

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

Judul Artikel Ilmiah : Carica pubescens fruit juice reduces tumor necrosis factor-alpha (TNF- $\alpha$ ) and fasting blood glucose (FBG) levels in type 2 diabetes mellitus Wistar rats

Penulis Artikel Ilmiah : Kusuma, T.U., Rachmawati, S.N., Anjani, G. and Muniroh, M.

Status Pengusul : Penulis pertama/penulis anggota/penulis korespondensi

Identitas Jurnal Ilmiah :

- a. Nama Jurnal : Food Research Journal
- b. ISSN : 2550-2166
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- d. Edisi (bulan/tahun) : Suppl. 3
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- g. DOI artikel (Jika ada) : 10.26656/fr.2017.4(S3).S15
- h. Alamat web Jurnal : [https://www.myfoodresearch.com/uploads/8/4/8/5/84855864/11\\_fr-ictmhs-s15\\_kusuma.pdf](https://www.myfoodresearch.com/uploads/8/4/8/5/84855864/11_fr-ictmhs-s15_kusuma.pdf)
- i. Terindeks di : SCOPUS Q4; SJR 0,14

Kategori Publikasi Jurnal Ilmiah (beri  $\checkmark$  pada kategori yang tepat) :

- Jurnal Ilmiah Internasional
- Jurnal Ilmiah Nasional Terakreditasi
- Jurnal Ilmiah Nasional tidak Terakreditasi

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d. Kelengkapan unsur dan kualitas penerbit (30%)	9			9.00
Nilai Total = (100%)				<b>29.00</b>
Nilai pengusul =			(40% x 29) =	<b>11.60</b>

KOMENTAR/ULASAN PEER REVIEW		Merupakan publikasi dari Conference ICTMHS 3 (Supplement 3)	
Kelengkapan dan Kesesuaian Unsur	:	Pada distematika artikel tidak diuraikan limitation of study dan tidak ada acknowledgment section.	
Ruang Lingkup dan Kedalaman Pembahasan	:	Merupakan riset untuk menemukan potensi pada carica pubescence sebagai terapi adjuvant untuk DM dalam konteks TNF alpha dan kadar gula darah. Hasil penelitian dibahas dengan cukup	
Kecukupan & Kemutakhiran Data & Metodologi	:	Metode yang digunakan dan procedure riset diuraikan dengan baik termasuk	
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i. Terindeks di : SCOPUS Q4; SJR 0,14

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Ruang Lingkup dan Kedalaman Pembahasan : Penelitian menggunakan tikus, merupakan perobaan untuk mengetahui manfaat buah carica dalam menangani diabetes. Hasil penelitian signifikan dan diuraikan dengan detail, didukung jurnal terkini.

Kecukupan & Kemutakhiran Data & Metodologi : Metode penelitian diuraikan dengan lengkap, pemilihan sampel, pengukuran material dan langkah penelitian dijelaskan dengan baik. Ethical clearance juga dilampirkan.

Kelengkapan Unsur dan Kualitas Penerbit : Jurnal Food Research Journal diterbitkan oleh Suppl. 3, jurnal ilmiah internasional terindeks scopus Q4 dengan nilai SJR 0.14.

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Penilai 2



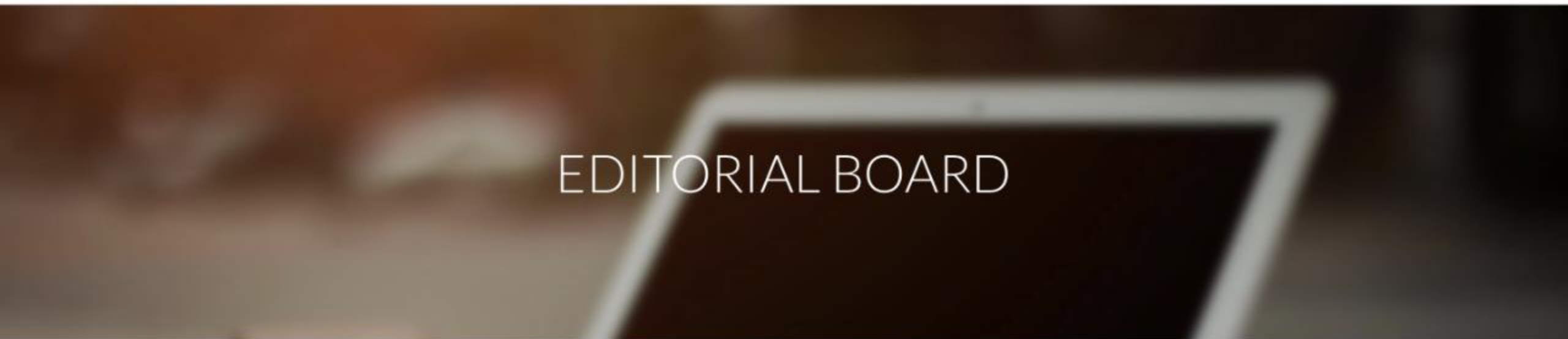
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### Volume 4, Supplementary 3

Special Issue: 3rd International Conference on  
Translational Medicine and Health Sciences  
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#### Full Papers

##### Understanding healthy body and dieting of youth athletes among Javanese Muslim parents

Dewi, N.S., Jittanoon, P. and Wiroonpanich, W.

