

Cancer Biology

ISSN: 1944-6543 (print); ISSN: 1944-6551 (online)

Volume 01 / Issue 1, March 25, 2011.

<http://www.cancerbio.net>; <http://www.cancer-biology.org>

CONTENTS

No.	Titles / Authors	
1	<p data-bbox="354 674 1235 737">Association between genetic polymorphisms of <i>CYP2A13</i>, <i>CYP2A6</i> and risk of nasopharyngeal carcinoma in southern Chinese population</p> <p data-bbox="334 758 1255 793">Yun Cao^{1,2}, Xiao-Ping Miao³, Yi-Xin Zeng^{1,4}, Dong-Xin Lin³, and Jian-Yong Shao^{1,2,4}</p> <p data-bbox="282 825 1308 1010">¹State Key Laboratory of Oncology in South China, Guangzhou, Guangdong 510060, P. R. China; ²Department of Pathology, Sun Yat-sen University Cancer Center, Guangzhou, Guangdong 510060, P. R. China; ³Department of Etiology and Carcinogenesis, Cancer Institute, Chinese Academy of Medical Sciences and Peking Union Medical College, Beijing 100021, P. R. China; ⁴Department of Experiment Research, Sun Yat-sen University Cancer Center, Guangzhou, Guangdong 510060, P. R. China</p> <p data-bbox="274 1041 1317 1738">Abstract: Background: Cytochrome P450 2A13 (<i>CYP2A13</i>) and 2A6 (<i>CYP2A6</i>) are enzymes expressed in the human respiratory tract, exhibit high efficiency in the metabolic activation of tobacco carcinogen 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK). A C→T transition in the <i>CYP2A13</i> gene causes Arg257Cys amino acid substitution and a deletion of the <i>CYP2A6</i> gene named as <i>CYP2A6</i> *4, both of them result in a significantly reduced activity toward NNK and other substrates. In this case-control study, we investigated the association between the <i>CYP2A13</i> and <i>CYP2A6</i> variants, smoking status and the risk of developing nasopharyngeal carcinoma (NPC) in the Cantonese population living in southern China. Materials and Methods: Genotypes of <i>CYP2A13</i> and <i>CYP2A6</i> genes were analyzed by using polymerase chain reaction-based restriction fragment length polymorphism (PCR-RFLP) assays and two-step PCR method. Results: Neither the <i>CYP2A13</i> -3375T variants nor <i>CYP2A6</i> *4 variants were associated with risk of NPC (OR = 0.84, 95% CI = 0.59–1.20, and OR = 0.83, 95% CI = 0.58–1.18, respectively) compared with their wild genotypes. Combination analysis showed that individuals with both <i>CYP2A13</i> CT or TT variants and <i>CYP2A6</i> *4 variants had no association with risk for NPC (OR = 0.71, 95% CI = 0.33–1.52) compared with those with both <i>CYP2A13</i> CC and <i>CYP2A6</i> */*1 genotypes. No association with the risk of NPC was observed in smokers with <i>CYP2A13</i> C/T polymorphisms or smokers with <i>CYP2A6</i> *4 variant polymorphisms (OR = 0.75, 95% CI = 0.43–1.32, and OR = 0.90, 95% CI = 0.27–1.70; respectively), including after stratification of smoking status. Furthermore, we did not observe association between the combination of two gene polymorphisms and smokers and risk of developing NPC, including the stratification of smoking. Discussions: Based on the results of this study, the effect of these two <i>CYP2A13</i> and <i>CYP2A6</i> enzymes may be not so important in developing of NPC as in other cancers, such as lung cancer.</p> <p data-bbox="274 1740 1268 1866">[Yun Cao, Xiao-Ping Miao, Yi-Xin Zeng, Dong-Xin Lin, and Jian-Yong Shao. Association between genetic polymorphisms of <i>CYP2A13</i>, <i>CYP2A6</i> and risk of nasopharyngeal carcinoma in southern Chinese population. Cancer Biology 2011;1(1):1-7]. (ISSN: 2150-1041). http://www.cancer-biology.org.</p>	Full Text

