Contents

Reviews

Cancer Progenitor Cells: The Result of an Epigenetic Event? K. LAPINSKA, G. FARIA, S. MCGONAGLE, K.M. MACUMBER, S. HEERBOTH, S. SARKAR (North Haven, CT; Wellesley; Quincy; Boston, MA; Nashville, TN, USA) ........................................................................................................................................................... 1

The Role of Prophylactic Cranial Irradiation for Non-small Cell Lung Cancer. C. PRECIVAL, M. LANDY, C. POOLE, L. MULLANEY (Dublin, Ireland) ................................................................................................................... 7

Regimens of Intraperitoneal Chemotherapy for Peritoneal Carcinomatosis from Colorectal Cancer. K. MURONO, K. KAWAI, K. HATA, S. EMOTO, M. KANEKO, K. SASAKI, T. NISHIKAWA, K. OTANI, T. TANAKA, H. NOZAWA (Tokyo, Japan) ................................................................................................................................................. 15

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) ................................................................................................................... 23

Managing Focal Nodular Hyperplasia of the Liver: Surgery or Minimally-invasive Approaches? A Review of the Preferable Treatment Options. E. VIRGILIO, M. CAVALLINI (Rome, Italy) .......................................................................................................................................... 33


Contents continued on the back cover
Editorial Board

P. A. ABRAHAMSSON, Malmö, Sweden
B. B. AGGARWAL, Houston, TX, USA
T. AKIMOTO, Kashima, Chiba, Japan
P. Z. ANASTASIASIDIS, Jacksonville, FL, USA
A. ARGIS, San Antonio, TX, USA
J. P. ARMAND, Toulouse, France
V. I. AVRAMIS, Los Angeles, CA, USA
D. T. BAU, Taichung, Taiwan, ROC
G. BAUER, Freiburg, Germany
E. E. BAULIEU, Le Kremlin-Bicêtre, France
E. J. BENZ, Jr., Boston, MA, USA
J. BERGH, Stockholm, Sweden
F. T. BOSMAN, Lausanne, Switzerland
M. BOUVEOT, La Jolla, CA, USA
J. BOYD, Miami, FL, USA
G. BROICH, Schleswig, Germany
O. S. BRULAND, Oslo, Norway
J. M. BUATTI, Iowa City, IA, USA
M. M. BURGER, Basel, Switzerland
M. CARBONE, Honolulu, HI, USA
C. CARLBERG, Kuopio, Finland
J. CARLSSON, Uppsala, Sweden
A. F. CHAMBERS, London, ON, Canada
P. CHANDRA, Frankfort am Main, Germany
L. CHENG, Indianapolis, IN, USA
J.-G. CHUNG, Taichung, Taiwan, ROC
R. CLARKE, Washington, DC, USA
E. DE CLEUR, Leuven, Belgium
W. DEN OTTER, Amsterdam, The Netherlands
E. F. DIAMANDOPoulos, Boston, MA, USA
L. EGEVAD, Stockholm, Sweden
D. W. FELSHER, Stanford, CA, USA
J. A. FERNANDEZ-POL, Chesterfield, MO, USA
I. J. FIDLER, Houston, TX, USA
A. P. FIELDS, Jacksonville, FL, USA
H. FU, Atlanta, GA, USA
B. FUCHS, Zurich, Switzerland
D. FUCHS, Innsbruck, Austria
D. FUKUMURA, Boston, MA, USA
G. GABBIANI, Geneva, Switzerland
R. GNAPATHI, Charlotte, NC, USA
A. F. GAZDAR, Dallas, TX, USA
J. H. GESCHWIND, Baltimore, MD, USA
A. GIORDANO, Philadelphia, PA, USA
G. GITSCHE, Freiburg, Germany
M. GNANT, Vienna, Austria
R. H. GOLDFARB, Guilford, CT, USA
A. HELLAND, Oslo, Norway
H. HELSON, Quakertown, PA, USA
R. HENRIKSSON, Umeå, Sweden
R. M. HOFFMAN, San Diego, CA, USA
S. C. HANWAR, New York, NY, USA
J. V. JOHANNESSON, Oslo, Norway
R. JONES, London, UK
B. KAINA, Mainz, Germany
P.-L. KELLOKUPEHTINEN, Tampere, Finland
D. G. KIEBACK, Schleswig, Germany
R. KLAPDOR, Hamburg, Germany
H. KOBAYASHI, Bethesda, MD, USA
S. D. KOTTARIDIS, Athens, Greece
G. R. F. KRUGER, Köln, Germany
Pat M. KUMAR, Manchester, UK
Shant KUMAR, Manchester, UK
O. D. LAERM, Bergen, Norway
F. J. LEJEUNE, Lausanne, Switzerland
S. LINDER, Linköping, Sweden
L. F. LIU, Piscataway, NJ, USA
D. M. LOPEZ, Miami, FL, USA
E. LUNDGREN, Umeå, Sweden
Y. MAEHARA, Fukuoka, Japan
J. MAHER, London, UK
J. MARESAUX, Strasbourg, France
J. MARX, Skovde, Sweden
S. S. MARTIN, Baltimore, MD, USA
S. MITRA, Houston, TX, USA
S. MIYAMOTO, Fukuoka, Japan
S. MONCADA, Manchester, UK
M. MUELLER, Villingen-Schwenningen, Germany
F. M. MUGGA, New York, NY, USA
M. NAMIKI, Kanazawa, Ishikawa, Japan
R. NARAYANAN, Boca Raton, FL, USA
K. NILSSON, Uppsala, Sweden
S. PATHAK, Houston, TX, USA
J. L. PERSSON, Malmo, Sweden
G. J. PILKINGTON, Portsmouth, UK
C. D. PLATSOUCA, Norfolk, VA, USA
A. POLLIACK, Jerusalem, Israel
D. RADES, Lübeck, Germany
M. RIGAUD, Limoges, France
U. RINGBORG, Stockholm, Sweden
M. ROSELL, Rome, Italy
S.T. ROSEN, Duarte, CA, USA
A. SCHAUER, Gottingen, Germany
M. SCHNEIDER, Wuppertal, Germany
J. SEHOLI, Berlin, Germany
A. SETHI, 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 VLIETBERGHE, Ghent, Belgium
R. G. VILE, Rochester, MN, USA
M. WELLER, Zurich, Switzerland
J. WESTERMARCK, Turku, Finland
B. WESTERMARCK, Uppsala, Sweden
Y. Y. EN, Duarte, CA, USA
M.J. YOUNG, Charleston, SC, USA
B. ZUMOFF, New York, NY, USA
G. J. DELINASIOS, Athens, Greece
J. G. 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, Attiki, 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@iiar-anticancer.org
Managing Editor: editor@iiar-anticancer.org

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


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 2018 per volume: Institutional subscription US$ 1,998.00 (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 subscription US$ 897.00 (online) or US$ 1,277.00 (print & online). 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).