Available Online: 30 MAY 2020

Dewi *et al.* studied the effects of dieting and having a healthy body of young athletes among Javanese Muslim parents.



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##### Metabolic characteristics and nutrition intake on women with normal body mass index

Fitranti, D.Y., Dieny, F.F., Kurniawati, D.M., Purwanti, R.,

Kusumaningnastiti, B. and Safitri, I

Available Online: 30 MAY 2020

The metabolic characteristics and nutrition intake on women with normal body mass index was studied by Fitrianti *et al.*



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##### Conicity index as an indicator of body fat percentage in adolescents

Mulyasari, I. and Purbowati

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G. and Nissa, C.

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The analysis of glycemic index, glycemic load and acceptability of formulated enteral formula based on tempeh flour and yam flour for hyperglycemic patients was studied by Wijayanti *et al.*

### Relationship between body type (somatotype) and bone density in perimenopause women



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### Analysis of iron, calcium and zinc contents in formulated fish protein hydrolyzate (FPH) complementary feeding instant powder



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Putri, A.R., Anwar, A., Chasanah, E., Fawzya, Y.N., Martosuyono, P., Nuryanto and Afifah, D.N.

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Formulated instant powder with fish protein hydrolyzate (FPH) substitution as complementary feeding food was analysed by Putri *et al.* for iron, calcium and zinc contents.

### **Carica pubescens fruit juice reduces tumor necrosis factor-alpha (TNF- $\alpha$ ) and fasting blood glucose (FBG) levels in type 2 diabetes mellitus**



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#### **Wistar rats**

Kusuma, T.U., Rachmawati, S.N., Anjani, G. and Muniroh, M.

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Kusuma *et al.* studied the effect of *Carica pubescens* fruit juice consumption in reducing tumor necrosis factor-alpha (TNF- $\alpha$ ) and fasting blood glucose (FBG) levels in type 2 diabetes mellitus Wistar rats.

### The relationship between body image and social pressure on eating disorders in obese female students



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Pahlavie A.N., Probosari E., Tsani A.F.A. and Dieny F.F.

Available Online: 30 MAY 2020

Pahlavie *et al.* studied the relationship between the body image and social pressure on eating disorders in obese female students.

### Risk factors of eating disorders in young female athletes

Suryawati, Dieny, F.F., Purwanti, R., Tsani, A.F.A. and Widyastuti, N.



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## Understanding healthy body and dieting of youth athletes among Javanese Muslim parents

<sup>1,2,\*</sup>Dewi, N.S., <sup>2</sup>Jittanon, P. and <sup>2</sup>Wiroonpanich, W.

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### Abstract

This phenomenological research is aimed to explore the perspectives of parents about the healthy body and dietary requirements for youth athletes. Data were obtained from the Javanese Muslim parents who have children who are youth athletes in two provinces of Indonesia, Central Java and East Java. Interviews were conducted with nine participants using a semi-structured guideline. Data analysis used Giorgi phenomenological approach. This study found various perceptions about the healthy body and dieting of youth athletes. Parents perceived a healthy body could be shown by no injury and the ability to reach the targets in either training or competing. As Muslims, they emphasized the importance of providing *halal* food because the food that enters the body would affect bodily functions. They stressed the importance of supplements to replace the lack of nutrients in the body and increased water intake. However, they expressed confusion in the composition, portion and frequency of nutrition for athletes. The limited understanding of nutrition for athletes urged parents to value the importance of advice from health workers related to maintaining athletes' performance and the nutrition they needed. The results of this study indicated the need to improve parents' knowledge and skills regarding nutrition management to maintain athletes' performance by considering Islamic laws.

## 1. Introduction

Being an athlete at a young age provides an additional burden on teenagers. They must be able to keep a balance between roles as students and as athletes. From an early age, they are pressured to become champions in every national or international competition that they participate in. They have to practice consistently at high intensity from childhood to prepare them physically well for competition (Gould and Whitley, 2009; Manzi *et al.*, 2010; Scott *et al.*, 2013). To support their intensive training, a healthy body must be observed.

Parents are some of those adults who have a main contribution to the care of young talented children (Wiersma and Fifer, 2008; Wu, 2008). They make extra efforts to meet the needs of youth athletes compared to parents who have children of average ability. They must ensure and encourage the achievements of their children and help them fulfill their potential to reach the highest level of their ability (Wu, 2008). Parents are also the main source of support in helping in the coping process during the end of season injury and in maintaining a healthy body (Wuerth *et al.*, 2004).

