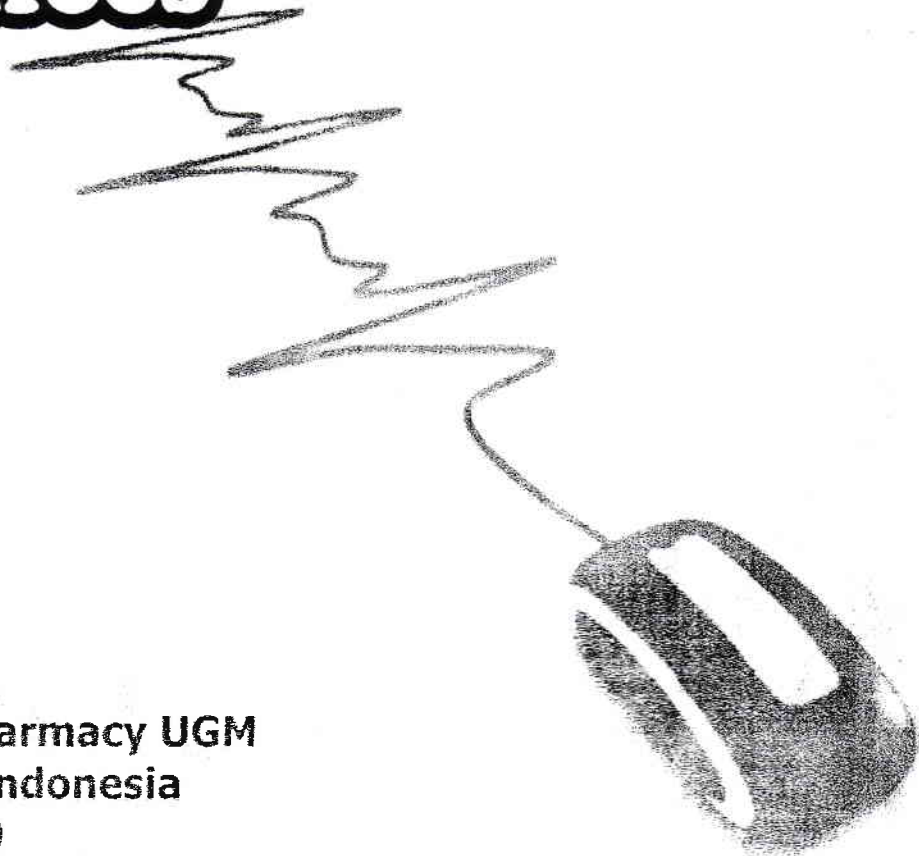


**PROCEEDING**

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**Pharmacy and Advanced  
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Sciences**



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## CONTENTS

Preface from the Editor	i
Organizing Committee	ii
Welcome Message Proceeding International Conference on Pharmacy and Advanced Pharmaceutical Sciences	
From the committee	iii
Remark of the Dean Faculty	v
Senior Vice Rector For Education	v
<b>CONTENT</b>	<b>vi</b>
Pharmacogenetics : in case of cytochrome P450 oxidases (CYPS) related to adverse drug reactions <b>Arum Pratiwi, Harianto Lim and Ronny Martien</b>	1 – 4
Interaction of turmeric and garlic extract combination against free radical scavenging activity <b>Patonah, Daryono H. Tjahjono, Elin Yulinah S. and I Ketut Adnyana</b>	5 – 6
Influenced of Kojic Acid and B-Cyclodextrin on SPF Value Sunscreen Product Contained Oxybenzone and Octyl Dimetyl Paba (3:7) (In vanishing cream base formulation) <b>Diana, Tristiana Erawati, Widji Soeratri and Noorma Rosita</b>	7 – 14
Isolation and Antimicrobial activity of endophytic fungi <i>Kabatiella caulivora</i> var B isolated from <i>Alyxia reinwardtii</i> BL <b>Noor Erma Sugjanto, Dian Anggraeny and Noor Cholies Zaini</b>	15 – 17
Rapid and Simple Luciferase Reporter Gene Assays for the Discovery of Peroxisome Proliferator-Activated Receptor $\alpha$ and $\gamma$ Agonists and Nuclear Factor- $\kappa$ B Inhibitors from Medicinal Plants. <b>N. Fakhruddin, S. Vogl, P. Picker, E. H. Heiss, J. Saukel, G. Reznicek, B. Kopp, A. G. Atanasov and V. M. Dirsch</b>	18 – 24
Identification of components of essential oil from <i>Cananga odorata</i> which penetrated into the rat skin / (wistar strain) in the practice of <i>Timung</i> (development of <i>Timung</i> as alternative healing) <b>Mangestuti Agil, Esti Hendradi and Budiastuti</b>	25 – 29
In Vivo Antihyperglycemic Test of Albedo Durian ( <i>Durio zibethinus</i> M) Extract on Aloxan- Induced Diabetic White Rat ( <i>Rattus norvegicus</i> ) <b>F. M. Cahyani, I. Susanti, R. Ratna, Y. D. Panggi and Y. Pravitasari</b>	30 – 33
Effect of Pasak Bumi's Root ( <i>Eurycoma longifolia</i> , Jack) on Sperm Output in Rats <b>Farida Hayati and Mustofa</b>	34 – 37

