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Vol. 12 No. 2 (2023): In Press Online : August 2023

ORIGINAL ARTICLE

The comparison of effects of iron supplementation since pre-pregnant and during pregnant period on reducing iron deficiency anemia in pregnant women with mild anemia in Bali
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4149>)

Luh Seri Ani, I Made Bakta, Made Ayu Hitapretwi Suryadhii, Nyoman Agus Bagiada

Online First: May 11, 2023 |

[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4149/2774\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4149/2774)

ORIGINAL ARTICLE

Psychometrics of social norm and beliefs on gender-based violence in Indonesia
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4307>)

Syiddatul Budury, Nunik Purwanti, Khamida, Diah Jenita Lita Sari

Online First: Apr 26, 2023 |

[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4307/2722\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4307/2722)

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The relationship between salivary cortisol levels with risk of behavioral-psychosocial-emotional disorders in adolescents aged 12-16 years (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4472>)

Aylini Sanjaya

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[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4472/2753\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4472/2753)

ORIGINAL ARTICLE

The difference of depression level in pregnant women based on the acceptance of pregnancy during the COVID-19 pandemic: a study on pregnant women in Bontang, East Kalimantan
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/3697>)

I Putu Satriya Wijaya, Titin Andri Wilhasluti, I Wayan Arsana Wiyasa, Muhammad Chair Effendi

Online First: Apr 12, 2023 |

[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/3697/2688\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/3697/2688)

ORIGINAL ARTICLE

Anxiety and perceived mental healthcare need among non-frontline in coronavirus referral hospital, Surabaya
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4197>)

Heru Wijono, Soenarnatalina Melaniani, Kuntoro, Zainul Amiruddin Zakaria, Made Oka, Najihah Hanisah Bte Marmaya, Risma Ekawaty, Bagus Ida Saputra

Online First: May 9, 2023 |

[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4197/27981\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4197/27981)

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The effects of Curcuma Longa extract on fibroblast count and collagen density in left colon anastomosis with acute intra operative loss of 15% circulating blood volume in rats (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4487>)

Nasrul Haidi, Tomy Lesmana

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[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4487/28321\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4487/28321)

ORIGINAL ARTICLE

The relationship of the use of masks with the event of maskne on Universitas Sumatera Utara Hospital healthcare workers during the COVID-19 pandemic (<https://www.balimedicaljournal.org/index.php/bmj/article/view/3967>)

Raisa Khairuni, Nelva Karmila Jusuf, Imam Budi Putra

Online First: Apr 12, 2023 |

[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/3967/26861\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/3967/26861)

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Platelet count, platelet lymphocyte ratio, and Ki67 as a predictive factor of neoadjuvant chemotherapy response in locally advanced breast cancer (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4222>)

Sasongko Hadi Priyono, Badriatunnor, Meitria Syahadatina Noor, Agung Ary Wibowo, Didik Dwi Sanyoto, Audi Ardansyah

Online First: May 27, 2023 |

[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4222/28751\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4222/28751)

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Composite characterization of freeze-dried human amnion membrane and human adipose tissue derived stromal cells for soft tissue engineering (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4333>)

Yusuf Rizal, Mouli Edward, Tri Wahyu Martanto, Heri Suroto

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BRCA 1 and 2 somatic mutation in high grade serous epithelial ovarian cancer in Indonesian women that was operated on Dr. Soetomo General Hospital, Surabaya in 2019-2021 (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4504>)

Jonathan Kevin Djuanda, Brahmana Askandar Tjokropawiro, Grace Ariani

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ORIGINAL ARTICLE

Sinonasal inverted papilloma extirpation by endoscopic approach: a case report (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4060>)

Teuku Husni TR, Ridha Chaharsyah Mulye

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Diagnostic and predictive value of hematological parameters of COVID-19 patients: a retrospective study (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4253>)

