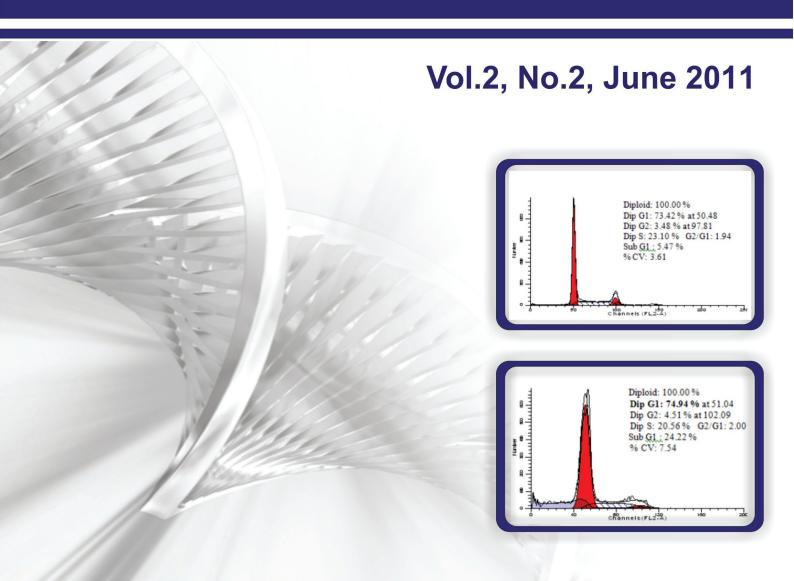
ISSN: 2088-0197





# Indonesian Journal of Cancer Chemoprevention



Indonesian Journal of Cancer Chemoprevention, 2011, 2(2)

ISSN: 2088-0197



### **Indonesian Journal of Cancer Chemoprevention**

### **Editor in Chief**

Dr. Arief Nurrochmad, M.Si., M.Sc., Apt.

### Vice

Dr. Agung Endro Nugroho, M.Si., Apt.

### **Secretary**

Dr.rer.nat. Rr. Endang Lukitaningsih, M.Si., Apt.

### **Editors**

Dr. Med.dr. Indwiani Astuti

Dr. Erna Prawita Setyowati, M.Si., Apt.

Dr. Muhammad Da'i, M.Si., Apt.

### **Board Reviewing Editors**

Prof. Dr. Edy Meiyanto, M.Si., Apt.

(Cancer Chemoprevention Research Center, Faculty of Pharmacy Universitas Gadjah Mada, Yogyakarta)

### Prof. drg. Ferry Sandra, D.D.S., Ph.D., L.F.I.B.A.

(Department of Biochemistry and Molecular Biology, Faculty of Dentistry, Trisakti University, Jakarta,)

Prof. Dr. Sugiyanto, SU., Apt.

(Faculty of Pharmacy, Universitas Gadjah Mada, Yogyakarta)

Prof. Dr. Sukardiman, SU., Apt.

(Faculty of Pharmacy, Universitas Airlangga, Surabaya)

Prof. Dr. Adek Zamrud Adnan, M.Sc., Apt.

(Faculty of Pharmacy, Universitas Andalas, Padang)

Prof. Dr. Sismindari, SU., Apt.

(Faculty of Pharmacy, Universitas Gadjah Mada, Yogyakarta)

Prof. Masashi Kawaichi, MD., PhD.

(Laboratory of Gene Function in Animals, Graduate School of Biological Sciences, Nara Institute of Science and Technology, Nara, Japan)

### Prof. Hiroshi Itoh, Pharmacist., PhD.

(Laboratory of Signal Transduction, Graduate School of Biological Sciences, Nara Institute of Science and Technology, Nara, Japan)

### **Business Manager**

Adam Hermawan, M.Sc., Apt. Muthi Ikawati, M.Sc., Apt.

### Lay outer and setting

Gatot Sadewo, AMd.

### **Editorial Office**

Faculty of Pharmacy, Universitas Gadjah Mada Yogyakarta

Sekip Utara, Yogyakarta, Indonesia 55281

Telp. (+62-274) 6492662, Fax.(+62-274) 543120

Email: iscc2010@ymail.com

Bank: Bank BNI

Branch: Cabang UGM, Yogyakarta

Account No.: 0205640096 Account Name: Muthi Ikawati

### **Published by**

Indonesian Society for Cancer Chemoprevention (ISCC)

**Cover Picture:** 

"Flowcytometric analysis ..."

