

# ANTICANCER RESEARCH

## International Journal of Cancer Research and Treatment

ISSN: 0250-7005

**Volume 34, Number 3, March 2014**  
**Special Issue on Breast Cancer**  
**Experimental and Clinical Research**

### Contents

#### Reviews

- Genetic and Epigenetic Aspects of Breast Cancer Progression and Therapy. S. BYLER, S. GOLDFAR, S. HEERBOTH, M. LEARY, G. HOUSMAN, K. MOULTON, S. SARKAR (*Boston, MA, USA*) ..... 1071
- Glycodelin A – A Famous Lipocalin and its Role in Breast Cancer. A.C. KÖLBL, U. JESCHKE, D. DIAN, K. FRIESE, U. ANDERGASSEN (*Munich, Germany*) ..... 1079
- Clinical Utility of Ultrasound-Needle Biopsy for Preoperative Staging of the Axilla in Invasive Breast Cancer. N. HOUSSAMI, S.C.E. DIEPSTRATEN, H.S. CODY III, R.M. TURNER, A.R. SEVER (*Sydney, NSW, Australia; Utrecht, Netherlands; New York, NY, USA; Maidstone, UK*)..... 1087
- Current Approaches to Managing Partial Breast Defects: The Role of Conservative Breast Surgery Reconstruction. A.M. MUNHOZ, E. MONTAG, J.R. FILASSI, R. GEMPERLI (*São Paulo, Brazil*) ..... 1099
- Predictive and Prognostic Significance of Tumor-infiltrating Lymphocytes in Patients with Breast Cancer Treated with Neoadjuvant Systemic Therapy. B. MELICHAR, H. ŠTUDENTOVÁ, H. KALÁBOVÁ, D. VITÁSKOVÁ, P. ČERMÁKOVÁ, H. HORNÝCHOVÁ, A. RYŠKA (*Olomouc; Hradec Králové, Czech Republic*) ..... 1115
- Mapping Oxidative Changes in Breast Cancer: Understanding the Basic to Reach the Clinics. A. MENCALHA, V.J. VICTORINO, R. CECCHINI, C. PANIS (*Rio de Janeiro; São Paulo; Londrina, Brazil*) ..... 1127
- The Management of Screen-detected Breast Cancer. M. AHMED, M. DOUEK (*London, UK*) ..... 1141