Institutional subscription 50% discount on the above rates.

Subscription Orders: Orders can be placed at agencies, bookstores, or directly with the Publisher. (e-mail: subscriptions@iiar-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.


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 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.

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© 2018, International Institute of Anticancer Research (Dr. George J. Delinasios), All rights reserved.

D.T.P. BY IIAR
PRINTED BY ENTPYO, ATHENS, GREECE. PRINTED ON ACID-FREE PAPER.
Editorial Board

P. A. Abrahamsson  
Department of Urology, Skåne University Hospital, Lund University, Malmö, Sweden

B. B. Aggarwal  
Cytokine Research Laboratory, Department of Experimental Therapeutics, University of Texas M.D. Anderson Cancer Center, Houston, TX, USA

T. Akimoto  
Division of Particle Therapy and Department of Radiation Oncology, National Cancer Center East, Kashiwa, Chiba, Japan

P. Z. Anastasiadis  
Department of Cancer Biology, Mayo Cancer Center, Jacksonville, FL, USA

A. Argiris  
Division of Hematology/Oncology, UT Health Science Center at San Antonio, San Antonio, TX, USA

J. P. Armand  
Institut Claudius Regaud, Toulouse, France

V. I. Avramis  
Division of Hematology/Oncology, Childrens Hospital, Los Angeles, CA, USA

D.-T. Bau  
Terry Fox Cancer Research Lab, China Medical University Hospital, Taichung, Taiwan, ROC

G. Bauer  
Abteilung Virologie, Institut für Medizinische Mikrobiologie und Hygiene, Universität Freiburg, Germany

E. E. Baulieu  
INSERM U488 and College de France, Le Kremlin-Bicetre, France

E. J. Benz, Jr.  
Dana-Farber Cancer Institute, Boston, MA, USA

J. Bergh  
Department of Clinical and Molecular Medicine, Radiumhemmet, Karolinska Institute, Stockholm, Sweden

F. T. Bosman  
Institute of Pathology, University of Lausanne, Switzerland

M. Bouvet  
Department of Surgery, University of California San Diego, Moores Cancer Center, La Jolla, CA, USA

J. Boyd  
Department of Human and Molecular Genetics, Herbert Wertheim College of Medicine, Florida International University, Miami, FL, USA

G. Broich  
Gruppo Policlinico di Monza, Monza, Italy

Ø. S. Bruland  
Department of Medical Oncology-Radiotherapy, Norwegian Radium Hospital, Oslo, Norway

J. M. Buatti  
Department of Radiation Oncology, University of Iowa, Iowa City, IA, USA

M. M. Burger  
Novartis, Basel, Switzerland

M. Carbone  
Cancer Research Center of Hawaii, Honolulu, HI, USA

C. Carlberg  
Institute of Biomedicine, University of Eastern Finland, Kuopio, Finland

J. Carlsson  
Department of Biomedical Radiation Sciences, Uppsala University, Sweden

A. F. Chambers  
Department of Oncology, London Regional Cancer Center, London, Ontario, Canada

P. Chandra  
Abt. für Molekularbiologie, Klinikum Wolfgang Goethe-Universität, Frankfurt am Main, Germany

L. Cheng  
Department of Pathology, Indiana University School of Medicine, Indianapolis, IN, USA

J.-G. Chung  
Department of Biological Science and Technology, China Medical University, Taichung, Taiwan, ROC

R. Clarke  
Georgetown University Medical Center, Washington, DC, USA

E. De Clercq  
Rega Institute for Medical Research, Katholieke Universiteit Leuven, Belgium

W. Den Otter  
VUMC, Department of Urology, Amsterdam, The Netherlands

E. P. Diamandis  
Department of Pathology and Laboratory Medicine, Mount Sinai Hospital, Toronto, Ontario, Canada

G. Th. Diamandopoulos  
Department of Pathology, Harvard Medical School, Boston, MA, USA

L. Egevad  
Department of Pathology, Karolinska University Hospital, Stockholm, Sweden

D. W. Felsher  
Division of Oncology, Stanford University School of Medicine, Stanford, CA, USA

J. A. Fernandez-Pol  
Metalloproteomics, LLC, Chesterfield, MO, USA

I. J. Fidler  
Department of Cancer Biology, University of Texas M.D. Anderson Cancer Center, Houston, TX, USA

A. P. Fields  
Department of Cancer Biology, College of Medicine, Mayo Clinic, Jacksonville, FL, USA

H. Fu  
Discovery and Developmental Therapeutics Program of Winship Cancer Institute, Emory University, Atlanta, GA, USA

B. Fuchs  
Balgrist University Hospital, Zurich, Switzerland

D. Fuchs  
Center for Chemistry and Biomedicine, Innsbruck Medical University, Innsbruck, Austria

continued
Acknowledgements

The IIAR appreciates the support of the following Foundations, Institutions, Organizations and Universities for the works published in Anticancer Research, Volume 37, 2017.