(see Kusharyanti et al., p 267-273)

ISSN: 2088-0197



# INDONESIAN JOURNAL OF CANCER CHEMOPREVENTION ARTICLES

Translational Research in Cancer Drug Development (Edy Meiyanto, Adam Hermawan, and Anindyajati)	198-211
Antimicrobial, Antioxidant, Hemolytic Activities and Toxicity of Ethyl Acetate Extract From An Unidentified Coral-Associated Fungus, Aspergillus Brevipes Rk06 (Risa Nofiani, Rio Kurniadi, and Puji Ardiningsih)	212-216
Synthesis Octyl p-methoxycinnamate as Sunblock by Transesterification Reaction with The Starting Material Ethyl p-methoxycinnamate (Suzana, Nunuk Irawati, and Tutuk Budiati)	217-221
Determination of The Active Asiaticoside Content In Centella asiatica as Anti-Cellulite Agent	
(Dewi Sondari, Sri Budi Harmami, M. Ghozali, Ahmad Randy, Athanasia Amanda S. and Yan Irawan)	222-227
Antiproliferative Activity of Ethanolic Extract of Ciplukan Herbs (physalis angulata l.) on 7,12-dimethylbenz[a]nthracene-induced Rat Mammary Carcinogenesis (Ameilinda Monikawati, Sofa Farida, Laras Widawaty Putri, Yurista Gilang Ikhtiarsyah, and Edy Meiyanto)	228-233
Activity of Trigonella foenum-graecum on Some Cell Lines	
(Kurnia Agustini, Wahono Sumaryono, and R. Micho Widyanto)	234-241
Isolation and Structure Elucidation of Soulatro Coumarin From Stem Bark of Calophyllum soulattri Burm F and In Vivo Antiplasmodial Activity by Using Mice Infected by Plasmodium berghei (Jamilah Abbas, Achmad Darmawan and Syafruddin)	242-254
Ficus septica burm. F. Leaves Ethanolic Extract Induces Apoptosis in 7,12-dimethylbenz[a]nthracene-induced Rat Liver Cancer Quatitavely (Dita Brenna Septhea, Anindyajati, Andita Pra Darma, Ika Nurzijah, Agung Endro Nugroho, and Edy Meiyanto)	255-260
The Enhancement Quality of Squalene as a Marine Chemopreventive Agent and Vitamin a Level in The Shark Liver Oil at The Territorial Ocean of Cilacap (Yuhansyah Nurfauzi, Wahyu Kurniawan and Tusrianto)	261-266
Hesperidin Increase Cytotoxic Activity of Doxorubicin on Hela Cell Line Through Cell Cycle Modulation and Apoptotis Induction (Indri Kusharyanti, Larasati, Ratna Asmah Susidarti, and Edy Meiyanto)	267-273

# **Preface**

Indonesian Journal of Cancer Chemoprevention (IJCC) established in 2010 is a peer reviewed journal publishing original articles, reports, and reviews on all aspects cancer chemoprevention, including experimental and clinical pharmacology, especially concerning antioxidants, anti-aging, anti-inflammation, anti-angiogenesis, and anti-carcinogenesis, cancer detection and also applications of stem cell technology, immunology research especially on immunomodulation, in vitro and in silico exploration on chemoprevention mechanism, screening of natural and synthetic chemopreventive agents, cancer biology, pharmacology and toxicology of cancer, and cancer therapeutic that published in English by Indonesian Society for Cancer Chemoprevention.

The current issue is contains nine articles selected from International Seminar on Chemoprevention for Health Promotion and Beauty and one review article. Nofiani et al studied antimicrobial, antioxidant, hemolytic activities and toxicity of ethyl acetate extract from an unidentified coral-associated fungus, Aspergillus Brevipes Rk06. Suzana et al performed the synthesis of octyl p-methoxycinnamate as sunblock by transesterification reaction with the starting material ethyl p-methoxycinnamate. Sondari et al investigated active asiaticoside content in Centella asiatica as anti-cellulite agent effect of antioxidant of ethanolic leaves extract and its different solvent fractions of Piper betle L. in vitro using DPPH method. In addition Monikawati et al also examine antiproliferative activity of ethanolic extract of ciplukan herbs (Physalis angulata L.) on 7,12-dimethylbenz[a]nthracene-induced rat mammary carcinogenesis. Agustini et al demonstrated activity of Trigonella foenum-graecum on some cell lines. Abbas et al performed isolation and structure elucidation of soulatro coumarin from stem bark of Calophyllum soulattri Burm F and in vivo antiplasmodial activity by using mice infected by Plasmodium berghei. Septhea et al reported Ficus septica Burm. F. leaves ethanolic extract induces apoptosis in 7,12-dimethylbenz[a]nthracene-induced rat liver cancer quatitavely. Nurfauzi et al reported the enhancement quality of squalene as a marine chemopreventive agent and vitamin a level in the shark liver oil at the territorial ocean of cilacap. Kusharyanti et al studied the hesperidin increase cytotoxic activity of doxorubicin on hela cell line through cell cycle modulation and apoptotis induction. Meiyanto et al reviewed translational drug development approach in cancer.

