LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : JURNAL ILMIAH

Judul Karya Ilmiah (Artikel) : Polyphenol Compounds of Mahkota Dewa (Phaleria macrocarpa[Scheff.] Boerl) Up-regulatedCaspase-3 and Apoptosis Index in Balb/c Strain Mice
Jumlah Penulis : 4 orang
Status Pengusul : N Judiono, **KS Indranila**, Theopilus W Watuguly, Lyle Craker
Identitas Jurnal Ilmiah :
a. Nama Jurnal : Functional Foods in Health and Disease
b. Nomor ISSN : ISSN: 2160-3855
c. Vol, Nomor, halaman : 2016/4/28 Hal: 206-218
d. Edisi : April 2016
e. Penerbit : **Functional Food Institute, USA**
f. Jumlah halaman : 13
g. DOI artikel (jika ada) : 10.31989/ffhd.v6i4.243
h. Alamat web jurnal :
https://www.ffhdj.com/index.php/ffhd/article/view/243/476
i. Terindeks di : Web of Science, Copernicus
j. Online Turnitin : https://doc-pak.undip.ac.id/4958/1/Turnitin_Polyphenol_Compounds_of_Mahkota_Dewa.pdf

Kategori Publikasi Jurnal Ilmiah (beri ✓pada kategori yang tepat) :
[V] **Jurnal Ilmiah Internasional** / Internasional Bereputasi **
[ ] Jurnal Ilmiah Nasional Terakreditasi
[ ] Jurnal Ilmiah Nasional/Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Jurnal Ilmiah			Nilai Akhir Yang Diperoleh
	Internasional [20]	Nasional Terakreditasi [ ]	Nasional *** [ ]	
a. Kelengkapan unsur isi artikel (10%)	2			2
b. Ruang lingkup dan kedalaman pembahasan (30%)	6			5
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	6			5,5
d. Kelengkapan unsur dan kualitas terbitan/ jurnal (30%)	6			6
Total = (100%)	20			18,5
Nilai Pengusul =			(40% x 18,5): 3 =	2,46

Catatan penilaian Artikel oleh Reviewer :

a. **Kelengkapan unsur isi artikel** : Unsur isi artikel lengkap Abstrak, Pendahuluan, Metode, Hasil & Diskusi, Referensi. Abstrak ditulis terstruktur dan unsur lain ditulis dengan cukup baik

b. **Ruang lingkup dan kedalaman pembahasan** : Ruang lingkup keilmuan sesuai pengusul. Pembahasan cukup baik dan dibandingkan dengan penelitian2 sebelumnya serta teori dengan referensi yang cukup sesuai.

c. **Kecukupan dan kemutahiran data/informasi dan metodologi:** Penelitian eksperimental dengan post test only control group design pada hewan coba. Data dikumpulkan dengan teknologi yang terstandar baik. Teknik analisis menggunakan uji beda dan dianalisis dengan baik

d. **Kelengkapan unsur dan kualitas terbitan/ jurnal:** Jurnal internasional terindex di WoS

Semarang,
Reviewer 1

Prof. Dr. dr. Tri Nur Kristina, DMM, M.Kes
NIP. 19590527 198603 2 001
Unit kerja : Fakultas Kedokteran Undip
Bidang Ilmu : Ilmu Kedokteran
Jabatan pangkat : Guru Besar

Lamp C.6

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH

Judul Jurnal Ilmiah (Artikel)	: Polyphenol Compounds of Mahkota Dewa (Phaleria macrocarpa[Scheff.] Boerl) Up-regulatedCaspase-3 and Apoptosis Index in Balb/c Strain Mice
Jumlah Penulisa	: 4 orang
Status Pengusul	: N Judiono, KS Indranila, Theopilus W Watuguly, Lyle Craker
Identitas Jurnal Ilmiah	: a. Nama Jurnal : Functional Foods in Health and Disease
	b. Nomor ISSN : ISSN: 2160-3855
	c. Volume nomor bulan tahun : 2016/4/28 Hal 206-218
	d. Penerbit : **Functional Food Institute, USA**
	e.DOJ artikel (Jika ada) : 10.31989/ffhd.v6i4.243
	f. Alamat web Jurnal : https://www.ffhdj.com/index.php/ffhd/article/view/243/476
	h.Terindeks di : **Web of Science, COPERNICUS**
	i. Online turnitin : **https://doc-pak.undip.ac.id/4958/1/Turnitin_Polyphenol_Compounds_of_Mahkota_Dewa.pdf**