Academic Enrichment Fund (AEF), Massachusetts General Hospital (MGH), Boston, MA, U.S.A.
Academy of Finland, Helsinki, Finland
Action Lions “Vaincre le Cancer” Association, Lions Clubs, Luxembourg
Agence Thématique de Recherche en Sciences et Technologie (ATRST), El Harrach, Alger
AIL La Spezia - Sezione "Francesca Lanzone", La Spezia, Italy
Ajou Human Bio-Resource Bank (AHBB), Suwon, Republic of Korea
Albert Hung Foundation, Hong Kong, P.R. China
ALFA LAB Molecular Biology Center, Athens, Greece
Alliance Pharma Company Limited, Bangkok, Thailand
American Cancer Society, Atlanta, GA, U.S.A.
Anna University, Chennai, India
ARC Foundation, Vancouver, BC, Canada
Asan Institute for Life Sciences, Seoul, Republic of Korea
Asia University, Taichung, Taiwan, R.O.C.
Association Santelys, Loos, France
Associazione Italiana per la Ricerca sul Cancro (AIRC), Milan, Italy
Astellas Pharma Inc., Tokyo, Japan
Banque de tissus et de données, Réseau de recherche sur le cancer, Fonds de la recherche en santé du Québec (FRSQ), Montreal, QC, Canada
BANSS-Stiftung, Biedenkopf, Germany
Base for Human Resource Development in Nanoscience and Nanotechnology, Osaka Prefecture University, Osaka, Japan
Basic Science Research Program, National Research Foundation of Korea (NRF), Ministry of Education, Science and Technology, Seoul, Republic of Korea
Basic-Clinic Cooperation Project, Capital Medical University, Beijing, P.R. China
Baylor Scott & White Health Publication Office, Dallas, TX, U.S.A.
Beaumont Hospital Research Institute, Royal Oak, MI, U.S.A.
Beijing Health System Talents Plan Fund, Beijing, P.R. China
Beijing Municipal Administration of Hospitals, Beijing, P.R. China
Beijing Municipal Commission of Health and Family Planning, Beijing, P.R. China
Beijing Municipal Natural Science Foundation, Beijing, P.R. China
Beijing Municipal Science and Technology Commission, Beijing, P.R. China
Beijing Talent Training Funding, Beijing, P.R. China
Bergen County Academies (BCA), Hackensack, NJ, U.S.A.
Bert von Kantsow Foundation, Sweden
Biofluid Biobank, University of Bonn, Bonn, Germany
Biohit Oyj, Helsinki, Finland
Bio-oriented Technology Research Advancement Institution (BRAIN), National Agriculture and Food Research Organization (NARO), Japan
Biotechnology Research Program, Department of Health, Commonwealth of Pennsylvania, Harrisburg, PA, U.S.A.
BK21 PLUS Program for Creative Veterinary Science, Seoul National University, Seoul, Republic of Korea
Blood Program, Harvard Stem Cell Institute, Cambridge, MA, U.S.A.
Bower Foundation, Ridgeland, MS, U.S.A.
Breast and Endocrine Fund (ANFS), Wales, U.K.
Breast Cancer Hope Charity Fund, Wales, U.K.
Breast Cancer Society of Canada, Sarnia, ON, Canada
BRIC Grant, Université Libre de Bruxelles, Bruxelles, Belgium
Bridge Funding, Department of Surgery, Dalhousie University, Halifax, NS, Canada
Bristol-Myers Squibb Co., Ltd, New York, NY, U.S.A.
Buddhist Tzu Chi General Hospital, Hualien City, Taiwan
Canadian Anesthesia Research Foundation (CARF), Toronto, ON, Canada
Canadian Breast Cancer Foundation (CBCF), Toronto, ON, Canada
Canadian Cancer Society Capacity Development, Toronto, ON, Canada
Canadian Institute of Health Research, Ottawa, ON, Canada
Canadian Tumour Repository Network (CTRNet), Canada
Cancer and Allergy Foundation, Gothenburg, Sweden
Cancer Research Foundation in Northern Sweden, Umeå, Sweden
Cancer Research Fund, Fukuoka Foundation for Sound Health, Fukuoka, Japan
Cancer Research Wales, Wales, U.K.
Cancer Society of Finland, Helsinki, Finland
Cancer Society of New Zealand, Wellington, New Zealand
Capital Medical University, Beijing, P.R. China
Cardiff China Medical Research Collaborative, Cardiff, U.K.
Cardiff University China Medical Scholarship, Cardiff, U.K.
Cardiff University–Peking University Cancer Institute, Cardiff, U.K.
Cell Innovator, Fukuoka, Japan
Center for Advanced Molecular Medicine, Fukuoka University, Fukuoka, Japan
Center for Cancer Research, Republic of Korea
Center for Development and Commercialization of Anti-Cancer Therapeutics, Ministry of Health and Welfare, Seoul, Republic of Korea
Center for Translational Cancer Research, University of Delaware, Newark, DE, U.S.A.
Center of Innovation Program (COI), Japan Science and Technology Agency (JST), Kawaguchi, Japan
Center of Life Science, Hiroshima University, Higashi, Hiroshima, Japan
Central Research Institute, Fukuoka University, Fukuoka, Japan
Centre of Molecular and Macromolecular Studies, Polish Academy of Sciences, Lodz, Poland
Chair of Clinical Immunology, Poznan University of Medical Sciences, Poznan, Poland
Challenging Exploratory Research, Japan
Chang Gung Medical Research Council, Chang Gung University, Taoyuan, Taiwan, R.O.C.
Chang Gung Memorial Hospital, Puzi City, Taiwan, R.O.C.
Chang Gung University, Taoyuan, Taiwan, R.O.C.
Changzhou Science & Technology Bureau, Changzhou, P.R. China
Charles University in Prague, Prague, Czech Republic
Charles University Research Fund (PROGRES), Charles University in Prague, Prague, Czech Republic
China International Medical Foundation (CIMF), P.R. China
China Medical University Hospital, Taichung, Taiwan, R.O.C.
China Medical University, Taichung, Taiwan, R.O.C.
China Scholarship Council, P.R. China
Chinese Medical Research Studentship of Cardiff University, Cardiff, U.K.
Chosun University, Gwangju, Republic of Korea
CHU Amiens, Amiens, France
Chugai Pharmaceutical Co., Ltd, Tokyo, Japan
Chula Research Scholar, Ratchadaphiseksomphot Endowment Fund, Chulalongkorn University, Bangkok, Thailand
Chungnam National University, Daejeon, Republic of Korea
Clinical Key Project, Peking University Third Hospital, Beijing, P.R. China
Clinical Medicine Research Laboratory, National Yang-Ming University Hospital, Taipei, Taiwan, R.O.C.
Clinical Research Education and Career Development, NIMHD, NIH, Bethesda, MD, U.S.A.
Clinical Research Launching Project, Beijing Friendship Hospital, Beijing, P.R. China
Clinical Scholar Award, Alberta Heritage Foundation for Medical Research (AHFMR), University of Alberta, Edmonton, AB, Canada
Clinical Special Fund, Science and Technology of Jiangsu Province, P.R. China
Clinical Trial and Research Center of Excellence, Ministry of Health and Welfare, Taipei, Taiwan, R.O.C.
College of Pharmacy and Pharmaceutical Sciences, Florida A & M University, Tallahassee, FL, U.S.A.
College of Pharmacy, The Ohio State University, Columbus, OH, U.S.A.
Comité de la Somme, Amiens, France
Comprehensive Support Project for Oncology Research (CSPOR), Public Health Research Foundation, Tokyo, Japan
Conceptual Development of Research Organization, Faculty Hospital in Pilsen - FNPI, Pilsen, Czech Republic
Conjoint Laboratory and the Flow Cytometer Room of the Department of Medical Research, Chang Gung Memorial Hospital, Chiayi, Taiwan, R.O.C.
Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Brasilia, Brazil
Cooperation in Science and Technology (COST), EU RTD Framework Program, Brussels, Belgium
Cooperative Research Program for Agriculture Science & Development, Rural Development Administration, Jeonju, Republic of Korea
Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Capes), Brasilia, Brazil
Council for Science, Technology and Innovation (CSTI), Tokyo, Japan
County of Västmanland, Sweden
Cross-ministerial Strategic Innovation Promotion Program (SIP), Japan
Cultivation for Major Projects and Emerging Interdisciplinary Funding Project, Sun Yat-sen University, Guangzhou, P.R. China
Daiichi Sankyo Co., Ltd, Tokyo, Japan
Dulim Pharmaceutical Corporation, Seoul, Republic of Korea
De La Salle University Science Foundation, Manila, Philippines
Deanship of Scientific Research (DSR), King Abdulaziz University, Jeddah, Kingdom of Saudi Arabia
Department of Anesthesiology and Pain Medicine at Metaxa Hospital, Piraeus, Greece
Department of Biology, Division of Natural and Social Sciences, Carthage College, Kenosha, WI, U.S.A.
Department of Biotechnology, Ministry of Science and Technology, New Delhi, India
Department of Clinical and Translational Sciences, Creighton University School of Medicine, Omaha, NE, U.S.A.
Department of Clinical Microbiology, County Hospital Ryhov, Jönköping, Sweden
Department of Clinical Research Center, Wakayama Medical University, Wakayama, Japan
Department of Defense, Arlington County, VA, U.S.A.
Department of Development and Research, Hospital Center of Porto, Porto, Portugal
Department of Histology and Embryology, Wroclaw Medical University, Wroclaw, Poland
Department of Integrative Cancer Therapy and Urology, Kanazawa University Graduate School of Medical Science, Kanazawa, Japan
