



JURNAL BIOTEKNOLOGI & BIOSAINS INDONESIA

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FOREWORD

First and foremost, we would like to praise Allah Almighty, the Most Gracious and the Most Merciful, for His blessings and mercy so that we can publish the Indonesian Journal of Biotechnology & Biosciences (Jurnal Bioteknologi & Biosains Indonesia/JBBI) Volume 9 Number 2 December 2022. This year was a historic year for JBBI when there was a transition of administration from BPPT to jointly management of BRIN and MABBI (Masyarakat Bioinformatika dan Biodiversitas Indonesia). The topics discussed in this edition were antioxidant effect of *moringa* on spermatogenesis in old rats, micropropagation of potato for G0 seed production, lignin content and agromorphological character diversities of Indonesian rice, application of recombinant triacylglycerol lipase and carboxylesterase enzymes, morphological and textural feature extractions from fungi images, and many more. With the increasing interest of university students, lecturers, engineers and researchers who submit their scientific papers to JBBI, has become a starting point for us to improve the quality of JBBI.

In this edition, JBBI presents one short communication, 10 research articles, and 3 review articles, from various institutions and universities in Indonesia. We realize that the preparation of this journal still has many weaknesses, therefore it needs improvement. We always expect constructive criticism, suggestions and recommendations from all parties for the accomplishment of publication in the next edition.

Editor



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KATA PENGANTAR

Pertama-tama kami panjatkan puji syukur kehadirat Allah SWT, Yang Maha Pengasih lagi Maha Penyayang, atas rahmat dan karunia-Nya sehingga kami dapat menerbitkan Jurnal Bioteknologi & Biosains Indonesia (Jurnal Bioteknologi & Biosains Indonesia/JBBI) Volume 9 Nomor 2 Desember 2022. Tahun ini merupakan tahun bersejarah bagi JBBI dimana terjadi peralihan kepengurusan dari BPPT menjadi pengelolaan bersama BRIN dan MABBI (Masyarakat Bioinformatika dan Biodiversitas Indonesia). Topik yang dibahas pada edisi kali ini adalah efek antioksidan kelor terhadap spermatogenesis tikus tua, mikropropagasi kentang untuk produksi benih G0, kandungan lignin dan keragaman karakter agromorfologi beras Indonesia, aplikasi enzim rekombinan triasilgliserol lipase dan karboksilesterase, ekstraksi ciri morfologi dan tekstur dari gambar jamur, dan masih banyak lagi. Dengan meningkatnya minat mahasiswa, dosen, insinyur dan peneliti yang mengirimkan karya ilmiahnya ke JBBI, menjadi titik awal bagi kami untuk meningkatkan kualitas JBBI.

Pada edisi kali ini, JBBI menghadirkan satu komunikasi singkat, 10 artikel penelitian, dan 3 artikel review, dari berbagai institusi dan universitas di Indonesia. Kami menyadari bahwa penyusunan jurnal ini masih memiliki banyak kelemahan, oleh karena itu perlu dilakukan penyempurnaan. Kami selalu mengharapkan kritik, saran dan masukan yang membangun dari semua pihak demi kesempurnaan publikasi di edisi berikutnya.

Redaksi



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We would like to express our highest gratitude and appreciation to the Reviewers, who have provided suggestions and feedback to the submitted manuscripts, namely:

1. Dr.rer.nat. Arli Aditya Parikesit
2. Dr.rer.nat. Catur Sriherwanto, B.Sc., M.Sc
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7. Dr. Sri Koerniati
8. Prof. Dr. Ir. Yusnita, M.Sc

With the considerate and accuracy of the reviewers, has allowed us to improve and maintain the quality of manuscripts in the December 2022 edition of the JBBI

To the Technical Team who have worked hard in the publishing process, starting from editing grammar, page layout, cover design and other technical work so that this edition can be published online, we also express our deepest thanks and appreciation. Without their hard working, the publication of this edition would not have been possible. Finally, we would like to thank the authors who, with their commitment, thoughts and cooperation, have contributed to the December 2022 issue.

Editor



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UCAPAN TERIMA KASIH

Ucapan terima kasih dan penghargaan yang setinggi-tingginya kami sampaikan kepada para Mitra Bestari, yang telah memberikan sumbang sarannya dalam menelaah naskah-naskah yang masuk, yaitu:

1. Dr.rer.nat. Arli Aditya Parikesit
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Dengan kesungguhan dan kecermatan para Mitra Bestari, telah memungkinkan kami meningkatkan kualitas dan menjaga mutu penulisan pada penerbitan Jurnal Bioteknologi & Biosains Indonesia (JBBI) edisi Bulan Desember 2022 ini.

Kepada Tim Teknis yang telah bekerja keras dalam proses penerbitan, mulai dari *editing* tata bahasa, *layout* halaman, disain cover dan pekerjaan-pekerjaan teknis lain sehingga edisi ini dapat diterbitkan secara *online*, juga disampaikan terima kasih dan penghargaan yang sebesar-besarnya. Kerja keras mereka dalam upaya penerbitan edisi ini telah mewujudkan hasil karya terbaik tahun ini. Terakhir kami sampaikan terima kasih kepada penulis yang dengan komitmen, pemikiran dan kerjasamanya telah berkontribusi pada edisi Bulan Desember 2022.

Redaksi



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