*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**, Houston, TX, USA  
**T. AKIMOTO**, Kashiwa, Chiba, Japan  
**A. ARGIRIS**, San Antonio, TX, USA  
**J. P. ARMAND**, Toulouse, France  
**V. I. AVRAMIS**, Los Angeles, CA, USA  
**R. C. BAST**, Houston, TX, USA  
**G. BAUER**, Freiburg, Germany  
**E. E. BAULIEU**, Le Kremlin-Bicetre, France  
**Y. BECKER**, Jerusalem, Israel  
**E. J. BENZ, Jr.**, Boston, MA, USA  
**J. BERGH**, Stockholm, Sweden  
**D. D. BIGNER**, Durham, NC, USA  
**A. BÖCKING**, Düsseldorf, Germany  
**G. BONADONNA**, Milan, Italy  
**F. T. BOSMAN**, Lausanne, Switzerland  
**G. BROICH**, Monza, Italy  
**J. M. BROWN**, Stanford, CA, USA  
**Ø. S. BRULAND**, Oslo, Norway  
**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**, Frankfurt am Main, Germany  
**L. CHENG**, Indianapolis, IN, USA  
**J.-G. CHUNG**, Taichung, Taiwan, ROC  
**E. DE CLERCQ**, Leuven, Belgium  
**W. DE LOECKER**, Leuven, Belgium  
**W. DEN OTTER**, Amsterdam, The Netherlands  
**E. P. DIAMANDIS**, Toronto, ON, Canada  
**G. TH. DIAMANDOPOULOS**, Boston, MA, USA  
**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  
**B. FUCHS**, Zurich, Switzerland  
**G. GABBIANI**, Geneva, Switzerland  
**R. GANAPATHI**, Charlotte, NC, USA  
**A. F. GAZDAR**, Dallas, TX, USA  
**J. H. GESCHWIND**, Baltimore, MD, USA  
**A. GIORDANO**, Philadelphia, PA, USA  
**G. GITSCH**, Freiburg, Germany  
**R. H. GOLDFARB**, Saranac Lake, NY, USA  
**S. HAMMARSTRÖM**, Umeå, Sweden  
**I. HELLSTRÖM**, Seattle, WA, USA  
**L. HELSON**, Quakertown, PA, USA  
**R. M. HOFFMAN**, San Diego, CA, USA  
**K.-S. JEONG**, Daegu, South Korea  
**S. C. JHANWAR**, New York, NY, USA  
**J. V. JOHANNESSEN**, Oslo, Norway  
**B. KAINA**, Mainz, Germany  
**P. -I. KELLOKUMPU-LEHTINEN**, Tampere, Finland  
**B. K. KEPPLER**, Vienna, Austria  
**D. G. KIEBACK**, Riesa (Dresden), Germany  
**R. KLAPDOR**, Hamburg, Germany  
**U. R. KLEEBERG**, Hamburg, Germany  
**P. KLEIHUES**, Zürich, Switzerland  
**E. KLEIN**, Stockholm, Sweden  
**S. D. KOTTARIDIS**, Athens, Greece  
**G. R. F. KRUEGER**, Köln, Germany  
**D. W. KUFE**, Boston, MA, USA  
**Pat M. KUMAR**, Manchester, UK  
**Shant KUMAR**, Manchester, UK  
**M. KUROKI**, Fukuoka, Japan  
**O. D. LAERUM**, Bergen, Norway  
**F. J. LEJEUNE**, Lausanne, Switzerland  
**L. F. LIU**, Piscataway, NJ, USA  
**D. M. LOPEZ**, Miami, FL, USA  
**E. LUNDGREN**, Umeå, Sweden  
**H. T. LYNCH**, Omaha, NE, USA  
**Y. MAEHARA**, Fukuoka, Japan  
**J. MAHER**, London, UK  
**J. MARESCAUX**, Strasbourg, France  
**J. MARK**, Skövde, Sweden  
**S. MITRA**, Houston, TX, USA  
**M. MUELLER**, Heidelberg, Germany  
**F. M. MUGGIA**, New York, NY, USA  
**M. J. MURPHY, Jr.**, Dayton, OH, USA  
**M. NAMIKI**, Kanazawa, Ishikawa, Japan  
**R. NARAYANAN**, Boca Raton, FL, USA  
**K. NILSSON**, Uppsala, Sweden  
**S. PATHAK**, Houston, TX, USA  
**J.L. PERSSON**, Malmö, Sweden  
**S. PESTKA**, Piscataway, NJ, USA  
**G. J. PILKINGTON**, Portsmouth, UK  
**C. D. PLATSOUKAS**, Norfolk, VA, USA  
**F. PODO**, Rome, Italy  
**A. POLLIACK**, Jerusalem, Israel  
**G. REBEL**, Strasbourg, France  
**M. RIGAUD**, Limoges, France  
**U. RINGBORG**, Stockholm, Sweden  
**M. ROSELLI**, Rome, Italy  
**A. SCHAUER**, Göttingen, Germany  
**M. SCHNEIDER**, Wuppertal, Germany  
**A. SETH**, Toronto, ON, Canada  
**G. V. SHERBET**, Newcastle-upon-Tyne, UK  
**G.-I. SOMA**, Tokushima, Japan  
**G. S. STEIN**, Burlington, VT, USA  
**T. STIGBRAND**, Umeå, Sweden  
**T. M. THEOPHANIDES**, Athens, Greece  
**B. TOTH**, Omaha, NE, USA  
**P. M. UELAND**, Bergen, Norway  
**H. VAN VLIERBERGHE**, Ghent, Belgium  
**R. G. VILE**, Rochester, MN, USA  
**M. WELLER**, Zurich, Switzerland  
**B. WESTERMARK**, Uppsala, Sweden  
**Y. YEN**, Duarte, CA, USA  
**M.R.I. YOUNG**, Charleston, SC, USA  
**B. ZUMOFF**, New York, NY, USA  
**J. G. DELINASIOS**, Athens, Greece  
Managing Editor  
**G. J. DELINASIOS**, Athens, Greece  
Assistant Managing Editor and  
Executive Publisher  
**E. ILIADIS**, Athens, Greece  
Production Editor

**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.

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 (IIAR; Kapandriti, Attiki, Greece); and (b) the organization of the International Conferences of Anticancer Research.