Department of International Medical Communications, Tokyo Medical University, Tokyo, Japan
Department of Interventional MRI, Shandong Medical Imaging Research Institute, Shandong, P.R. China
Department of Laboratory Medicine, Lund University, Lund, Sweden
Department of Molecular Pharmacology and Oncology, Graduate School of Medicine, Gunma University, Maebashi, Japan
Department of Pathology and Microbiology, Saga University, Saga, Japan
Department of Pathology and Oncology, University of Occupational and Environmental Health, Kitakyushu, Japan
Department of Pathology, Fukuoka-Wajiro Hospital, Fukuoka, Japan
Department of Pathology, Saitama Medical University International Medical Center, Moroyama, Japan
Department of Pathology, Tokushima University School of Medicine, Tokushima, Japan
Department of Pediatrics, University of Mississippi Medical Center, Jackson, MS, U.S.A.
Department of Pharmaceutics, School of Pharmacy and Pharmaceutical Sciences, Mukogawa Women’s University, Hyogo, Japan
Department of Preventive Medicine, Tokai University School of Medicine, Isehara, Japan
Department of Radiation Oncology, Froedtert Hospital, Milwaukee, WI, U.S.A.
Department of Radiation Oncology, Gunma University Graduate School of Medicine, Maebashi, Japan
Department of Surgery, Nippon Medical School Chiba Hokusoh Hospital, Chiba, Japan
Department of Surgical Oncology, Osaka City University Graduate School of Medicine, Osaka, Japan
Department of Urology, General Teaching Hospital and 1st Faculty of Medicine, Charles University in Prague, Prague, Czech Republic
Department of Veterinary Internal Medicine, University of Tokyo, Tokyo, Japan
Departments of Oncology and Pathology, Karmanos Cancer Institute, Wayne State University, Detroit, MI, U.S.A.
Deutsche Forschungsgemeinschaft (DFG), Bonn, Germany
Discovery Foundation, Texas A&M Health Science Center, Temple, TX, U.S.A.
Ditmanson Medical Foundation, Chia-Yi Christian Hospital, Chiayi city, Taiwan, R.O.C.
Diversity Grant, National Institute of Radiological Sciences (NIRS)-Chiba University, Chiba, Japan
Division of Pneumology, San Bartolomeo Hospital, Sarzana, Italy
Divisions of Gastroenterological Surgery and Molecular Diagnosis and Cancer Prevention, Saitama Cancer Center, Saitama, Japan
DNA Sequencing Facility, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Germany
Edanz Group, Fukuoka, Japan
Eeen Häerz fir kriibskrank Kanner Association, Luxembourg
Ehime Prefectural University of Health Sciences, Iyo-gun, Japan
Eileen-Iwanicki Fellowship for Breast Cancer Research, Canadian Institutes of Health Research, Canada
Eisai Co., Ltd., Tokyo, Japan
Elite Young Scholars Program, Sun Yat-sen Memorial Hospital, Guangzhou, P.R. China
Enago, Tokyo, Japan
Enrico and Enrica Sovena Foundation, Rome, Italy
Epigenetics Shared Resource, Herbert Irving Comprehensive Cancer Center, Columbia University Medical Center, New York, NY, U.S.A.
EP-SOGO Co., Ltd, Tokyo, Japan
European Commission, Brussels, Belgium
European Regional Development Fund, Brussels, Belgium
European Social Fund (ESF), European Commission, Brussels, Belgium
Hungarian Brain Research Program, Hungary
Hyogo College of Medicine, Nishinomiya, Japan
Hyogo Prefecture Health Promotion Association, Hyogo, Japan
Hyogo Science and Technology Association, Hyogo, Japan
Ichiro Kanehara Foundation, Tokyo, Japan
Iizuka Hospital, Fukuoka, Japan
IMEREM/RPS Clinical Research, RPS Germany, Nuremberg, Germany
Importation and Development of High-Caliber Talents Project of Beijing Municipal Institutions, Beijing, P.R. China
INCT/CNPq-Inovação Farmacêutica, Brazil
Industrial Strategic Technology Development Program, Ministry of Trade, Industry, & Energy (MOTIE), Sejong, Republic of Korea
Institute for Biomedical Science (IBS), Chonnam National University Hwasun Hospital (CNUHH), Hwasun-eup, Republic of Korea
Institute of Biomathematics, Faculty of Medicine, Mannheim, Germany
Institute of Immunology, Department of Pathobiology, University of Veterinary Medicine in Vienna, Vienna, Austria
Institute of Immunology, Department of Pathobiology, University of Veterinary Medicine, Vienna, Austria
Institute of Molecular Medicine, Faculty of Medicine of Lisbon, University of Lisbon, Lisbon, Portugal
Institute of Physiology, University Hospital Zurich, Zurich, Switzerland
Institutes of Shanghai Municipal Education Commission, Shanghai, P.R. China
Instituto Gulbenkian de Ciência, Oeiras, Portugal
Intramural Research Program, National Cancer Institute, National Institutes of Health, Department of Health and Human Services, Bethesda, MD, U.S.A.
Istanbul University Scientific Research Coordination Unit, Istanbul, Turkey
Italian Association for Cancer Research (AIRC), Milan, Italy
Italian Ministry of Health, Rome, Italy
Itoh-Chubei Foundation, Japan
Jagiellonian University, Cracow, Poland
Jan Kochanowski University, Kielce, Poland
János Bolyai Scholarship, Hungarian Academy of Sciences, Budapest, Hungary
Japan Agency for Medical Research and Development (AMED), Tokyo, Japan
Japan Foundation for Applied Enzymology, Osaka, Japan
Japan Science and Technology Agency (JST), Kawaguchi, Japan
Japan Society for the Promotion of Science (JSPS), Tokyo, Japan
Jiangsu Provincial Medical Youth Talent, Jiangsu, P.R. China
John Sealy Memorial Endowment Fund, University of Texas Medical Branch (UTMB), Galveston, TX, U.S.A.
Junior Science Talent Project (JSTP), Pathum Thani, Thailand
Kadner-Pitts Research Grant, Loyola Marymount University, Los Angeles, CA, U.S.A.
Kahramanmaras Sutcu Imam University Research, Kahramanmaras, Turkey
Kakihara Science and Technology Foundation, Fukuoka, Japan
Kanazawa Medical Research Foundation, Kanazawa, Japan
Kansai Genshiryoku Kondankai, Osaka, Japan
Kaohsiung Medical University, Kaohsiung, Taiwan, R.O.C.
Kaohsiung Veterans General Hospital, Kaohsiung City, Taiwan, R.O.C.
Karolinska Institute, Stockholm, Sweden
Key Laboratory of Malignant Tumor Gene Regulation and Target Therapy, Guangdong Higher Education Institutes Grant, Guangdong Science and Technology Department, Guangdong, P.R. China
Key Laboratory of Malignant Tumor Molecular Mechanism and Translational Medicine, Guangzhou Bureau of Science and Information Technology, Guangzhou, P.R. China
Key Research and Development Plan of Shandong Province, Shandong, P.R. China
Khon Kaen University, Khon Kaen, Thailand
King Abdulaziz City for Science and Technology (KACST), Riyadh, Saudi Arabia
KKU Publication Clinic, Bangkok, Khon Kaen, Thailand
Kochi Organization for Medical Reformation and Renewal Grants, Kochi, Japan
Konkuk University, Seoul, Republic of Korea
Korea Health Technology R&D Project, Korean Health Industry Development Institute (KHIDI), Ministry of Health & Welfare, Seoul, Republic of Korea
Korea Institute of Oriental Medicine, Ministry of Education, Science and Technology (MEST), Seoul, Republic of Korea
Korea Institute of Radiological and Medical Sciences (KIRAMS), Ministry of Science, ICT and Future Planning (MSIP), Republic of Korea
Korea Research Foundation, Republic of Korea
Korea University Guro Hospital of National Biobank, Seoul, Republic of Korea
KUULAS Helsinki/Business Science Helsinki, Helsinki, Finland
Kyoto University, Kyoto, Japan
Laboratory for Process Engineering, Environment, Biotechnology and Energy (LEPABE), Porto, Portugal
Laval University Cancer Research Center, Quebec, QC, Canada
Leading Graduate Schools, Cultivating Global Leaders in Heavy Ion Therapeutics and Engineering, Gunma University, Maebashi, Japan
Leading University, Sylhet, Bangladesh
Les Amis de l’Institut J. Bordet, Bruxelles, Belgium
Leukemia Research Foundation Grant, Italy
Life Sciences National Research Network Wales (LSRNW/Ser Cymru), Cardiff, Wales, U.K.
Liga Portuguesa Contra o Cancro, Lisboa, Portugal
Ligue Contre le Cancer de Loire-Atlantique, Nantes, France
Ligue Contre le Cancer, Paris, France
Lions Cancerforskningsfond, Uppsala, Sweden
Lipidomics Shared Resource Facility, Medical University of South Carolina, Charleston, SC, U.S.A.
Ludwig-Maximilians-Universität München (LMU), Munich, Germany
Madou Sin-Lau Hospital, Tainan, Taiwan, R.O.C.
Magnus Bergvalls Stiftelse, Stockholm, Sweden
Mahidol University, Salaya, Thailand
Management Expenses Grant, Ministry of Education, Culture, Sports, Science and Technology, Japan
Margarete Bonifer-Stiftung, Bad Soden, Germany
Marlene and Stewart Greenebaum Comprehensive Cancer Center, University of Maryland, Baltimore, MD, U.S.A.
Masaryk University, Brno, Czech Republic
Medac GmbH, Wedel, Germany
Medical and Biological Laboratories Co., Ltd, Japan