Kategori Publikasi Jurnal Ilmiah (beri ✓ pada kategori yang tepat) :
- [v] Jurnal Ilmiah Internasional / internasional bereputasi *
- [ ] Jurnal Ilmiah Nasional Terakreditasi
- [ ] Jurnal Ilmiah Nasional/ Nasional terindeks di DOAJ CABI COPERNICUS** Tidak Terakreditasi

Hasil Penilaian *Peer Review* :

NO	KOMPONEN YG DINILAI	Nilai Maksimal Jurnal Ilmiah			
		Internasional/internasional bereputasi [20]	Nasional Terakreditasi [ ]	Nasional ***	Nilai Akhir Yang Diperoleh
a	Kelengkapan unsur isi artikel (10%)	2			……1,5
b	Ruang lingkup dan kedalaman pembahasan (30%):	6			……5,4
c	Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	6			……5,5
d	Kelengkapan unsur dan berkualitas terbitan/ jurnal (30%)	6			……4,5
	Nilai Total = (100%)	20			……16,9
	Nilai Pengusul =			(40% x 16,9/3) = ..2,25	~~10,14~~

Catatan Penilaian artikel oleh Reviewer

a. Kelengkapan unsur isi artikel : abstrak lengkap dan jelas pendahuluan, metode hasil, diskusi dan kesimpulan ditulis sesuai penulisan kaidah ilmiah. Daftar pustaka ditulis sesuai sistem vancouver, jumlah 77 20 > 10 th.

b. Ruang lingkup dan kedalaman pembahasan: lingkup keilmuan sesuai dg bidang ilmu pengusul. Pembahasan cukup dalam dan lengkap dan dibandingkan dengan penelitian-penelitian terdahulu.

c. Kecukupan dan kemutahiran data/informasi dan metodologi : Penelitian eksperimental pada hewan coba dg bahan herbal anti kanker. Data primer didapat dari pemeriksaan imunohistokimia yg terstandar.

d. Kelengkapan unsur dan berkualitas terbitan/ jurnal : jurnal internasional – web science ESCI.

Semarang, 14 September 2020
Reviewer 2

Prof. Dr. drg. Oedijani, M.S.
NIP 194902091979012001
Unit kerja: Fakultas Kedokteran Undip
Bidang ilmu : Ilmu Kedokteran
Jabatan/pangkat: Guru Besar

Functional Foods In Health And Disease

The Functional Foods in Health and Disease (FFHD) is a peer-reviewed, open-access international journal which serves as the journal of the Academic Society for Functional Foods and Bioactive Compounds (ASFFBC). The journal's overall focus is on Functional Food Science, which is a new and unique area of health and nutrition. Although currently a small scientific field, Functional Food Science is quickly expanding as studies show that functional food products can help manage chronic disease and promote overall wellness. This is reflected in our journal's rapidly growing citation score.

The articles we publish include cutting-edge biomedical research and development of functional foods. The goal is to provide research that can lead to the development of functional food products. The actual definition for these functional foods, as provided by the Functional Food Center (FFC) is as follows: "Natural or processed foods that contain biologically-active compounds; which, in defined, effective non-toxic amounts, provide a clinically proven and documented health benefit utilizing specific biomarkers, for the prevention, management, or treatment of chronic disease or its symptoms."

The journal also serves as an excellent resource for: PhD students, professors, public health professionals, medical doctors, dieticians, nutritionists, government representatives (FDA, NIH, USDA) and the general public for information regarding the latest advancements for the prevention, treatment, and management of chronic diseases or its symptoms using functional foods and bioactive compounds including antioxidents, vitamins and many more.

The FFHD journal has been published under the title Functional Foods in Health and Disease since February, 2011. You can submit your manuscripts and cover letter here (/index.php/ffhd/author/submit/1) or directly to the Editorial Office at editor@ffhdj.com as an e-mail attachment. Additional information about submission guidelines can be found here (/index.php/ffhd/about/submissions) and an example cover letter can be found here (https://drive.google.com/file/d/1dDBTVMc0AkuYCbpUM9gsHc3HUZwurLyu/view).