For more information about ANTICANCER RESEARCH, IIAR and the Conferences, please visit the IIAR website: [www.iia-anticancer.org](http://www.iia-anticancer.org)

**Publication Data:** ANTICANCER RESEARCH (AR) is published 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.

**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 2014 per volume:** Institutional subscription Euro 1,650.00 - print or online. Personal subscription Euro 780.00 - print or online. Prices include rapid delivery and insurance. The complete previous volumes of Anticancer Research (Vol. 1-33, 1981-2013) are available at 50% discount on the above rates.

**Subscription Orders:** Orders can be placed at agencies, bookstores, or directly with the Publisher. Cheques should be made payable to J.G. Delinasios, Executive Publisher of Anticancer Research, Athens, Greece, and should be sent to the Editorial Office.

**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), Science Citation Index, Index Medicus, Biological Abstracts, PubMed, Chemical Abstracts, 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.

Authorization to photocopy items for internal or personal use, or the internal or personal clients, is granted by ANTICANCER RESEARCH, provided that the base fee of \$2.00 per copy, plus 0.40 per page is paid directly to the Copyright Clearance Center, 27 Congress Street, Salem, MA 01970, USA. For those organizations that have been granted a photocopy license by CCC, a separate system of payment has been arranged. The fee code for users of the Transactional Reporting Service is 0250-7005/2014 \$2.00 +0.40.

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© 2014, International Institute of Anticancer Research  
(Dr. John G. Delinasios), All rights reserved.  
D.T.P. BY IIAR  
PRINTED BY ENTYP0, ATHENS, GREECE  
PRINTED ON ACID-FREE PAPER



# 9th INTERNATIONAL CONFERENCE OF ANTICANCER RESEARCH

6-10 October 2014,  
Porto Carras, Sithonia, Greece

[www.iar-anticancer.org/conference](http://www.iar-anticancer.org/conference)

Information

## Under the auspices of:

- The Union for International Cancer Control (UICC)
- The Asian and Pacific Federation of Clinical Biochemistry (APFCB)
- The Asian Pacific Organization for Cancer Prevention (APOCP)
- The Austrian Society for Radiation Oncology (ÖGRO)
- The European Group on Tumor Markers (EGTM)
- The Hungarian Society of Epidemiology
- The International Cancer Microenvironment Society (ICMS)
- The International Geriatric Radiotherapy Group (IGRG)
- The International Institute of Anticancer Research (IIAR)
- The International Society for Biological and Environmental Repositories (ISBER)
- The International Society of Oncology and Biomarkers (ISOBM)
- The Italian Society of Uro-Oncology (SIUrO)
- The Latinamerican and Caribbean Society of Medical Oncology (SLACOM)
- The Lithuanian Society of Radiation Oncology (LSRT)
- The North-Eastern German Society of Gynecological Oncology (NOGGO)
- The Polish Society of Radiation Oncology (PSTRO)
- The Portuguese Society of Radiotherapy - Oncology (SPRO)
- The Society of Biotherapeutic Approaches, Japan
- The Szeged Foundation for Cancer Research, Hungary
- The Turkish Society for Electron Microscopy (TSEM)

## Supported by:

- The International Institute of Anticancer Research



**Deadline for registration:** September 26, 2014.

**Deadline for submission of abstracts:** August 10, 2014.

## Dates and Venue

The 9th International Conference of Anticancer Research will be held at the Porto Carras Grand Resort, Sithonia, Halkidiki, Greece, from 6 to 10 October, 2014.

## General Policy

The purpose of the Anticancer Research Conferences is to exchange scientific information worldwide and to discuss recent advances in both broad and specialized areas of experimental and clinical cancer research. International Scientific and Medical Societies are invited to participate in the Conference by organizing specialized sessions. This initiative presents a forum for inter-Society communication allowing the organization and coordination of international activities on cancer.

Special sessions will be devoted to the discussion and arrangement of international cooperation projects and activities, encompassing the aims of the International Institute of Anticancer Research.

The Conference is organized and supported by the International Institute of Anticancer Research.

The Scientific Program will comprise of oral (10, 15, 30 or 40 minutes) and poster presentations. Both overviews and original works will be presented. Each oral presentation will be allocated a five-minute discussion-time. Six conference rooms will be used simultaneously. Posters will be exhibited for 1-2 days. Projection facilities for PowerPoint presentations will be provided.

