided. Review articles may follow a different style according to the subject matter and the Author’s opinion. Review articles should not exceed 35 pages (approximately 250 words per double-spaced typed page) including all tables, figures, and references.

Figures. All figures (whether photographs or graphs) should be clear, high contrast, at the size they are to appear in the journal: 8.00 cm (3.15 in.) wide for a single column; 17.00 cm (6.70 in.) for a double column; maximum height: 20.00 cm (7.87 in.). Graphs must be submitted as photographs made from drawings and must not require any artwork, typesetting, or size modifications. Symbols, numbering and lettering should be clearly legible. The number and top of each figure must be indicated. Colour plates are charged.

Tables. Each table should be submitted on a separate page, typed double-spaced. Tables should be numbered with Roman numerals and should include a short title.


Clinical Trials. Authors of manuscripts describing clinical trials should provide the appropriate clinical trial number in the correct format in the text.

For International Standard Randomised Controlled Trials (ISRCTN) Registry (a not-for-profit organization whose registry is administered by Current Controlled Trials Ltd.) the unique number must be provided in this format: ISRCTNXXXXXXXX (where XXXXXXXXXX represents the unique number, always prefixed by “ISRCTN”). Please note that there is no space between the prefix “ISRCTN” and the number. Example: ISRCTN47956475.

For Clinicaltrials.gov registered trials, the unique number must be provided in this format: NCTXXXXXXXX (where XXXXXXXXXX represents the unique number, always prefixed by “NCT”). Please note that there is no space between the prefix “NCT” and the number. Example: NCT00001789.

Ethical Policies and Standards. IN VIVO agrees with and follows the “Uniform Requirements for Manuscripts Submitted to Biomedical Journals” established by the International Committee of Medical Journal Editors in 1978 and updated in October 2001 (www.icmje.org). Microarray data analysis should comply with the “Minimum Information About Microarray Experiments (MIAME) standard”. Specific guidelines are provided at the “Microarray Gene Expression Data Society” (MGED) website. Presentation of genome sequences should follow the guidelines of the NHGRI Policy on Release of Human Genomic Sequence Data. Research involving human beings must adhere to the principles of the Declaration of Helsinki and Title 45, U.S. Code of Federal Regulations, Part 46, Protection of Human Subjects, effective December 13, 2001. Research involving animals must adhere to the Guiding Principles in the Care and Use of Animals approved by the Council of the American Physiological Society. The use of animals in biomedical research should be under the careful supervision of a person adequately trained in this field and the animals must be treated humanely at all times. Research involving the use of human foetuses, foetal tissue, embryos and embryonic cells should adhere to the U.S. Public Law 103-41, effective December 13, 2001.

Submission of Manuscripts. Please follow the Instructions to Authors regarding the format of your manuscript and references. There are 3 ways to submit your article (NOTE: Please use only one of the 3 options. Do not send your article twice.):
1. To submit your article online please visit: IIAR-Submissions (link to: http://www.iiar-anticancer.org/submissions/login.php)
2. You can send your article via e-mail to journals@iiar-anticancer.org (mail to: journals@iiar-anticancer.org). Please remember to always indicate the name of the journal you wish to submit your paper. The text should be sent as a Word document (*.doc) attachment. Tables, figures and cover letter can also be sent as e-mail attachments.
3. You can send the manuscript of your article via regular mail in a USB stick, DVD, CD or floppy disk (including text, tables and figures) together with three hard copies to the following address:
   John G. Delinasios, International Institute of Anticancer Research (IIAR), Editorial Office of ANTICANCER RESEARCH, IN VIVO and CANCER GENOMICS & PROTEOMICS, 1st km Kapandritiou-Kalamou Road, P.O. Box 22, GR-19014 Kapandriti, Attiki, GREECE.

Submitted articles will not be returned to Authors upon rejection.

Galley Proofs. Unless otherwise indicated, galley proofs will be sent to the first-named Author of the submission. Corrections of galley proofs should be limited to typographical errors. Reprints, PDF files, and/or Open Access may be ordered after the acceptance of the paper. Requests should be addressed to the Editorial Office.

Copyright© 2014 International Institute of Anticancer Research (J.G. Delinasios). All rights reserved (including those of translation into other languages). No part of this journal may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise, without written permission from the Publisher.
Experimental Studies