We wish to thank the authors who contributed to this issue. We are grateful to the Organizing Committee and to our Sponsors for their contribution to meeting. We would like to express our special thanks to Prof. Edy Meiyanto, the President of the Indonesian Society for Cancer Chemoprevention for his encouragement and support needed to organize the meeting and support to this journal. Publication of this issue of the Indonesian Journal of Cancer Chemoprevention was financed by Indonesian Society for Cancer Chemoprevention.

Chief Editor,

Arief Nurrochmad, Ph.D.

### **AIMS**

Indonesian Journal of Cancer Chemoprevention is a tri-anual international journal devoted to the publication of articles on all aspects cancer chemoprevention including experimental and clinical pharmacology, especially concerning anti-oxidants, antiaging, anti-inflammation, anti-angiogenesis, and anti-carcinogenesis; cancer detections and also applications of stem cell technology; Immunology research, especially on immunomodulation; In vitro and in silico exploration on chemoprevention mechanisms; Screening of natural (plants, marine natural products, etc.) and synthetic chemopreventive agents; Cultivation of chemopreventive plants and development of herbal dosage forms for chemoprevention; and Development of herbal cosmetics formulation.

### **INSTRUCTIONS TO THE AUTHORS**

### **Submission**

Abstract was written in 1 space, one column, the manuscript 1.5 space with 1 column format, the overall amount of approximately 10 pages, with top and left of the format is 4 cm, right and bottom 3 cm from the edge of quarto paper (A4), must be clear for easy reading.

The manuscript must be written in clear and concise English and should comprise: (a) Title page; (b) abstract; (c) Keywords; (d) Background; (e) Materials and Methods; (f) Results and Discussion; (g) Conclusion (h) Acknowledgement, if any; (i) References.

### The manuscript

### Title page

Title must be concise and informative.

## First Author<sup>1,\*</sup>, Second Author, etc, (given name followed by surname), Times New Roman 12 pt, bold, double space, centered

<sup>1</sup>Institutional affiliation(s), Times New Roman 12 pt, double space, centered

\*Corresponding author: contact of the corresponding author, affiliation, address (optional), phone number (optional), city, country, email address

### Abstract and keywords

Write the abstract using single spacing. The abstract provides a clear and concise summary of the information in an article. The abstract should include a background for the work, a brief description of the methods, a summary of the results, and a conclusion. They are indicative only and will not be used for citation purposes. The abstract should be between 200 and 300 words.

Key words: provide a list of a most 5 key words for the abstract, separated by commas (,)

### Introduction

The introduction should state the purpose of the paper. It should not review the subject extensively

### Materials and Methods

*Materials and Methods should* be described in detail sufficient to enable the work to be repeated, and suppliers of materials and equipment given, if necessary.

### Results and Discussion

Results should be presented in logical sequence, with tables and illustration as appropriate. Discussion should emphasize the implication of the findings, their limitations, and relevance to other studies. It should not be a recapitulation of the results.

### Conclusion

### Acknowledgement

Fill this with the acknowledgement section of your manuscript if any

### References

The Harvard System is used. References in the tax should be quoted in the following for single, two or more than two authors respectively: King (2000), Hanahan and Weinberg (1999), Choi et al. (2005). Multiple papers referred to together in the text should be given in chronological order.

The references should be listed alphabetically at the end of the paper. The journal titles should be abbreviated to conform to the style of Index Medicus. The layout should be as follows.

### for journals

Chen, Y. Shen, S., and Lin, H., 2003, Rutinoside at C7 attenuates the apoptosis-inducing activity of flavonoids, *Biochem. Pharmacol.*, **66**(5), 1139–1150.

### for books

Bruton, L. Lazo, J. S. and Parker, K. L., 2005, Goodman & Gilman's the pharmacological basis of therapeutics. 11th ed. Lange: McGrawHill.

### for chapter in books

Smith, J., 1975, A source of information. In: W. Jones, ed. 2000, *One hundred and one ways to find information about health.* Oxford: Oxford University Press. pp. 44-68.

### for proceedings

Adina, A.B. Handoko, F.F. Setyarini, I.I. Septisetyani, E.P. Riyanto, S., and Meiyanto, E., 2008. Ethanolic extract *Citrus aurantifolia* increase sensitivity MCF7 cell line towards Doxorubicin, *Proceding*, Kongres Ilmiah ISFI ke-16, Yogyakarta, ISBN:978-979-95107-6-2, pp. 55-629, 11 Agustus.

### for official documents

Division of Drugs & Toxicology, 1994, Drug Evaluation Annual, New York: American Medical

Association

Without author

Cancer in South Africa [editorial], 1994, S Afr Med J, 84, 15-20.

### Tables and figure

For each table and figures, provide a detail legend explaining the content of the table or figure