*The Conference website ([www.iar-anticancer.org/conference](http://www.iar-anticancer.org/conference)) will be consistently updated announcing new titles of accepted abstracts, new special symposia and social events.*



## Organizing Committee

- P.A. Abrahamsson**, Malmö, Sweden  
**N. Agnantis**, Ioannina, Greece  
**F.E. Ahmed**, Greenville, NC, USA  
**C. Alexiou**, Erlangen, Germany  
**L. Amaral**, Lisbon, Portugal  
**F.L. Ampil**, Shreveport, LA, USA  
**R. Andersson**, Lund, Sweden  
**S. Arbak**, Istanbul, Turkey  
**V. Barak**, Jerusalem, Israel  
**D.-T. Bau**, Taichung, Taiwan  
**G. Bauer**, Freiburg, Germany  
**A. Bishayee**, Signal Hill, CA, USA  
**R. Bjerkvig**, Bergen, Norway  
**G. Broich**, Monza, Italy  
**C. Carlberg**, Kuopio, Finland  
**J. Carlsson**, Uppsala, Sweden  
**D. Characiejus**, Vilnius, Lithuania  
**C.J. Chen**, Taipei, Taiwan  
**G. Ciarimboli**, Münster, Germany  
**B.F.C. Clark**, Aarhus, Denmark  
**R. Clarke**, Washington, DC, USA  
**P. Collery**, Bastia, France  
**H. Cross**, Vienna, Austria  
**M. De Braekeleer**, Brest, France  
**K. De Meirleir**, Brussels, Belgium  
**A.Z. Dudek**, Chicago, IL, USA  
**A. Dutour**, Lyon, France  
**P. Dzegiel**, Wrocław, Poland  
**T. Efferth**, Mainz, Germany  
**W. Engström**, Uppsala, Sweden  
**M. Eskelinen**, Kuopio, Finland  
**J.A. Fernandez-Pol**, Chesterfield, MO, USA  
**A. Fields**, Jacksonville, FL, USA  
**M. Friedrich**, Krefeld, Germany  
**R. Friedrich**, Hamburg, Germany  
**H.-J. Gabius**, Munich, Germany  
**R. Ganapathi**, Charlotte, NC, USA  
**A.F. Gazdar**, Dallas, TX, USA  
**V. Gebbia**, Palermo, Italy  
**J.W. Greiner**, Bethesda, MD, USA  
**F. Guadagni**, Rome, Italy  
**C. Hastie**, Guildford, Surrey, UK  
**J. Hau**, Copenhagen, Denmark  
**R. Hoffman**, San Diego, CA, USA  
**S. Holdenrieder**, Bonn, Germany  
**T. Isbir**, Istanbul, Turkey  
**S. Jhanwar**, New York, NY, USA  
**M. Jhanwar-Uniyal**, New York, NY, USA  
**B. Kaina**, Mainz, Germany  
**E. Kandil**, New Orleans, LA, USA  
**D.G. Kieback**, Riesa (Dresden), Germany  
**I. Kiss**, Pécs, Hungary  
**R. Klapdor**, Hamburg, Germany  
**R. Knecht**, Hamburg, Germany  
**M. Kohonen-Corish**, Sydney, NSW, Australia  
**M. Koutsilieris**, Athens, Greece  
**K. Kubota**, Mibu, Tochigi, Japan  
**S. Kumar**, Manchester, UK  
**P.M. Kumar**, Manchester, UK  
**O.D. Laerum**, Bergen, Norway  
**S.A. Lamprecht**, Beer-Sheva, Israel  
**W. Lichtenegger**, Berlin, Germany  
**D. Lincoln**, Chapel Hill, QLD, Australia  
**B. Littlefield**, Andover, MA, USA  
**F. Lumachi**, Padova, Italy  
**S. Mitra**, Galveston, TX, USA  
**R. Molina**, Barcelona, Spain  
**J. Molnár**, Szeged, Hungary  
**N. Motohashi**, Tokyo, Japan  
**R.M. Nagler**, Haifa, Israel  
**N. Nguyen**, Tucson, AZ, USA  
**C. Nicolini**, Genova, Italy  
**C. Pace-Asciak**, Toronto, ON, Canada  
**S. Pathak**, Houston, TX, USA  
**G.J. Pilkington**, Portsmouth, UK  
**C.D. Platsoucas**, Norfolk, VA, USA  
**A. Polliack**, Jerusalem, Israel  
**J. Reichrath**, Homburg/Saar, Germany  
**D.A. Ribeiro**, Santos, SP, Brazil  
**M. Rigaud**, Limoges, France  
**F.M. Robertson**, Houston, TX, USA  
**M. Roselli**, Rome, Italy  
**G.R. Rutteman**, Utrecht, Netherlands  
**C. Sansom**, London, UK  
**S. Sarkar**, Boston, MA, USA  
**A. Schauer**, Göttingen, Germany  
**D. Schiffer**, Vercelli, Italy  
**J. Schneider**, Alcorcón (Madrid) Spain  
**M. Schneider**, Wuppertal, Germany  
**O.J. Semmes**, Norfolk, VA, USA  
**A. Seth**, Toronto, ON, Canada  
**G. Sica**, Rome, Italy  
**J. Slansky**, Denver, CO, USA  
**K. Smetana**, Prague, Czech Republic  
**S.S. Smith**, Duarte, CA, USA  
**R.M. Snapka**, Columbus, OH, USA  
**J. Sterling**, Nashville, TN, USA  
**T. Stigbrand**, Umeå, Sweden  
**K. Syrjänen**, Helsinki, Finland  
**R.T. Todorova**, Sofia, Bulgaria  
**O. Topolcan**, Pilsen, Czech Republic  
**G.C. Torre**, Finale Ligure (SV), Italy  
**V. Treska**, Pilsen, Czech Republic  
**M. de L.G. Trigo**, Porto, Portugal  
**G. Tsangaris**, Athens, Greece  
**E. Vairaktaris**, Athens, Greece  
**D. Vesely**, Tampa, FL, USA  
**D. Vetvicka**, Prague, Czech Republic  
**J.K. Vishwanatha**, Fort Worth, TX, USA  
**G. Vollmer**, Dresden, Germany  
**A. Wani**, Columbus, OH, USA  
**I.P. Witz**, Tel Aviv, Israel  
**Y. Yen**, Duarte, CA, USA  
**C.H. Yip**, Petaling Jaya, Malaysia  
**O. Zoras**, Heraklion, Greece