2	[Cancer Biology 2011;1(1):8-12]. (ISSN: 2150-1041). http://www.cancer-biology.org . Withdrawn	Full Text
3	<p style="text-align: center;">GC-MS Study on the Bioactive Components and Anti-Cancer Activities of <i>Solanum surattense</i></p> <p style="text-align: center;">Hema R., S. Kumaravel and K. Alagusundaram</p> <p style="text-align: center;">Indian Institute of Crop Processing Technology, Thanjavur-613 005, TamilNadu, India e-mail: hema.scientist@gmail.com</p> <p>Abstract: Ayurveda is a 5000 year-old system of natural healing that has its origins in the Vedic culture of India. In the last few decades there has been an exponential growth in the field of herbal medicine. Medicinal plants and herbs contain substances known to modern and ancient civilizations for their healing properties. They were the sole source of active principles capable of curing man's ailments. Thus natural products have been a major source of drugs for centuries. <i>Solanum surattense</i>, is such a medicinally important plant of family Solanaceae. All parts of the tree have medicinal properties. Taking into consideration the medicinal importance of the plant, the volatile organic matter from the bark of this plant was analyzed for the first time using GC-MS and the structures were confirmed by genesis. The majority of prevailing constituents in this plant, trans-Squalene (31.55%), 9,12,15-Octadecatrienoic acid, (Z,Z,Z)- (10.20%), Phytol (8.17%) and Vitamin E (7.86%) are proven anti-Cancer agents.</p> <p>[Hema R., S. Kumaravel and K. Alagusundaram. GC-MS Study on the Bioactive Components and Anti-Cancer Activities of <i>Solanum surattense</i>. Cancer Biology 2011;1(1):13-17]. (ISSN: 2150-1041). http://www.cancer-biology.org.</p>	Full Text
4	<p style="text-align: center;">Conservative Breast Surgery In Early And Locally Advanced Breast Cancer</p> <p style="text-align: center;">Tamer A. ElBakary, Salah ElDin A. ElGohary, Magdy M. Elgendy, Ashraf F. Barakat*, & Samar Galal Younes*</p> <p style="text-align: center;">Department of Surgical Oncology, *Department of Clinical Oncology, Tanta University. Correspondence to: Tamer A. ElBakary; E-mail: telbakary@yahoo.com; Phone number: 0020122775338; Mail Address: Omar Zaafan Street, Ibn-Elhaytham Tower</p> <p>Abstract: Aim: to evaluate efficacy of breast conservation surgery in loco-regional control of early & locally advanced breast surgery. Methods: the study included 2 groups; group A: 30 patients with early breast cancer & group B: 32 patients with 33 locally advanced breast cancer which were furtherly subdivided into 2 subgroups: 1-FAC group: 24 patients with 25 breast cancer received 3 cycles of FAC regimen, 2-TAC group: 8 patients received 3 cycles of TAC regimen. Group A patients were submitted to quadrantectomy & axillary evacuation, group B patients were submitted to quadrantectomy & axillary evacuation or modified radical mastectomy according to their response to neoadjuvant chemotherapy. Results: In group A, 1 patient developed local recurrence & submitted to completion mastectomy, in group B, overall response to neoadjuvant chemotherapy was 54.5%. 14 patients in group B underwent breast conservation surgery, 18 patients underwent modified radical mastectomy, 5 patients in group B developed treatment failure. Conclusion: breast conservation surgery is safe surgical technique for local control of both early & locally advanced breast cancer after downstaging by neoadjuvant chemotherapy. Neoadjuvant chemotherapy has significant anti-tumour activity & it increases the ability to perform breast conservation surgery.</p> <p>[Tamer A. ElBakary, Salah ElDin A. ElGohary, Magdy M. Elgendy, Ashraf F. Barakat, & Samar Galal Younes. Conservative Breast Surgery In Early And Locally Advanced Breast Cancer.</p>	Full Text

