





## Potential of Hotong Flour (*Setaria italica* (L.) Beauv) from Buru Island in Reducing Blood Cholesterol Levels in Wistar Rats with Diabetes Mellitus

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### ABSTRACT (Which comprised of approximately 200 words)

Hotong flour (*Setaria italica*) can be used as a functional food as therapy in the treatment of diabetes mellitus by reduce cholesterol levels in the blood. Hotong is a rice-like food crop that is usually consumed by the people of Buru Island. Hotong seeds have quite high nutritional content, namely containing 11.18% protein, 2.36% fat, 73.36% carbohydrates, 11.78% water, and 1.32% ash. The energy produced per 100 grams of hotong seeds is 359 calories. Hotong plants can be used as an alternative commodity in a carbohydrate-producing food diversification program. This study aims to determine the potential dose of hotong flour in treating diabetes mellitus by reducing cholesterol levels in the blood of rat. This research used 24 wistar rats animals which were divided into 6 groups which were given hotong flour for 21 days and the cholesterol levels were evaluated on the 7<sup>th</sup>, 14<sup>th</sup>, and 21<sup>st</sup> day. Determination of rat blood cholesterol levels using the enzymatic method. Hotong flour can reduce blood sugar levels at doses of 1 g/kg bw and 1.5 g/kg bw in rat that have been made diabetic by examination on days 7, 14 and 21 days.

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Background and research objectives written from the researcher's point of view. This section should end with a very short closing of what will be reported in the article. Font size 11, Times New Roman style, single spaced.

**MATERIALS AND METHOD**

Describe the materials and methods used in the research. If necessary, this section can be divided into subsections. Font size 11, style Times New Roman, line spacing single.

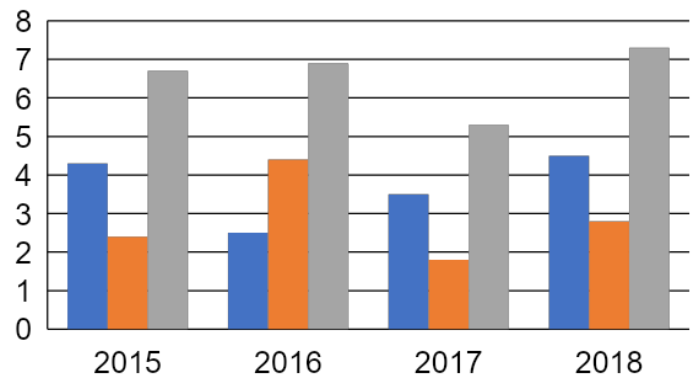
**RESULTS AND DISCUSSION**

Results and discussion can be combined into one section or separated into subsections, provided that the title of the subsection must be short and informative. Font size 11, style Times New Roman, single line spacing. If the results are displayed in figures and tables, they must be connected to the content of the writing by adding **(Figure 1)** for images, and **(Table 1)** for tables.

**Table 1.** Average value and standard deviation of rat blood cholesterol levels.

| Group                    | Days       |            |            |            |
|--------------------------|------------|------------|------------|------------|
|                          | 0          | 7          | 14         | 21         |
| Control                  | 58.38 ± 11 | 56.24 ± 55 | 57.62 ± 35 | 54.08 ± 19 |
| Control negative         | 76.33 ± 47 | 72.61 ± 52 | 79.70 ± 27 | 76.11 ± 39 |
| Control positive         | 60.41 ± 16 | 44.49 ± 39 | 67.30 ± 46 | 71.74 ± 15 |
| Hotong flour 1 g/kg bw   | 65.33 ± 27 | 40.46 ± 36 | 43.97 ± 84 | 68.77 ± 32 |
| Hotong flour 1.5 g/kg bw | 77.21 ± 8  | 65.78 ± 26 | 56.90 ± 75 | 52.96 ± 39 |
| Hotong flour 2.5 g/kg bw | 75.49 ± 30 | 76.50 ± 64 | 78.61 ± 31 | 73.57 ± 41 |

Note: Style Times New Roman, font 10.



**Figure 1.** The number of student graduates per class year.

**CONCLUSION**

Contains clear statements about the main conclusions of the research results. This conclusion can be displayed in paragraph form or sorted by number. Font size 11, style Times New Roman, single line spacing.

**AUTHORS CONTRIBUTION**

S. Wael designed and conducted the study, analyzed and interpreted the data, and wrote a draft of the manuscript. W. Mose and D. Wahyudi analyzed and interpreted the data. M. Salmawati & P. Astuti reviewed the draft manuscript, and supervised the entire process.

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## CONFLICT OF INTEREST

The authors declare no conflicts of interest, and will take full responsibility for the content of the article, including implications of AI-generated art.

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Yusetyani, L., Rofida, S., & Hijriani, N. (2023). Assessment of riparian vegetation patterns along Alista Hilly River Basin. *J. Trop. Life Sci.* 8(3), 237-241.

### **Articles in proceedings:**

Hasnat, G. N. T., Kabir, M. A., & Hossain, M. A. (2018). Major environmental issues and problems of South Asia, particularly Bangladesh. In C. M. Hussain (Ed.), *Handbook of Environmental Materials Management* (pp. 1-40). Switzerland: Springer Nature.

### **Book:**

Miller, J. N., & Miller, J. C. (2005). *Statistics and chemometrics for analytical chemistry*. 5<sup>th</sup> ed. Pearson Education Limited, Edinburgh Gate Harlow, England. pp. 213-239.

### **Chapter in a book:**

Che, Y. B., Syahariza, Z. A., & Rohman, A. (2010). Chapter 1. Fourier transform infrared (FTIR) spectroscopy: development, techniques, and application in the analyses of fats and oils, in *Fourier Transform Infrared Spectroscopy*, edited by Oliver J. Rens, Nova Science Publishers, New York, USA. pp. 1-26.