## Scientific Program

### *Experimental Research Sessions*

1. Oncogenes; tumor suppressor genes; growth factors; signal transduction.
2. Molecular and cellular biology of cancer.
3. Cancer stem cells.
4. Cancer cell differentiation.
5. Cancer genomics. Microarray technology.
6. Cancer proteomics. Metabolomics.
7. Cancer systems biology and signaling.
8. Cancer metabolism and autophagy.
9. Reactive oxygen/nitrogen species and cancer.
10. MicroRNAs in cancer.
11. Invasion and metastasis.
12. Cytogenetics and genetics.
13. Epigenetics.
14. Tumor angiogenesis and anti-angiogenesis.
15. Multi-drug and drug resistance. Mechanisms and reversal.

16. Apoptosis.
17. Tumor microenvironment; cell-cell interactions; adhesion; stroma; cancer-associated fibroblasts.
18. Carcinogenesis. Viral oncogenesis.
19. New anticancer agents.
20. Natural products in cancer drug development.
21. Experimental chemotherapy.
22. Immunobiology of cancer.
23. Gene therapy.
24. Aging and cancer.

### *Clinical Research Sessions*

25. Diagnosis and prognosis of cancer.
26. Cancer surgery.
27. Serum markers in diagnosis and therapy.
28. Clinical chemotherapy.
29. Immunotherapy; biotherapy; vaccines.
30. Hormone therapy.

31. Radiotherapy.
32. Hyperthermia.
33. Personalized medicine in cancer.
34. Advances in breast cancer.
35. Advances in gynecological cancer.
36. Advances in prostate cancer.
37. Advances in neurooncology.
38. Advances in colorectal cancer.
39. Advances in head and neck cancer.
40. Advances in stomach and esophageal cancer.
41. Advances in hemato-oncology.
42. Melanoma: New therapies and biomarkers.
43. Chemoprevention. Environmental exposure and cancer risk.
44. Epidemiology.
45. Nutrition and cancer. Nutritional aspects of cancer prevention.