The Effect Of $\beta$ -Cyclodextrin And Oxybenzone-Octyl Dimethyl Paba (3:7% W/W) Addition On The Penetration Of Kojic Acid In Vanishing Cream (Based on Activity Inhibition of Tyrosinase) <b>Diana Winarita, Tristiana Erawati, Noorma Rosita and Widji Soeratri</b>	111 – 116
The profile of knowledge and self-medication in handling cough symptoms by students of pharmacy at Airlangga university <b>Elida Zairina, Liza Pristianty and Lestriana Kusumasari</b>	117 – 120
The Characteristics and Release of Diclofenac Sodium of Niosome System in Carbomer 940 Gel Base Preparation (Niosome System of Diclofenac Sodium-Span 60-Cholesterol with Molar Ratio 1:5 :5) <b>Esti Hendradi, Tutiek Purwanti, Bety Nurfia Puspitarini and Bianda Ida Kurnia</b>	121 – 128
Red Betel Vine ( <i>Piper Crocatum</i> ) Essential Oil as Antituberculosis <b>Farida Juliantina Rachmawaty</b>	128 – 133
Effect of Pasak Bumi's Root ( <i>Eurycoma longifolia</i> , Jack) on Sperm Output in Rats <b>Farida Hayati and Mustofa</b>	134 – 137
The Influence of Sesame Oil Addition on Arbutin Release from Carbomer-940 Gel Bases <b>Hanifa Rahma, Tristiana Erawati and Noorma Rosita</b>	138 – 141
Phytochemical Screening and Determination of Antioxidant Activity of Fractions from Ethyl Acetate Extract of <i>Phyllanthus acidus</i> (L.) Skeels Leaf <b>Hindra Rahmawati, Hesty Utami and Moordiani</b>	142 – 145
Study on Antihyperglycaemic Activitiy of Ethyl Acetate Extract of Sidaguri ( <i>Sida rhombifolia</i> L.) Stem on Alloxan-Induced Diabetic Mice ( <i>Mus musculus</i> L.) <b>Irma Ratna K, Muktiningsih, Suhartono, Natalia Elisabeht and Muhammad Ali Zulfikar</b>	146 – 152
The Influence of Arbutin and Olive Oil as an Enhancer in Characteristic and SPF Value of Sunscreen (Combination of Oxybenzone and Octyldimethyl Paba in <i>Carbomer</i> 940 Gel Base) <b>Josephine Paramita Ayuningtyas, Tristiana Erawati, Noorma Rosita and Widji Soeratri</b>	153 – 160
The Effect of Secondary Emollients Triethylhexanoate, Isopropyl myristate, and Propyleneglycol Isostearate on In-vitro skin penetration of tocopheryl acetate cream using Franz-diffusion cell <b>Joshita Djajadisastra, Sutriyo and Fraida Aryani</b>	161 – 165
Immunomodulatory activity of <i>Plantago major</i> L. on IgM titer of mice <b>Kartini, A. Kirtishanti, Dessy, Fauziah and Isnaini</b>	166 – 169
Antibacterial activities of <i>Aleurites moluccana</i> (Euphorbiaceae) <b>Othman Abd Samah and Rasyidah Mohamad Razar</b>	170 – 178
Total synthesis and revised structure of benzophenone glucopyranosides from <i>phaleria macrocarpa</i> <b>Phebe Hendra, Yukiharu Fukushi and Yasuyuki Hashidoko</b>	179 – 185

## Antiemetics utilization in cancer patients with high emetogenic cytotoxic drugs in two governmental hospital in Indonesia

Dyah Aryani Perwitasari\*, Ana Hidayati  
Pharmacy Faculty Ahmad Dahlan University Yogyakarta

### Abstract

Nausea and vomiting are common side effects of cancer chemotherapy and can impair patient quality of life. The distress resulting from this side effect can escalate over time and may decrease the patient compliance in continuing potentially beneficial treatment. This research was aimed to know anti-emetics utilization in cancer patients with high emetogenic cytotoxic drug in two governmental hospital in Indonesia. The research was descriptive design with prospectively data collecting from the two governmental hospital in Indonesia, with the same type of hospital. We took cancer patients who got the high emetogenic of cytotoxic drug during 1 month. Data was taking from patients' medical record and patients diary card to know the episodes of vomiting in acute emesis (24 hours after cytotoxic drug administration) and delayed emesis (6 days after cytotoxic drug administration). Vomiting has to be absent at least 1 minute to count the different episodes of vomiting. Result of this research showed that, in the Hospital A there were 6 patients with high emetogenic cytotoxic drugs (cisplatin,  $\geq 50$  mg/m<sup>2</sup> and/or its combination) with the total number of chemotherapy cycles were 20. There were 14 cycles of chemotherapy which patients had vomiting episodes and 6 cycles with no vomiting episodes. The antiemetics which were given to the patients were combination of ondansetron, dexamethason and diphenhydramine or ranitidine. Almost all of the patients were experiencing acute emesis, only 1 patient who experiencing delayed emesis. According to the hospital B, there were 31 cycles of chemotherapy with high emetogenic cytotoxic drug over the 9 cancer patients, There were 24 cycles of chemotherapy which patients had vomiting episodes and 7 cycles with no vomiting episodes. Acute emesis was experienced by 24 patients and 7 patients had no emesis. Patients with acute emesis got the combination of metoclopramide and dexamethasone and patients with no emesis got combination of ondansetron and dexamethasone. Conclusion, the use of antiemetics in the cancer patients who got high emetogenic cytostatic in the two governmental hospital in Indonesia was not appropriate with the standard therapy, since the patients were still experiencing vomiting episodes.