Medical Faculty, University of Pécs, Pécs, Hungary
Medical Research Collaborating Center, Seoul National University Bundang Hospital, Seongnam, Republic of Korea
Medical Research Core Facilities Center, Office of Research & Development, China Medical University, Taichung, Taiwan, R.O.C.
Medical Research Encouragement Prize, The Japan Medical Association, Tokyo, Japan
Medical Scientific Research Foundation of Guangdong Province, P.R. China
Medical University of Białystok, Białystok, Poland
Medicine, Odontology and Health (ALF), Stockholm, Sweden
Mediterranean Cancer Support and Rehabilitation – Medicare Onlus, Catania, Italy
Ministry of Education, Culture, Sports, Science and Technology, Tokyo, Japan
Ministry of Education, Science and Technology (MEST), Seoul, Republic of Korea
Ministry of Education, Youth and Sports, Prague, Czech Republic
Ministry of Health, Prague, Czech Republic
Ministry of Health, Rome, Italy
Ministry of Science and Higher Education, Warsaw, Poland
Ministry of Science and Technology (MOST), Taipei, Taiwan, R.O.C.
Ministry of Science, Education and Sports, Zagreb, Republic of Croatia
Ministry of Science, ICT and Future Planning (MSIP), Republic of Korea
Mochida Pharmaceutical Co., Ltd, Tokyo, Japan
Molecular Science Unit of Center Natural Sciences and Environmental Research (CENSER), De La Salle University, Manila, Philippines
Musella Foundation for Brain Tumor Research & Information, Hewlett, NY, U.S.A.
Nagai Memorial Research Scholarship, Pharmaceutical Society of Japan, Tokyo, Japan
National Cancer Center Research and Development Fund, Tokyo, Japan
National Cancer Center, Seoul, Republic of Korea
National Cancer Institute (NCI), National Institutes of Health, Department of Health and Human Services, Bethesda, MD, U.S.A.
National Center for Advancing Translational Sciences (NCATS), National Institutes of Health, Department of Health and Human Services, Bethesda, MD, U.S.A.
National Disease Surveillance System, China Center for Disease Control and Prevention (CDC), Beijing, P.R. China
National Health Research Institutes, Taipei, Taiwan R.O.C.
National Heart Lung and Blood Institute (NHLBI), NIH, Bethesda, MD, U.S.A.
National Institute of General Medical Sciences (NIGMS), NIH, Bethesda, MD, U.S.A.
National Institute of Minority Health and Health Disparities (NIMHD), NIH, Bethesda, MD, U.S.A.
National Institute of Radiological Sciences (NIRS), Chiba, Japan
National Institutes for Quantum and Radiological Science and Technology, Chiba, Japan
National Institutes of Health (NIH), Department of Health and Human Services, Bethesda, MD, U.S.A.
National Key Research and Development Program of China, Beijing, P.R. China
National Kyushu Cancer Center, Kyushu, Japan
National Natural Science Foundation of China, Guangdong, P.R. China
National Plan Science, Technology and Innovation (MAARIFAH), King Saud University, Riyadh, Kingdom of Saudi Arabia
National Research Foundation of Korea (NRF), Ministry of Education, Science and Technology, Seoul, Republic of Korea
National Research Foundation, Pretoria, South Africa
National Research Program for Universities (NRPU), Higher Education Commission of Pakistan, Islamabad, Pakistan
National Science and Technology Development Agency (NSTDA), Pathum Thani, Thailand
National Science Center (NCN), Krakow, Poland
National Science Centre (NCN), Warsaw, Poland
National Science Council, Taipei, Taiwan, R.O.C.
National Science Foundation of Guangdong Province, Guangdong, P.R. China
National Sun Yat-sen University (NSYSU)-Kaohsiung Medical University (KMU) Joint Research Project, Kaohsiung, Taiwan, R.O.C.
National Sustainability Program I (NPU I), Ministry of Education and Sports, Prague, Czech Republic
National Sustainability Program I (NPU I), Ministry of Education and Sports of the Czech Republic, Prague, Czech Republic
National Taiwan University Hospital, Taipei, Taiwan, R.O.C.
National Taiwan University Hospital, Yunlin, Taiwan, R.O.C.
National Tsing Hua University, Hsinchu City, Taiwan, R.O.C.
National Yang-Ming University Hospital, Yilan, Taiwan, R.O.C.
Natural Science Foundation of China, P.R. China
Natural Science Foundation of Jiangsu Province, Jiangsu, P.R. China
Natural Science Foundation of Shandong Province, Shandong, P.R. China
Natural Science Foundation of Yangzhou, Yangzhou, P.R. China
Nelson Mandela Metropolitan University, Port Elizabeth, South Africa
New Faculty Research Fund, Ajou University School of Medicine, Suwon, Republic of Korea
New National Excellence Program, Ministry of Human Capacities, Budapest, Hungary
Nilsson-Ehle’s Foundation, Sweden
Nippon Medical School Hospital, Tokyo, Japan
Noile-Immune Biotech, Inc., Japan
Nordic Cancer Union, Reykjavík, Iceland
Norwegian Radium Hospital Research Foundation, Lysaker, Norway
Norwegian Radium Hospital, Oslo, Norway
ODSeasy, asthenis® GmbH, Aschheim, Germany
Office of Higher Education Commission (OHEC), Thailand
Oita Cancer Research Foundation, Yufu, Japan
Oita Red Cross Hospital, Oita, Japan
Okayama University of Science, Okayama, Japan
Oklahoma Center for Advancement of Science and Technology, Oklahoma City, OK, U.S.A.
Oncogenomic Project, Apulia Region, Italy
Ono Pharmaceutical Co., Ltd, Osaka, Japan
Opening Research Project of Jiangsu Key Laboratory of Integrated Traditional Chinese and Western Medicine for Prevention and Treatment of Senile Diseases, Nanjing, P.R. China
Operational Programme Research and Innovation, European Regional Development Fund (ERDF), Brussels, Belgium
Osaka Foundation for Promotion of Fundamental Medical Research, Graduate School of Medicine Faculty of Medicine, Osaka University, Suita, Japan
Osaka Prefecture University, Osaka, Japan
Paavo Koistinen Foundation, Vuorela, Finland
Peking University Hospital, Beijing, P.R. China
Pfizer Pharma GmbH, Berlin, Germany
Pierre Fabre Pharma GmbH, Freiburg im Breisgau, Germany
Polish Ministry of Science and Higher Education, Warsaw, Poland
Polish State Funds for Scientific Research, Warsaw, Poland
Portuguese NMR (PTNMR) Network, Portugal
Poznan University of Medical Sciences, Poznan, Poland
Practical Research for Innovative Cancer Control, Japan Agency for Medical Research and Development (AMED), Tokyo, Japan
Precision Medicine Special Project of National Key Research and Development Program, P.R. China
Presbyterian Church in Taiwan, Taipei, Taiwan, R.O.C.
Princess Takamatsu Cancer Research Fund, Tokyo, Japan
Priority Academic Program Development (PAPD) of Jiangsu Higher Education Institutions, Jiangsu, P.R. China
Program for Professor of Special Appointment (Eastern Scholar), Shanghai Institutions of Higher Learning, Shanghai, P.R. China
Programa Operacional Competitividade e Internacionalização (POCI), COMPETE2020, Lisboa, Portugal
Project for Cancer Research and Therapeutic Evolution (P-CREATE), Japan Agency for Medical Research and Development (AMED), Tokyo, Japan
Project for Development of Innovative Research on Cancer Therapeutics, Japan Agency for Medical Research and Development (AMED), Tokyo, Japan
Project of Medical Science and Technology Development in Shandong Province, Shandong, P.R. China
Projects of Medical and Health Technology Development Program in Shandong Province, Shandong, P.R. China
Province Natural Foundation of Shandong, Shandong, P.R. China
Quantum and Radiological Science and Technology (QST), National Institute of Radiological Sciences (NIRS), Chiba, Japan
Radiosensitivity of Individuals and Susceptibility to Cancer induced by ionizing Radiations (RISC-RAD), Community Research and Development Information Service (CORDIS), Seventh Framework Programme, European Commission, Brussels, Belgium
Ratchadaphiseksomphat Endowment Fund, Chulalongkorn University, Bangkok, Thailand
Recherches Scientifiques Luxembourg (RSL) Association, Luxembourg
Regensburger Forschungsfoerderung in der Medizin (ReForM), University of Regensburg, Regensburg, Germany
Regina Elena National Cancer Institute, Rome, Italy
Regional Research Board of Northern Norway, Norway
Research and Development for Innovations Operational Program (RDIOP), ERDF, Brussels, Belgium
Research Center for Advanced Molecular Medicine, Fukuoka University, Fukuoka, Japan
Research Center of the Portuguese Institute of Oncology of Porto, Porto, Portugal
Research Council of Lithuania, Vilnius, Lithuania
Research Institute for Veterinary Science, Seoul National University, Seoul, Republic of Korea
Research Institute of Medical Science, St. Vincent’s Hospital, Suwon, Republic of Korea
Research Institute of Medical Sciences, Chonnam National University, Gwangju, Republic of Korea