Based on this phenomenon, the perspective of parents about the healthy body and dietary requirements for athletes needs to be explored. Most of the sport studies in Indonesia have been explored quantitatively about the dietary or healthy status only (Lestari and Amin, 2019; Rachmad *et al.*, 2016; Siregar and Dani, 2019). Thus, this research was needed to be able to explore new understanding regarding the healthy body and dietary requirements for youth athletes through the perspective of Javanese Muslim parents.

## 2. Materials and methods

The phenomenological descriptive methodology from Giorgi was used to obtain the understanding of healthy body and nutrition of youth athletes among Javanese Muslim parents from East and Central Java, Indonesia. Purposive and snowball techniques were chosen to obtain data from nine participants. The participants were biological/adopted parents who had a youth athlete studying in college or university. The description of the participant's characteristics is presented in the Table 1.

The researchers collected data through in-depth

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## Effects of goat milk kefir fortified with vitamin D<sub>3</sub> on Interleukin-18 levels in diabetic rats

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### Abstract

Hyperglycemia causes increased oxidative stress through an imbalance of reactive oxygen species and antioxidative mechanisms. It stimulates the production of inflammatory mediators and cytokines such as TNF- $\alpha$ , interleukin (IL)-1, and IL-18. Goat milk kefir and vitamin D<sub>3</sub> have potential as antioxidants and anti-inflammatory agents that can repair damage to pancreatic  $\beta$  cells. This study analyzed the effects of goat milk kefir fortified with vitamin D<sub>3</sub> on the IL-18 level in diabetic rats. An experimental randomized pre-post test with control group design was conducted on 20 male Wistar rats divided into four groups, namely negative control (K-), positive control (K+), treatment with unfortified kefir (P1), and treatment with kefir fortified with vitamin D<sub>3</sub>. The intervention lasted 34 days. Fasting blood glucose and IL-18 levels were measured before and after intervention. Blood glucose and IL-18 levels were analyzed using the glucose oxidase p-aminophenol method and enzyme-linked immunosorbent assay, respectively. No significant increase in the IL-18 level was found in the P1 group with a median of 56.5 (10–252.7) pg/mL to 148.2 (106.8–428.3) pg/mL ( $p = 0.465$ ) or P2 group with a median of 117.3 (91.8–146.8) pg/mL to 246.7 (168.8–311) pg/mL ( $p = 0.068$ ), and no significant increase was observed in blood glucose levels in the P1 group (366.9 $\pm$ 134.8 mg/dL to 462.1 $\pm$ 156.9 mg/dL,  $p = 0.357$ ) or P2 group (415.0 $\pm$ 203.8 mg/dL to 258 $\pm$ 129 mg/dL,  $p = 0.463$ ). Goat milk kefir fortified with vitamin D<sub>3</sub> could maintain blood glucose and IL-18 levels.

## 1. Introduction

Diabetes mellitus is a metabolic multisystem disease caused by abnormalities in insulin secretion, action, or use, such that insulin secretion by pancreatic  $\beta$  cells is reduced (also called insulin resistance). Insulin is a hormone that regulates the balance of blood sugar levels. Abnormalities in insulin secretion can cause abnormal metabolism of carbohydrates, fat, and protein (Kemenkes RI, 2014). According to the International Diabetes Federation, hormonal insulin is produced by the pancreas and is used as a source of energy, but when the body produces less insulin, it can lead to hyperglycemia (Lathifah, 2017). Estimates of the prevalence of type 2 diabetes mellitus by the World Health Organization (WHO) were 6.4% in the age group of 20–79 years in 2010, and it is expected to increase to 7.7% by 2030. By 2030, Indonesia is expected to rank ninth worldwide in the epidemiological estimates of diabetes mellitus, with 20 million cases (Shaw *et al.*, 2010).

Hyperglycemia is a consequence of insulin resistance, leading to increased production of free radicals and oxidative stress that activate the transcription factor NF- $\kappa$ B and trigger the production of inflammatory mediators and cytokines, such as interleukin (IL)-18, that are part of proximal cytokines. IL-18 is a pleiotropic proinflammatory cytokine that induces TNF- $\alpha$  production and is an early mediator of the inflammatory pathway; thus, IL-18 can be a sensitive marker of the chronic inflammatory process underlying insulin resistance (Escobar-Morreale *et al.*, 2004). The IL-18 concentration was found to be elevated in patients with type 2 diabetes and was associated with fasting blood glucose levels. The IL-18 concentration is increased in acute hyperglycemia through an oxidative mechanism (Krogh-Madsen *et al.*, 2006).

Vitamin D<sub>3</sub> is a precursor of vitamin D produced by ultraviolet (UV)-B radiation. Vitamin D can be obtained by dietary intake and plays a role in glucose tolerance

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