## Special Symposia

1. PKC signaling in cancer. Organized by A.P. Fields (Jacksonville, FL, USA)
2. Hepatocellular carcinoma. Organized by Keichi Kubota (Mibu, Tochigi, Japan) - (Wednesday, 8 October 2014)
3. Cancer Prevention in Asia Pacific Countries. Organized by C.H. Yip (Petaling Jaya, Malaysia), C.J. Chen (Taipei, Taiwan) (APOCP) – (Thursday, 9 October 2014)
4. Invasion and carcinomas of the GI tract. Organized by O.D. Laerum (Bergen, Norway)
5. Toxicology and cancer aetiology. Organized by C.H. Yip (Petaling Jaya, Malaysia), C.J. Chen (Taipei, Taiwan) (APOCP) – (Thursday, 9 October 2014)
6. Genomic instability and cancer (DNA repair). Organized by A. Wani (Columbus, OH, USA)
7. Drug resistance in cancer and targeting DNA repair pathways. Organized by S. Mitra (Galveston, TX, USA)
8. Image-guided radiotherapy. Organized by Nam Nguyen (Tucson, AZ, USA)
9. Circulating tumor cells. Organized by M. Rigaud (Limoges, France)
10. Cancer stem cells. Organized by M. Jhanwar-Uniyal (New York, NY, USA), F. Guadagni (Rome, Italy)
11. Regulation of efflux pumps of mdr cancer by phenothiazine derivatives and natural products. Organized by L. Amaral (Lisbon, Portugal), J. Molnár (Szeged, Hungary)
12. Drug delivery. Organized by D. Vetvicka (Prague, Czech Republic)
13. Genomics and clinical management of ovarian cancer. Organized by R. Ganapathi (Charlotte, NC, USA)
14. New insights in prostate cancer. Organized by C. Aukim-Hastie (Guildford, Surrey, UK)
15. Hox genes in cancer. Organized by C. Aukim-Hastie (Guildford, Surrey, UK)
16. Application of RT-qPCR in Biomedicine. Organized by F.E. Ahmed (Greenville, NC, USA)
17. Vitamin D and Cancer. Organized by M. Friedrich (Krefeld, Germany), J. Reichrath (Homburg/Saar, Germany)
18. Biobanks: A research infrastructure for the future of translational and clinical research. Organized by F. Guadagni (Rome, Italy), M. Roselli (Rome, Italy)
19. New insight into brain tumors. Organized by G. Sica (Rome, Italy), M. Jhanwar-Uniyal (New York, NY, USA)
20. Micro RNAs in cancer. Organized by A. Seth (Toronto, ON, Canada)
21. Next generation sequencing for cancer drug development and diagnostics. Organized by A. Seth (Toronto, ON, Canada)
22. Transporters as mediators of uptake of chemotherapeutic drugs in target and non-target cells. Organized by G. Ciarimboli (Münster, Germany)
23. Metal-based drugs and cancer. Organized by P. Collery (Bastia, France)

## Publications

Abstracts of all contributed papers will be published in a special issue of ANTICANCER RESEARCH, which will be distributed to registrants during the Conference, as well as to all subscribing libraries and indexing services (print and online through the Stanford University HighWire Press). After recommendation by the Organizing Committee, selected contributions will be invited as complete original papers or reviews to be submitted for publication in ANTICANCER RESEARCH. Paper submissions will also be welcome during the Conference.

Abstracts (titles and authors) will be announced in [www.iiar-anticancer.org/conference](http://www.iiar-anticancer.org/conference) upon acceptance. The final conference program will be publicised on September 10, 2014.

## Registration

- **Registration is required of all participants.**
- **Registration deadline:** 26 September, 2014.
- **Deadline for submission of abstracts:** 10 August, 2014.
- **Registration fee:** EURO 260.00; Students, EURO 100.00; accompanying person, EURO 100.00 (each); Children, no fee.
- The registration fee for the Conference participants partially covers: attendance at the scientific sessions; all Conference material and documentation (final program, list of participants, book of Abstracts, Conference folder, Certificate of attendance and registration badge) from the Conference Secretariat; participation in all social events (social dinners, music recital, coffee breaks, closing gala dinner), and conference gifts.
- The registration fee for accompanying persons covers: participation in all social events; eligibility for special accommodation fees (the same offer applies to Conference participants).
- The registration fee for the Members of the auspicious societies is waived.
- Registration will be regarded as final only after all forms and registration plus accommodation fees have been received by the Editorial Office of Anticancer Research.

## Accommodation

Hotel reservation requests should be submitted directly to the Editorial Office of Anticancer Research. Porto Carras Grand Resort (★★★★★) is located in a beautiful, peaceful setting by the sea and will provide excellent service and quality half-board accommodation for all participants.

### ● Accommodation fees:

- Double room: EURO 132.00 for 2 persons, per night.
- Single room: EURO 98.00 per person, per night.
- Children 2-12 years old as 3rd person in double room: EURO 35.00.

– Triple room: EURO 180.00 for 3 persons, per night.