Research Promotion Grant, Shin-Nihon Advanced Medical Research Foundation, Japan
Richard M Lucas Cancer Foundation, Menlo Park, CA, U.S.A.
Rizzoli Orthopedic Institute, Palermo, Italy
Robert Benjamin Ahlin Foundation for Cancer Research, Tucson, AZ, U.S.A.
Robert Bosch Stiftung, Stuttgart, Germany
Roche S.A.S., Paris, France
Romanian National Authority for Scientific Research and Innovation (ANCSI), National Research Council (CNCS)-Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI), Romania
Saitama Medical University International Medical Center, Moroyama, Japan
Saitama Prefectural University, Koshigaya, Japan
Saitama Surgical Association, Saitama, Japan
Sallie Astor Burdine and Delta State University Foundations, Baton Rouge, LA, U.S.A.
Samyang Corporation, Seoul, Republic of Korea
Sarcoma Foundation of America (SFA), Damascus, MD, U.S.A.
Sarcoma SPOREs, NIH, U.S.A.
Sbarro Health Research Organization (SHRO), Philadelphia, PA, U.S.A.
SC Laboratory of Musculoskeletal Cell Biology, Rizzoli Orthopedic Institute (IOR), Bologna, Italy
School of Anti-Aging and Regenerative Medicine, Mae Fah Luang University, Chiang Rai, Thailand
School of Chinese Medicine, University of Hong Kong, Pokfulam, Hong Kong, P.R. China
Science and Technology Commission of Beijing, Beijing, P.R. China
Science and Technology Development Foundation of Yantai, Yantai, P.R. China
Science and Technology Planning Project of Guangdong Province, Guangdong, P.R. China
Science and Technology Unit, Ministry of Health and Welfare, Executive Yuan, Taipei, Taiwan, R.O.C.
Science for Life Laboratories (SciLifeLab), Uppsala, Sweden
Science Research Promotion Fund, Promotion and Mutual Aid Corporation for Private Schools of Japan, Japan
Scientific Research Fund of Beijing Friendship Hospital, Beijing, P.R. China
Scientific Research Project Commission, Eskisehir
Osmangazi University, Eskisehir, Turkey
Senckenberg's Institute of Pathology, University of Frankfurt, Frankfurt, Germany
Seoul National University Bundang Hospital Research Fund, Bundang, Republic of Korea
Seppo Nieminen Fund, Finland
Ser Cymru Wales, Wales, U.K.
Setsunan University, Osaka, Japan
Setsuro Fujii Memorial, Institute of Advanced Medical Sciences, Institute of Advanced Medical Sciences, Tokushima University, Tokushima, Japan
Shandong Medicine and Health Science Technology Program, Shandong, P.R. China
Shandong Science and Technology Development Project, Shandong, P.R. China
Shizuoka Cancer Center Hospital, Shizuoka, Japan
Show Chwan Memorial Hospital, Changhua City, Taiwan, R.O.C.
Sigurd and Elsa Goljes Foundation, Sweden
Slovak Grant Agency, Bratislava, Slovakia
Small Animal Imaging Facility, University of Pennsylvania, Philadelphia, PA, U.S.A.
Social Development project of Jiangsu Province, Jiangsu, P.R. China
Solomon Brothers Medical Technology Corporation for Technical Assistance
Solutex, Madrid, Spain
Son Tra Centre Medical Diagnostic Center, Danang, Vietnam
Soonchunhyang University Research Fund, Asan, Republic of Korea
South Sweden Breast Cancer Group, Sweden
Srinakharinwirot University, Bangkok, Thailand
St. Joseph's Healthcare Foundation, Hamilton, ON, Canada
Stanford University, Stanford, CA, U.S.A.
Stellenbosch University, Stellenbosch, South Africa
Stiftelsen Onkologiska Klinikens i Uppsala Forskningsfond, Uppsala, Sweden
Stiftelsen Tornspiran, Farsta, Sweden
Stiftung für Pathobiochemie und Molekulare Diagnostik, Bonn, Germany
Stockholm Cancer Society (Radiumhemsfonderna), Stockholm, Sweden
Stockholm City Council, Stockholm, Sweden
Stockholm County Council (ALF project), Stockholm, Sweden
Support Association, Surgery Department, Santo António Hospital, Porto, Portugal
Support Center for Advanced Medical Science, Tokushima University Graduate School, Tokushima, Japan
Support Center for Medical Research and Education, Tokai University, Tokyo, Japan
Support Project of High-level Teachers in Beijing Municipal Universities in the Period of 13th Five-year Plan, Beijing, P.R. China
Supported Program for the Strategic Research Foundation at Private Universities, Ministry of Education, Culture, Sports, Science and Technology of Japan, Japan
Suzukien Memorial Foundation, Nagoya, Japan
Svenska Läkarsällskapet (SLS), Stockholm, Sweden
Sveriges Kommuner och Landsting (SKL), Stockholm, Sweden
Swedish Cancer and Allergy Foundation, Stockholm, Sweden
Swedish Cancer Foundation, Stockholm, Sweden
Swedish Cancer Society (Cancerfonden), Stockholm, Sweden
Swedish National Quality Registry of Gynecological Surgery (GynOp Registry), Sweden
Swedish Research Council (Vetenskapsrådet), Stockholm, Sweden
Szeged Foundation for Cancer Research, Szeged, Hungary
Taichung Armed Forces General Hospital, Taichung, Taiwan, R.O.C.
Taipei City Hospital, Taipei, Taiwan, R.O.C.
Taipei Medical University Hospital, Taipei, Taiwan, R.O.C.
Taipei Medical University, Taipei, Taiwan, R.O.C.
Taipei Veterans General Hospital, Yuan-Shan, Taiwan, R.O.C.
Taiwan Ministry of Health and Welfare (MOHW), Taipei, Taiwan, R.O.C.
Taiwan Mouse Clinic (TMC), Taipei, Taiwan, R.O.C.
Takeda Science Foundation, Japan
Tampere University Hospital, Tampere, Finland
Taoyuan General Hospital, Ministry of Health and Welfare, Taipei, Taiwan, ROC
Társadalmi Megújulás Operatív Program (TÁMOP), Hungary
Télévie Luxembourg, Luxembourg
Thailand Research Fund, Bangkok, Thailand
The Scientific and Technological Research Council of Turkey (TUBITAK), Ankara, Turkey
Tissue Bank, China Medical University, Taichung, Taiwan R.O.C.
Tokai University Educational System General Research Organization (SO), Tokyo, Japan
Tokai University Hachioji Hospital, Hachioji, Japan
Tokai University School of Medicine, Tokyo, Japan
Instructions for Authors 2018