Journal Citation and Indexing

The FFHD journal has been indexed in the **Web of Science** since 2011 and in the Emerging Sources Citation Index (ESCI) since 2015. The ESCI was a new database in the Web of Science that was launched in 2015 by Thomson Reuters. The ESCI aimed to expand the Web of Science publications by including excellent quality, peer-reviewed journals. Around 3,000 journals were selected for the launch, including the FFHD. Since then, a separate organization called Clarivate Analytics has produced the index starting in 2017. In addition, in 2020 the journal was accepted into **Scopus**! All articles from 2011 on have been accepted and indexed within Scopus. The acceptance into both Scopus and Web of Science show strength of the journal and the authors as well as help expand the reach of our published articles.

The FFHD's citation score has more than doubled over the past two years. As of November 2020 our average citations per item is 3.9. This number is calculated by the sum of the times cited count divided by the number of results in the set. Our h-index is 16, which means there are h papers that have each been cited at least h times.

In addition, the FFHD's self-citation percentage is 4.64%. The self-citation percentage reflects the number of times an article published in a journal has cited a previously published article in the same journal.

The FFHD journal is also indexed in Index Copernicus International (ICI). The ICI has indexed over 6,000 journals. Our current value in ICI for 2018 is 88.99. The value is based on a multidimensional parametric assessment, with over 100 assessment criteria.

In addition, we have also been cited in the following databases: Chemical Abstract, EBSCO, and Google Scholar.

Vol 10, No 12 (2020): December 2020

Table of Contents

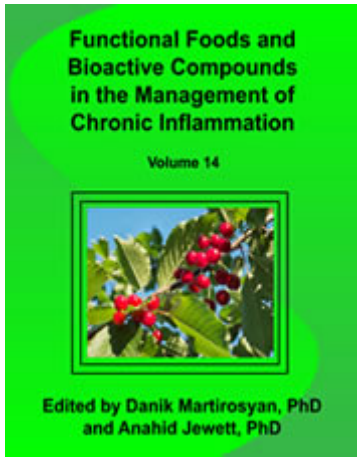
Editorial Team

Editors-in-Chief

Editorial Board

Field Editors

Related Publications



Journal Content

Notifications

User

Vol 6, No 4 (2016)

April 2016

Table of Contents

Research Articles

Related Publications

Research Article Open Access

Examining the potential benefits of (-)-epicatechin, (+)-catechin, and rutin on maternal and offspring cardiovascular outcomes in LDLr-/- mice exposed to an atherogenic environment during early development

Mary N. R. Lesser[1,2], Johanna Park[3], Michael D. Gedestad[3], Carl L. Keen[3,4], Janet Y. Uriu-Adams[3], and Louise Lanoue[3]

[1]Children's Hospital Oakland Research Institute, 5700 Martin Luther King Jr. Way, Oakland, CA 94609, USA; [2]Department of Nutritional Sciences & Toxicology, 119 Morgan Hall, University of California, Berkeley, Berkeley, CA 94720, USA; [3]Department of Nutrition, University of California, Davis, One Shields Avenue, Davis, CA 95616, USA; [4]Department of Internal Medicine, University of California, Davis, One Shields Avenue, Davis, CA 95616, USA

Corresponding Author: Mary N. R. Lesser PhD, RD, Children's Hospital Oakland Research Institute, 5700 Martin Luther King Jr. Way Oakland, CA 94609, USA

Submission date: November 28, 2015; Acceptance date: April 20, 2016; Publication date: April 27, 2016

ABSTRACT

Background: Maternal nutritional status can impact numerous early developmental processes. In certain cases, these effects can influence the risk their offspring can have for select chronic diseases later in life. Consequently, in this article we report on the effects of maternal consumption of high levels of certain flavonoids on the development of coronary artery disease (CAD) in an atherosclerosis-prone mutant mouse model.

Methods: LDLr -/- mutant mice were fed a control fat (CF), high fat (HF), or the HF diet supplemented with epicatechin and catechin (HFEC) or rutin (HFRU), prior to pregnancy and during lactation, in order to explore whether the flavonoids influenced markers of vascular health in the lactating dams (lactation day (LD) 21). Post-weaning (postnatal day (PND) 22), offspring were challenged with an atherogenic environment (HF diet in the absence of flavonoids) and vascular health markers were assessed in the adult offspring (PND 60).