The fee covers: accommodation in A (★★★★★) type rooms (bath, balcony, radio, TV, telephone), breakfast, dinner and transportation from and to the Airport of Thessaloniki on October 5 and October 11, 2014, respectively.

● Service hours: Breakfast (buffet): 7.30 – 10.00 a.m.; Dinner (formal club style) 19.00 – 22.30 p.m.; Self-service restaurant for lunch: 12.30 – 14.00 p.m.

● Accommodation requests are valid if made through the official conference Registration Form. For accommodation & registration to be secured all fees need to have been paid in advance.

● Cancellations: Abstract and registration plus accommodation fees will be returned if participation is cancelled before August 10, 2014. No refunds will be offered past this date.

## Travel Arrangements

The Conference will officially commence on the morning of October 6, 2014. Therefore, participants should preferably arrive on October 5, 2014. The conference will conclude with the closing gala dinner on October 10, 2014. Participants are advised to finalize their travel plans at the earliest possible date. Details of date, flight number and time of arrival at Thessaloniki Airport should be given to the Editorial Office not later than September 26, 2014.

Aegean Airlines: [www.aegeanair.com](http://www.aegeanair.com)

Olympic Airways: [www.olympicairlines.com](http://www.olympicairlines.com)

## Airport – Hotel Transportation

Shuttle buses will provide transportation from Thessaloniki Airport to the Hotel only on Sunday, October 5, 2014, and from the Hotel to the airport only on Saturday, October 11, 2014. Participants will be welcomed at the airport by a conference representative. Participants arriving on days other than October 5 or departing on days other than October 11 will have to hire a taxi (50 min, Euro ~120) at their own expense.

## Instructions for Submitting an Abstract

1. Only abstracts containing new results (original research work or overviews) will be accepted. Abstracts should clearly and adequately describe the objectives and results of the research. All abstracts must be submitted in English.
2. All abstracts need to be accompanied by a completed Conference Registration Form made out in the name of the Author presenting the paper.
  - a. Each abstract should include a title (in capital letters), names of all authors (with the name of the author who will be presenting the paper underlined), as well as complete address(es).
  - b. Two types of abstracts may be submitted:
    - Short abstract, not exceeding 300 words.
    - Long abstracts not exceeding 1500 words, with 1-2 figures or tables (max size 8 cm width x 12 cm height), including abstract, introduction, materials and methods, results, discussion, acknowledgements, references. Color figures will be charged 180.00 EURO per page.
  - c. Careful typing and proof-reading are essential.
  - d. Abstract forms will not be provided.
3. Abstracts and a completed Conference Registration Form should be sent to: Dr. John G. Delinasios, International Institute of Anticancer Research, 1st km Kapandritiou-Kalamou Rd, P.O. Box 22, Kapandriti 19014, Greece. E-mail: conference@iicar-anticancer.org.

**Abstracts must arrive at our offices  
by August 10, 2014, at the latest.**

4. A reply (regarding decision, acceptance or revision) will reach the author within 5-12 days from submission.

## Instructions for Poster Presentations

Abstracts scheduled for presentation in poster sessions will be grouped by topic, numbered and listed in the program, and published in the Abstract Book, as well as in ANTICANCER RESEARCH. Posters will be exhibited for 1-2 days and program listings will specify the time for poster discussion.

The original abstract of each poster presentation should arrive by August 10, 2014, at the latest at our offices. For the preparation of the abstract, please follow the Instructions for Submitting an Abstract.

The poster board surface area is 0.64 m<sup>2</sup> [0.8 m (31.5 inches) high and 0.8 m (31.5 inches) wide]. Poster presentations should include: title, authors, institutional affiliation, abstract, short introduction, methods, results, discussion, references and conclusion.

## Social Program

- Opera Evening.  
DIMITRA THEODOSSIOU, soprano.  
DIMITRIS YAKAS, piano.  
Arias by Verdi, Puccini, Mascagni.  
No fee (date to be announced).
- Classical Guitar Recital. No fee (date to be announced).
- Greek songs recital. No fee (date to be announced).
- Greek traditional dances. No fee (date to be announced).
- Closing ceremony and Gala Dinner on Friday, October 10, 2014. No fee.
- A special program of visits to archaeological sites, visits to museums, excursions, and tours will also be available.  
The program includes: The Holy Monasteries of Mount Athos (excursion and cruise); Alexander the Great tour (Pella, Vergina, Veroia); Dion; Amphipolis, Filippi, Kavala; Thessaloniki tour, Byzantine and Archaeological Museums, etc. Tickets can be ordered at the desk of the Conference Secretariat.

