

## Table of Contents

|                                                                                                                                                                                                                                                                  |     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| <b><i>In Vitro</i> Evaluation of Antibacterial Properties of Biogenically Synthesized Zinc Oxide Nanoparticles on Pathogenic Paddy Bacteria</b><br>R. Abd Rahman, C.H. Chia and N.A. Masdor                                                                      | 1   |
| <b>Investigation of Physochimechal and Biological Properties of Composite Sodium Alginate for Tissue Engineering</b><br>I.A.U. Kadhim                                                                                                                            | 11  |
| <b>Novel Carbidopa Functionalised Silver Nanoparticles a Selective Detection for Lead and Levodopa</b><br>P.R. Popat, K. Nayee, M. Patel, A.P. Patel, R.J. Patel, V.A. Patel and B.A. Makwana                                                                    | 21  |
| <b>Synthetic and Natural Polymeric Drug Delivery Systems - A Comprehensive Overview of Polycaprolactone and Glucan Particles</b><br>N. Bernardi, S. Jesus and O. Borges                                                                                          | 39  |
| <b>Synthesis Techniques of Bioceramic Hydroxyapatite for Biomedical Applications</b><br>T.O. Sadiq, I. Sudin, J. Idris and N.A. Fadil                                                                                                                            | 59  |
| <b>Improvement in Bioactivity Properties of Hydroxyapatite Coated Ti-6Al-4V ELI with Addition of Zirconium Oxide for Orthopaedic Implant</b><br>S. Ardhy, Gunawarman, J. Affi and Y. Yetri                                                                       | 81  |
| <b>Optimizing the Surface Properties of Zirconium Implants with Germanium Coating</b><br>D.H. Mohammed and R.K. Jassim                                                                                                                                           | 91  |
| <b>Forecasting Approach to Investigate Dynamic Growth of Organoid within 3D Matrix for Distinct Perspective</b><br>M. Yusro and I. Nurisusilawati                                                                                                                | 107 |
| <b>Evaluation of the Malalignment Varus - Valgus in Total Knee Arthroplasty Designed for Deep Knee Flexion Using Knee Kinematic Motion Simulator</b><br>J. Triwardono, F. Rokhmanto, R. Roberto, I. Kartika, A.S. Saragih, Y. Whulanza, S. Shuib and S. Supriadi | 119 |
| <b>Performance Comparison for Hearth Rate Signal Detection for Different Location in Fingertip and Wrist Using Sensor MAX30102</b><br>R. Gunawan, A. Andang and M. Ridwan                                                                                        | 131 |
| <b>The Evaluation of Complementary Metal-Oxide Semiconductor (CMOS) in Smartphone to Test X-Ray Tube Radiation Leakage</b><br>T.M. Yoshandi, A. Zaky and A. Patrian                                                                                              | 145 |