Results: Dams fed the HF diet had elevated markers of atherosclerosis on LD 21 when compared to the dams fed with the control diet. Flavonoid consumption prior to pregnancy and during lactation had inconsistent effects on maternal markers of atherosclerosis (plasma cholesterol, aortic lipid accumulation, and oxidative stress biomarkers) at LD 21 compared to dams fed the HF diet without flavonoids. At PND 60, there were no differences in vascular health markers among the groups of LDLr -/- offspring whose mothers consumed the CF or the HF diet with or without flavonoids during lactation.

Conclusions: Maternal consumption of the flavonoid-supplemented HF diets had modest effects on maternal markers of atherosclerosis. The exposure of offspring to the flavonoid-supplemented HF diets during early lactation had little effect on the cardiovascular parameters assessed in the adult offspring.

Key Words: (-)-epicatechin, (+)-catechin, rutin, flavonoids, flavanols, flavonols, coronary artery disease, lactation, development

BACKGROUND

Developmental programming refers to events that occur during critical periods of development which can influence long-term health outcomes. These outcomes are commonly attributed to direct damage, impaired development, or long-term functional rewiring of developing organisms [1]. With respect to coronary artery disease (CAD), it has been shown in humans, as well as in rabbit and rodent models, that fatty streaks—an early sign of atherosclerosis—can develop in the fetus and newborn of hypercholesterolemic mothers [2, 3, 4, 5]. Additionally, *in utero* atherogenic conditions, promoted by maternal hypercholesterolemia or other risk factors can prime the offspring to develop CAD later in life, in the absence of atherosclerotic lesions at birth [6, 7]. Given the examples above, it is reasonable to argue that interventions aimed at curbing the onset and/or progression of CAD can include interventions during pregnancy and lactation, as these are periods when an individual demonstrates great susceptibility and plasticity to environmental influences.

There has been an increasing interest in the concept that the regular consumption of a plant-based diet, particularly one that includes food items rich in select types of flavonoids, including flavanols and flavonols, can improve cardiovascular health [8, 9, 10, 11, 12]. Findings from recent meta-analyses of data from prospective cohort studies, demonstrate a significant association between high intakes of flavonoid-rich foods and beverages and reduced CAD risk, which consistently support this concept [13, 14]. It should be noted that the participants of these studies were older men and women with a range of diseases, including atherosclerosis. The potential anti-atherogenic effects of high intakes of flavonoids in the context of pregnancy and development has received limited attention.

Flavanols and flavonols have been reported to modulate a range of cellular properties and functions, including the promotion of endothelial cell repair and vasomotility, the inhibition of platelet aggregation and activation, and the modulation of inflammatory and oxidative reactions [15, 16, 17, 18, 19, 20, 21, 22, 23], all factors which can reduce the risks of CAD. Importantly, supplementing atherogenic diets with flavanols or flavonols, either as plant extracts or in their purified form, has been reported to mitigate the development of atherosclerotic lesions in adult mutant mice engineered to develop atherosclerosis in response to high fat consumption [24, 25, 22, 26, 27, 28, 29].

While interest in the potential health benefits of flavonoid intake is considerable, the potential adverse effects of consuming very large amounts of these phytochemicals have not been extensively studied. Many flavonoids are available for purchase as dietary supplements, and it is feasible to achieve levels of intake which markedly exceed what is provided in typical diets. There is limited literature on the subject. Accordingly, we examined the effects of maternal

Evaluation of harmful heavy metal (Hg, Pb and Cd) reduction using *Halomonas elongata* and *Tetragenococcus halophilus* for protein hydrolysate product

Ruttiya Asksonthong, Sunisa Siripongvutikorn, and Worapong Usawakesmanee

Department of Food Technology, Faculty of Agro-Industry Prince of Songkla University, Hat Yai, Songkhla, Thailand

Corresponding author: Sunisa Siripongvutikorn, Assistant Professor, Department of Food Technology, Faculty of Agro-Industry Prince of Songkla University, Hat Yai, Songkhla, Thailand

Submission Date: January 15, 2016, Acceptance Date: April 25, 2016, Publication Date: April 27, 2016