## Sithonia

Sithonia, the central peninsula of Chalkidiki, is varnished with unique, virgin bays and plenty of serene and natural beaches. The place that hosted both Aristotle and Alexander the Great has succeeded in keeping a low profile in mass tourism campaigns and maintaining its cultural uniqueness and natural beauty. Situated right next to Thessaloniki, voted best of the world places by National Geographic, it dazzles the international traveler with an interminable list of archaeological sights of great magnitude. The museum of Vergina hosts immaculate gold treasures from the burial site of King Philip II, Alexander the Great's father. The ancient Kavala aqueduct, the ancient theatre of Filippi, the archaeological areas of Vergina, Dion and Pella, and countless byzantine monuments and churches are only a few of the nearby sites that inspire a great historical time travel experience.

## Weather

October is a very pleasant month in Sithonia, Greece. The average temperature is 24°C (range 20-30°C).

## The Previous Conferences of Anticancer Research

	Location & Year	Number of Participants	Total Number of Papers	(Original / Reviews)
1st	Loutraki, 1985	450	285	(234 / 51)
2nd	Saronis, 1988	550	339	(299 / 40)
3rd	Marathon, 1990	580	332	(287 / 45)
4th	Crete, 1992	650	402	(347 / 55)
5th	Corfu, 1995	860	555	(460 / 95)
6th	Halkidiki, 1998	640	450	(405 / 45)
7th	Corfu, 2004	1,190	616	(552 / 64)
8th	Kos, 2008	1,212	760	(692 / 68)





Porto Carras Grand Resort, Sithonia, Greece

# 9th INTERNATIONAL CONFERENCE OF ANTICANCER RESEARCH

6-10 October 2014, Porto Carras, Sithonia, Greece

[www.iar-anticancer/conference](http://www.iar-anticancer/conference)

## CONFERENCE REGISTRATION FORM

- Please reserve my place at the 9th International Conference of Anticancer Research.
- I shall be accompanied by ..... adults and ..... children.  
(Please complete separate forms for each accompanying person.)
- I plan to present ..... poster(s). Topic number .....
- I plan to present ..... oral communication(s): ..... minutes. Topic Number .....
- Abstract is attached. (Please follow the instructions for submitting an abstract).
- I shall require accommodation in single  or double  room;  
Accommodation fees: Double room, EURO 132.00 for 2 persons per night; Single room, EURO 98.00 per person per night;  
Children 2-12 years old, as 3rd person in the same room, EURO 35.00 (per child). Triple room, EURO 180.00 for 3 persons per night.  
The fee covers accommodation in 5\*-type rooms, breakfast, dinner, transportation from and to Thessaloniki Airport (5-11 October 14).  
Registration fee: EURO 260.00; Students, EURO 100.00; Accompanying person, EURO 100.00; Children: No fee.
- Registration fee is enclosed. Accommodation fee for ..... nights is also enclosed.  
(Cheques should be made payable to Delinasios G.J. & CO G.P., Athens, Greece. Credit cards are NOT accepted.)
- Please send an invoice for EURO ..... (and instructions for payment).  
Please provide VAT number and billing address for European invoices.
- I am a student (certificate enclosed).
- I will require transportation between Thessaloniki Airport and the Porto Carras Hotels on October 5 and 11, 2014.  
Time of my arrival: ..... Flight no.: ..... Time of my departure: ..... Flight no.: .....
- Please enter my personal subscription to Anticancer Research/IN VIVO/2015,  
at the special conference rate:  online (EURO 200.00);  print & online (EURO 300.00).

---

Title: .....  
Name: ..... Sex: male  or female   
Institution (or Company): .....  
Address: .....  
Tel: ..... Fax: ..... E-mail: .....

---

**Deadline for registration: September 26, 2014.**

**Deadline for submission of abstracts: 10 August, 2014.**

Please send completed form and Registration & Accommodation fees to:

Dr. John G. Delinasios, International Institute of Anticancer Research,  
1st km Kapandritiou-Kalamou Rd., P.O. Box 22, Kapandriti 19014, Greece.

Tel. / Fax : +30 22950 53389; e-mail: [conference@iiar-anticancer.org](mailto:conference@iiar-anticancer.org). Website: [www.iar-anticancer.org/conference](http://www.iar-anticancer.org/conference)

Please photocopy for additional forms.

# BREAST CANCER

## Experimental and Clinical Research



## Reviews