General Policy. ANTICANCER RESEARCH (AR) will accept original high quality works and reviews on all aspects of experimental and clinical cancer research. The Editorial Policy suggests that priority will be given to papers advancing the understanding of cancer causation, and to papers applying the results of basic research to cancer diagnosis, prognosis, and therapy. AR will also accept the following for publication: (a) Abstracts and Proceedings of scientific meetings on cancer, following consideration and approval by the Editorial Board; (b) Announcements of meetings related to cancer research; (c) Short reviews (of approximately 120 words) and announcements of newly received books and journals related to cancer, and (d) Announcements of awards and prizes.

The principal aim of AR is to provide prompt publication (print and online) for original works of high quality, generally within 1-2 months from final acceptance. Manuscripts will be accepted on the understanding that they report original unpublished works in the field of cancer research 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 AR will be subject to peer-review, when appropriate, by two members of the Editorial Board and by one suitable outside referee. All manuscripts submitted to AR are urgently treated with absolute confidence, with access restricted to the Managing Editor, the journal’s secretary, the reviewers and the printers. The Editors reserve the right to improve manuscripts on grammar and style.

The Editors and Publishers of AR accept no responsibility for the contents and opinions expressed by the contributors. Authors should warrant 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 published manuscript to the NIH four months after publication in ANTICANCER RESEARCH, for public archiving in PubMed Central.