Key words: antiemetics, cytotoxic, high emetogenic

### Introduction

Cancer was still becoming problem of the health in the world. In developed countries, cancer caused of the second death after cardiovascular disease. The incidence and mortality of cancer in each country were influenced by geographical condition, race and population (Tierney et al., 2006). During 2006, more than half incidences of cancer were prostate cancer, breasts cancer, colon cancer and lung cancer. The incidence of cancer in the United States during 2006 reached 1,399,700 that covered 234,460 incidents of prostate cancer, 212,920 incidents of breasts cancer to the woman, 174,470 lung cancer incidents and 148,610 incidents of colon cancer (Anonymous, 2005).

The highest incidence of cancer in the woman in Indonesia during 2002 was breasts cancer was followed by cervix cancer, whereas the highest incidence of cancer in the man in Indonesia was lung cancer was followed by colon cancer. The early cancer data was in Indonesia taken was based on hospital data during 2002 (Anonymous, 2002). During 1995, the incidence of cancer in Yogyakarta to the man was 35,49 per 100,000 of lung cancer (5,96 per 100,000), colon cancer (5,55 per 100,000), skin cancer (3,49 per 100,000), rectal cancer (3,35 per 100,000), and bladder cancer (2,97 per 100,000). To the incidence woman of cancer a little higher than the man, that is 47,91 per 100,000; breasts cancer (12,54 per 100,000), cervix cancer (8,70 per 100,000), ovarium cancer (6,11 per 100,000), skin cancer (4,17 per 100,000) and colon cancer (2,84 per 100,000) (Soetiarto, 2001)

## Results and Discussions

Demographic data of the cancer patients from the two hospitals were listed in table 1. Result of this research showed that, in the Hospital A there were 6 patients with high emetogenic cytotoxic drugs (cisplatin,  $\geq 50$  mg/m<sup>2</sup> and/or its combination) with the total number of chemotherapy cycles were 20. In average, each patients had more than 4 cycles. According to the hospital B, there were 31 cycles of chemotherapy with high emetogenic cytotoxic drug over the 9 cancer patients, In average, each patients had 4 cycles.

There were 14 cycles of chemotherapy which patients had vomiting episodes and 6 cycles with no vomiting episodes in the hospital A. The antiemetics which were given to the patients were combination of ondansetron, dexamethason and diphenhydramine or ranitidine. Almost all of the patients were experiencing acute emesis, only 1 patient who experiencing delayed emesis. However, in the hospital B, there were 24 cycles of chemotherapy which patients had vomiting episodes and 7 cycles with no vomiting episodes. Acute emesis was experienced by 24 patients, delayed emesis was not experiencing and 7 patients had no emesis.

Table 1. Demographic data of the cancer patients

	Hospital A (n=6) (%)	Hospital B (n=9) (%)
Sex		
Male	100%	10%
Female	-	90%
Age		
< 40 years old	16,16%	-
40-50 years old	66,60%	77,78%
>50 Years old	16,16%	22,22%
Cancer diagnoses	NHL = 66,60% Etc = 33,4%	Cervix : 55,5% Etc : 44,5%
Cycle of chemotherapy		
1 cycle	-	-
2 cycle	16,60%	22,22%
3 cycle	33,34%	22,22%
>4 cycle	50,00%	55,55%
High emetogenic chemotherapy		
Cisplatin doses >50 mg/m <sup>2</sup>	16,60%	22,22%
Cisplatin doses >50 mg/m <sup>2</sup> + combination	83,34%	77,77%

Patients with acute emesis got the combination of metoclopramide and dexamethasone and patients with no emesis got combination of ondansetron and dexamethasone.

Result of the research suggested that the use of anti-emetic combinations were inappropriate, therefore the patients still had acute vomiting episodes or delayed vomiting episodes. Result of this study need to be confirmed with larger sample size to propose the rationality of anti-emetic used in oncology.

## Conclusion

The use of antiemetics in the cancer patients who got high emetogenic cytostatic in the two governmental hospital in Indonesia was not appropriate with the standard therapy , since the patients were still experiencing vomiting episodes.

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