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# TEKNOSAINS

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EXPRESSION OF GRATITUDE

## EDITORIAL

Greetings to the Readers of Jurnal Teknosains!

We are pleased to present the June edition of our journal (Volume 15, Number 2 June 2025), featuring a diverse collection of research articles across pharmaceutical sciences, biomedical engineering, material technology, and environmental health. Each paper offers fresh perspectives and contributes meaningfully to ongoing conversations in their respective areas.

We begin with an intriguing study on Singkel leaves (*Premna serratifolia* Linn.), where researchers explore how different extraction methods and solvent concentrations can affect the flavonoid content and antioxidant activity. Following that, we feature a study on ultrafine bubble (UFB) fluid production using a closed-loop system. The authors applied response surface methodology to optimize production conditions. It is a technical yet highly practical piece of work that could be valuable for both industrial and biomedical applications.

In the third article, researchers turn their attention to Baroma rice, investigating its potential as an anti-cancer functional food. Laboratory tests on colon cancer cells showed promising results, suggesting that both raw and cooked Baroma rice might offer health benefits beyond nutrition. We also present a paper in the field of dental materials, examining the color stability and hardness of denture base materials treated with various coloring agents. After simulating long-term exposure to artificial saliva, the findings confirm that color changes stay within acceptable limits.

Our fifth article introduces a prototype of a single-axis prosthetic foot created using 3D printing and resin infusion techniques. Mechanical testing revealed that the prosthetic meets international standards for safety and durability, offering a lightweight, affordable alternative for amputees. Noise exposure in the workplace is the focus of our sixth paper, where researchers assess the sound levels produced by handheld grinding machines during material cutting. Interestingly, while the type of material didn't significantly affect noise levels, maintaining a safe distance from the noise source proved effective in reducing exposure.

Our seventh study examines a biocomposite bone screw made from cantula fiber-reinforced nano-hydroxyapatite/magnesium/shellac. The research shows that increasing cantula fiber content improves mechanical strength and wear resistance, highlighting its potential as a future biodegradable implant material.

For the last paper, we close this issue with an innovative look at biofilm production by lactic acid bacteria (LAB) using tofu wastewater. Not only does this offer a sustainable solution for managing industrial waste, but the biofilms produced also demonstrated antimicrobial properties.

Finally, the research featured in this edition reflects the dedication of scholars in tackling complex problems and finding solutions with real-world applications. We hope these papers will inspire further research and collaboration in the months ahead.

We extend our gratitude to the researchers, contributors, and readers who have contributed to the realization of the June 2025 edition.

Warm regards,  
Editor in Chief  
Jurnal Teknosains

### **EXPRESSION OF GRATITUDE**

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