Copyright. Once a manuscript has been published in ANTICANCER RESEARCH, 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 the 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 recognisable 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 4 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 should appear at the end of the submitted document file. Once a manuscript is accepted all figures and graphs should be submitted separately in either jpg, tiff or pdf format and at a minimum resolution of 300 dpi. Graphs must be submitted as pictures 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. Pages that include color figures are subject to color charges.

Tables. All tables should appear at the end of the submitted document file. Once a manuscript is accepted, each table should be submitted separately, 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 XXXXXXXXX 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 XXXXXXXXX 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. ANTICANCER RESEARCH 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 for Authors regarding the format of your manuscript and references. Manuscripts must be submitted only through our online submission system at: http://www.iiar-submissions.com/login.html

In case a submission is incomplete, the corresponding Author will be notified accordingly. Questions regarding difficulties in using the online submission system should be addressed to: email: journals@iiar-anticancer.org

Galley Proofs. Unless otherwise indicated, galley proofs will be sent to the corresponding 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. Authors of online open access articles are entitled to a complimentary online subscription to Anticancer Research for the current year and all previous digital content since 2004. Requests should be addressed to the Editorial Office. Galley proofs should be returned corrected to the Editorial Office by email within two days.

Specific information and additional instructions for Authors

1. Anticancer Research (AR) closely follows the new developments in all fields of experimental and clinical cancer research by (a) inviting reviews on topics of immediate importance and substantial progress in the last three years, and (b) providing the highest priority for rapid publication to manuscripts presenting original results judged to be of exceptional value. Theoretical papers will only be considered and accepted if they bear a significant impact or formulate existing knowledge for the benefit of research progress.

2. Anticancer Research will consider the publication of conference proceedings and/or abstracts provided that the material submitted fulfils the quality requirements and instructions of the journal, following the regular review process by two suitable referees.

3. An acknowledgement of receipt, including the article number, title and date of receipt is sent to the corresponding author of each manuscript upon receipt. If this receipt is not received within 20 days from submission, the author should call or write to the Editorial Office to ensure that the manuscript (or the receipt) was not lost in the mail or during electronic submission.

4. Each manuscript submitted to AR is sent for review in confidence to two suitable referees with the request to return the manuscript with their comments to the Editorial Office within 12 days from receipt. If reviewers need a longer time or wish to send the manuscript to another expert, the manuscript may be returned to the Editorial Office with a delay. All manuscripts submitted to AR, are treated in confidence, without access to any person other than the Managing Editor, the journal’s secretary, the reviewers and the printers.
5. All accepted manuscripts are peer-reviewed and carefully corrected in style and language, if necessary, to make presentation clear. (There is no fee for this service). Every effort is made (a) to maintain the personal style of the author’s writing and (b) to avoid change of meaning. Authors will be requested to examine carefully manuscripts which have undergone language correction at the pre-proof or proof stage.

6. Authors should pay attention to the following points when writing an article for AR:

- The Instructions to Authors must be followed in every detail.
- The presentation of the experimental methods should be clear and complete in every detail facilitating reproducibility by other scientists.
- The presentation of results should be simple and straightforward in style. Results and discussion should not be combined into one section, unless the paper is short.
- Results given in figures should not be repeated in tables.
- Figures (graphs or photographs) should be prepared at a width of 8 or 17 cm with legible numbers and lettering.
- Photographs should be clear with high contrast, presenting the actual observation described in the legend and in the text. Each legend should provide a complete description, being self-explanatory, including technique of preparation, information about the specimen and magnification.
- Statistical analysis should be elaborated wherever it is necessary. Simplification of presentation by giving only numerical or % values should be avoided.
- Fidelity of the techniques and reproducibility of the results, should be points of particular importance in the discussion section. Authors are advised to check the correctness of their methods and results carefully before writing an article. Probable or dubious explanations should be avoided.
- Authors should not cite results submitted for publication in the reference section. Such results may be described briefly in the text with a note in parenthesis (submitted for publication by... authors, year).
- The References section should provide as complete a coverage of the literature as possible including all the relevant works published up to the time of submission.
- By following these instructions, Authors will facilitate a more rapid review and processing of their manuscripts and will provide the readers with concise and useful papers.

7. Following review and acceptance, a manuscript is examined in language and style, and galley proofs are rapidly prepared. Second proofs are not sent unless required.

8. Authors should correct their galley proofs very carefully and preferably twice. An additional correction by a colleague always proves to be useful. Particular attention should be paid to chemical formulas, mathematical equations, symbols, medical nomenclature etc. Any system of correction marks can be used in a clear manner, preferably with a red pen. Additions or clarifications are allowed provided that they improve the presentation but do not bring new results (no fee).

9. Articles submitted to AR may be rejected without review if:

- they do not fall within the journal's policy.
- they do not follow the instructions for authors.
- language is unclear.
- results are not sufficient to support a final conclusion.
- results are not objectively based on valid experiments.
- they repeat results already published by the same or other authors before the submission to AR.
- plagiarism is detected by plagiarism screening services.

(Rejection rate (2017): 66%).

10. Authors who wish to prepare a review should contact the Managing Editor of the journal in order to get confirmation of interest in the particular topic of the review. The expression of interest by the Managing Editor does not necessarily imply acceptance of the review by the journal.

11. Authors may inquire information about the status of their manuscript(s) by calling the Editorial Office at +30-22950-53389, Monday to Friday 9.00-16.00 (Athens time), or by sending an e-mail to journals@iiar-anticancer.org

12. Authors who wish to edit a special issue on a particular topic should contact the Managing Editor.

13. Authors, Editors and Publishers of books are welcome to submit their books for immediate review in AR. There is no fee for this service.

(This text is a combination of advice and suggestions contributed by Editors, Authors, Readers and the Managing Editor of AR).

Copyright© 2018 - International Institute of Anticancer Research (G.J. 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.