	Cancer Biology 2011;1(1):18-25]. (ISSN: 2150-1041). http://www.cancer-biology.org .	
5	<p style="text-align: center;">Immunohistochemical Study Of Protein P53 In Egyptian Psoriasis</p> <p>Rasha EL-Adel; Mahmoud Abdel Hameed; <u>Marwa El-Shaer*</u>; Adel Imam**; Noha Abdel Hafez*</p> <p style="text-align: center;">Dermatology and Venereology Department, Medical Research Division, National Research Centre ,Cairo Egypt</p> <p>*Pathology Department , Medical Research Division, National Research Centre ,Cairo Egypt ** Dermatology and Venereology Department, Ain Shams University,Cairo Egypt</p> <p style="text-align: center;"><u>Corresponding Author:marwaelshaer@hotmail.com</u> <u>12311 ,Elbuhouth Street ,Dokky,Cairo .Egypt</u></p> <p>Abstract: Background: The histopathologic changes characteristic of psoriasis might be related to an abnormality in the apoptotic pathway. Aim of the work: The aim of this study is to evaluate the possible role of protein P₅₃ in the pathogenesis of psoriasis through a case control study as it could be one of the targets of psoriasis therapy. Patients and Methods: This study included; 30 patients of different clinical variants of psoriasis and 25 controls normal skin biopsies. All patients were subjected to complete history taking, clinical examination including psoriasis area and severity index (PASI) score and skin biopsies, all patients stopped topical or systemic medication 4 weeks prior to biopsies. Five mm incisional biopsy specimens were taken from the 30 patients and from each biopsy one stained with hematoxylin and eosin to confirm the diagnosis ,the other to be prepared for immunohistochemical detection using mouse monoclonal antibody (Do7) against P53 protein , results were compared with 25 control ..Results: Psoriatic plaques revealed P53 nuclear staining detected in 13 out of the 30 patients (43.3%), and 17 (56.7%) showed negative immunoreactivity in keratinocytes. Conclusion: From these results it can be concluded that apoptosis plays a role in the pathogenesis of psoriasis and this may be mediated through abnormal expression of apoptosis regulating proteins P53.</p> <p>[Rasha EL-Adel; Mahmoud Abdel Hameed; <u>Marwa El-Shaer</u>; Adel Imam; Noha Abdel Hafez. Immunohistochemical Study Of Protein P53 In Egyptian Psoriasis. Cancer Biology 2011;1(1):26-42]. (ISSN: 2150–1041). http://www.cancer-biology.org.</p>	Full Text
6	<p style="text-align: center;">Protective Effect Of <i>Nigella Sativa</i> Seeds Against Dimethylaminoazobenzene (Dab) Induced Liver Carcinogenesis</p> <p style="text-align: center;">H. A. Mohamed¹, I. H. El-Sayed² and M. Moawad³</p> <p>¹Plant Pathology Institute, Agriculture Research Center, Cairo, Egypt, ²Molecular Biology Department, Genetic Engineering and Biotechnology Institute, Minufiya University, Sadat City, Minufiya, Egypt, and ³Pathology Department, National Cancer Institute, Cairo University, Cairo, Egypt. ibrahimelsayed@yahoo.com</p> <p>ABSTRACT: Liver cancer is one of the most common solid tumors worldwide. Extensive research was carried out to document the powerful properties of <i>Nigella sativa</i> (<i>N. sativa</i>) as an anti-tumor, bactericide, anticestode, antinematode, anti-inflammatory, analgesic, anti-diabetic and diuretic with many other uses. Little is known about the <i>Nigella sativa</i> anti-tumor property in liver cancers, thus our current study was performed to investigate the protective role of <i>Nigella sativa</i> in DAB induced liver carcinogenesis. 140 male Albino mice weighing 40-50 gm divided into four groups. Group one was normal control group without treatment of any type. Group two was <i>Nigella sativa</i> treated control group. Group three was treated with DAB carcinogen. Group four was treated with both <i>Nigella sativa</i> and DAB. Biochemical investigations, flow cytometric analysis, and histopathological examination of the liver tissue were performed for all groups. The results showed that there was a significant change in the DNA content, histomorphology, and antioxidant enzymes in the liver tissues of the DAB treated group. These changes were restored to approximately the normal counterpart with <i>Nigella sativa</i> treatment. In addition, treatment with <i>Nigella sativa</i> only showed comparable results with control untreated groups on different levels. Collectively, these results give clear evidence that <i>Nigella sativa</i> lonely induce no harmful</p>	Full Text