ABSTRACT

Background: Many health claims surrounding antioxidative, antihypertensive and anti-inflammatory properties have been addressed in natural protein hydrolysates, including fermented fish. Besides being sold as animal feed, tuna viscera is used for for the production of fermented products like fish sauce and Tai pla, fermented viscera. However, toxic heavy metals including Hg, Pb and Cd have been found in various food items, particularly within the internal organs of tuna. Therefore, the consumption of fermented tuna viscera containing heavy metal involves health risks. Consequently, the detoxification and reduction of these toxic elements are relevant and important issues, particularly with the use of their bacterial cells and metabolic products. *Halomonas elongata* is a moderately halophilic bacterium which has the ability to remove heavy metal, and is normally found in hypersaline environments. *Tetragenococcus halophilus* is a moderately halophilic lactic acid bacterium and probiotic which is found in fermented food products, such as fish sauce, shrimp paste, and fermented fish. Some scientific studies have reported using *T. halophilus* improves amino acid profiles and desirable volatile compounds, in addition to reducing biogenic amine content in fish sauce product. Therefore, it was hypothesized that using *H. elongata* and *T. halophilus* could reduce heavy metal content and improve the organoleptic quality of fermented fish viscera product (Tai pla).

Objective: This present work attempted to determine the growth characteristic of *H. elongata* and *T. halophilus* reared at various NaCl concentrations: 10, 15, 20 and 25%. Consequently, heavy metal reduction using these microorganisms reared at optimum NaCl concentration was evaluated.

Methods: *H. elongata* and *T. halophilus* were reared in saline nutrient broth (SNB) and de Man, Rogosa and Sharpe (MRS-broth) added with NaCl at concentration 10, 15, 20 and 25%, respectively. Cultures at each NaCl content were added with mercury (Hg), lead (Pb) and

cadmium (Cd) at concentration, 0.5, 1, and 3 mg/L, respectively. Subsequently, the supernatant of each condition was incubated at 48h and taken for heavy metal analysis at 96 h.

Results: The results showed that higher NaCl content resulted in slower late log and stationary phases, particularly in *T. halophilus*. This may due to *T. halophilus* not producing special metabolite such as exopolysaccharide, which was found in *H. elongata*. Regardless of heavy metal concentration, the results revealed that Cd at 3 mg/kg caused more cell death of *H. elongate,* but not that of *T. halophilus*. Furthermore, removal of Hg, Pb and Cd was 12.70, 84.78 and 75.83% respectively, by rearing with *H. elongata* for 48 h and by rearing with *T. halophilus* for 96 h was 12.68, 91.27 and 95.12%, respectively.

Conclusion: *H. elongata and T. halophilus* prefered SNB containing NaCl concentration between 10-20%. At higher NaCl concentration, 20-25%, the log phase was extended. Both *H. elongata and T. halophilus* were able to remove all test heavy metals. However, *T. halophilus* appeared to have higher Pb and Cd removal capability compared with *H. elongata*. Therefore, using *H. elongata* and *T. halophilus* for fermented tuna viscera is possible.

Keywords: *Halomonas elongata, Tetragenococcus halophilus*, Heavy metal, NaCl

INTRODUCTION:

Some heavy metals such as zinc, cobalt, iron copper, manganese and molybdenum are necessary to support life in very small doses. However, in large amounts these heavy metals are toxic and potentially hazardous [1, 2]. Moreover, other heavy metals like Pb, Cd and Hg are not essential for any living cell. An accumulation of these toxic elements over time can cause serious body illness once the accumulated level increases over the threshold. The releasing of heavy metals into the environment occurs through various process plants [3]. Expansion of many industries, including smelting, mining, refining, metallurgical, electroplating, petrochemical, and the discharge of industrial wastes has led to environment toxic metal contamination.

Environments contaminated with heavy metals pose a significant problem, mainly due to the toxic effects of these metals throughout the food chain. The toxic effects of these metals can cause serious ecological damage due to their solubility and mobility. Among the toxic heavy metals, Pb, Cd and Hg cause serious health problems when they accumulate in the living tissues [4], particularly in internal organs such as the spleen, liver, pancreas and stomach [5, 6, 7]. Since these elements are harmful chemicals for many human organs, ways to reduce and or eliminate these metals are of great interest and importance [8].

The conventional technique for metal remediation includes common physic-chemical precipitation, such as inducing electrochemical treatment, chemical coagulation, reverse osmosis, ion exchange and ultrafiltration. However, these processes also have other disadvantages, including the need to find suitable places. Moreover, a majority of these process are outside industrial scale applications. Furthermore, the high capital and operational costs involved, high energy consumption, and generation of large amounts of sludge containing toxic compounds are not eco-friendly [9]. Therefore, biotechnological approaches which are less expensive, eco-