	<p>effects on the liver. Moreover, it exerts hepatoprotective effect against liver carcinogens. Antioxidant property is mediated its actions and investigating other underlying mechanisms merits further studies.</p> <p>[H. A. Mohamed, I. H. El-Sayed and M. Moawad. Protective Effect Of <i>Nigella Sativa</i> Seeds Against Dimethylaminoazobenzene (Dab) Induced Liver Carcinogenesis. Cancer Biology 2011;1(1):43-50]. (ISSN: 2150-1041). http://www.cancer-biology.org.</p>	
7	<p>The Prognostic Function of Biomarkers in Head and Neck Squamous Cell Carcinomas HNSCC</p> <p>Li -Xia Li 1, Jiang-Xue Wu and Wen lin Huang^{1, 2}</p> <p>Abstract: Objective: HNSCC is one of frequently cancers worldwide, All three categories: diagnostic, prognostic and therapeutic which are different from other departed biomarkers. These markers could serve as targets for new therapies, which would probably eventually change the outcome of HNSCC. The objective in this review was to highlight recent research about biomarkers that shows prognostic function for HNSCC. Methods: The data used in this review were obtained mainly from the studies reported in PubMed using the key terms; HNSCC, biomarker and prognostic. Original articles and critical reviews selected were relevant to tumor pathogenetic and tumorigenic molecular mechanism. Results: There are many biomarkers referring to proto-oncogene and tumor suppressor gene, cell cycle regulation, tumor metastasis and immunological markers of virus oncogene. Among them drugs targeting HPV and EGFR have been used for clinic. Conclusion: Individual inherited diversity is the basis of tumor markers. Because of complicated signal network and reciprocal cross in diverse pathways in most tumors, various kinds of biomarkers should be specifically combined in time of judging tumor prognosis.</p> <p>[Li -Xia Li, Jiang-Xue Wu and Wen lin Huang. The Prognostic Function of Biomarkers in Head and Neck Squamous Cell Carcinomas HNSCC. Cancer Biology 2011;1(1):51-60]. (ISSN: 2150-1041). http://www.cancer-biology.org.</p>	Full Text
8	<p>Immune Modulation Potentials of Aqueous Extract of <i>Andrographis paniculata</i> Leaves in Male Rat</p> <p>Oyewo, Emmanuel Bukoye and Akanji, Musbau Adewumi</p> <p>Abstract: The immune modulation potentials of the aqueous extract of <i>Andrographis paniculata</i> leaves was investigated. The dry pulverized leaves were extracted with water and lyophilized. Forty male albino rats were randomly picked into four groups. The first group received distilled water, while the other groups were administered daily 250 mg/kg, 500 mg/kg and 1000 mg/kg BW doses for 84 days. Effect of the chronic administration of the extracts on haematological parameters, IL-6, TNF-. The packed cell volume was not significantly changed ($p < 0.05$), while haemoglobin and red blood cell were increased significantly ($p < 0.05$) only in group four. Dose dependent significant increases ($p < 0.05$) were observed in platelet count and erythrocyte sedimentation rate. Mean cell volume was reduced significantly ($p < 0.05$), but with no significant differences ($p < 0.05$) among the test groups. Mean cell haemoglobin and mean cell haemoglobin concentration showed significant reductions ($p < 0.05$) in the group 4 only. The white blood cell and lymphocytes were increased significantly ($p < 0.05$) with group 2 and 3 been statistically equal. Significant reductions ($p < 0.05$) were observed in neutrophil and eosinophils in the group 4 rats only. Monocyte was increased significantly ($p < 0.05$) in group 4 only. Dose dependent significant increases ($p < 0.05$) were observed in the serum IL 6 and TNF-decreased significantly ($p < 0.05$) in group 2 and 3, while significant increases ($p < 0.05$) was shown in group 4. Indirect bilirubin was increased significantly ($p < 0.05$) in group 3 and 4 only. Uric acid was reduced significantly ($p < 0.05$) in group 2 and 3, while group 4 showed significant increase ($p < 0.05$). The overall result suggested that the chronic consumption of the aqueous extract of <i>A. paniculata</i> boosted the immune functions, but the 1000 mg/kg BW dose predisposed to anaemia, possibly multiple myeloma and autoimmunity.</p>	Full Text

[Oyewo, Emmanuel Bukoye and Akanji, Musbau Adewumi. Immune Modulation Potentials of Aqueous Extract of <i>Andrographis paniculata</i> Leaves in Male Rat. Cancer Biology 2011;1(1):61-73]. (ISSN: 2150-1041). http://www.cancer-biology.org .
--

Marsland Press, PO Box 180432, Richmond Hill, New York 11418, USA, 347-321-7172, 718-404-5362.