Estie Ludi Kiriwenno, Yulia Nadar Indrasari

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Effect of medroxyprogesterone and doxycycline on vascular endothelial growth factor (VEGF) expression and corneal neovascularization in corneal alkali trauma (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4366>)

Muhammad Hariz, Luki Indriawati, Sutjipto

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Abstract

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The relationship between parental risk factors with degree of severity in myopia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4522>)

Marisa Surya Airlangga, Ria Sandy Deneska, Rozalina Loebis, Reni Prastyani

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Abstract

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ORIGINAL ARTICLE

A comparison of otoacoustic emissions examination results as early hearing screening in normal and infants at risk of hearing loss (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4280>)

Rosa Falerina, Puguh Setyo Nugroho, Nyilo Purnami, Fatimah Azizah Salsabila

Online First: May 23, 2023 |

Abstract

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ORIGINAL ARTICLE

The effect of school closure and online learning during the COVID-19 pandemic on the academic performance of elementary school-aged children (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4384>)

Glabela Christiana Pandango, Ahmad Suryawan, Mira Irmawati

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4384/2733>)

ORIGINAL ARTICLE

SOD2 and HIF-1 α expression in rat ovaries (Rattus norvegicus) administered with forest bee honey (Apis dorsata) following physical stress (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4532>)

Hani Plumeriastuti, Widjiati Widjiati, Annise Proboningrat, Mey Vanda Pusparina Sajida

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Abstract

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ORIGINAL ARTICLE

The effectiveness of CRP and leukocyte examinations as a detection of risk factors for pre-eclampsia in pregnant women (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4304>)

Nur Masruroh Masruroh, Lailatul Khusnul Rizki, Uliyatul Laili, Dhifa Nur Alifah

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4304/2697>)

ORIGINAL ARTICLE

Development of non-pharmacological pain management (behavioral intervention) model based on family-centered empowerment in toddlers with invasive procedures (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4312>)

Wesiana Heris Santy, I Dewa Gede Ugrasena, Yuni Sulyanti Ariel, Nur Hidayah, Firdaus, Resti Utami

Online First: Apr 26, 2023 |

Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4312/2724>)

ORIGINAL ARTICLE

Mechanism of neurological deficit improvement through analysis in cerebral artery stenosis, Endothelial Progenitor Cells (EPC), Asymmetric Dimethylarginine (ADMA), Malondialdehyde (MDA), and Superoxide Dismutase (SOD) after balloon angioplasty procedure in ischemic stroke patients (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4485>)

Nasrul Musadir, Soetojo, Syahrul, Ketut Sudiana, Budi Utomo, Muhammad Hamdan, Fritz Sumantri Usman, Siti Pariani

Online First: Jun 12, 2023 |

Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4485/2837>)

ORIGINAL ARTICLE

Activity of enzyme Esterase, Glutathione S Transferase and Inorganic Substance of Dengue vector *Aedes aegypti* larvae against *Lansium domesticum* leave extract and fractionation (<https://www.balimedicaljournal.org/index.php/bmj/article/view/3946>)

Dewi Fabriani Putri, Ismail Husna, Mala Kurniati, Annisa Primadiamanti

Online First: Apr 12, 2023 |

[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/3946/2685\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/3946/2685)

ORIGINAL ARTICLE

Factors attributed to depressive symptoms in women coping with infertility during the pandemic of COVID-19 (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4214>)

Mila Maidarti, Emily Bailie, Aprilia Siregar, Primi Diandera Garinasih, Vita Silvana, Achmad Kemal Harzif, Gita Pratama, Kanadi Sumapraja, R Muharam, Andon Hestiantoro, Budi Wiweko

Online First: Apr 23, 2023 |

[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4214/2703\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4214/2703)

ORIGINAL ARTICLE

The self-acceptance model improves the behavior of maintaining the quality of life after a hysterectomy (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4325>)

Raden Khairiyatul Afiyah, Faridah Umamah, Nanik Handayani, Rusdianingseh, Budi Prasetyo

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[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4325/2706\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4325/2706)

ORIGINAL ARTICLE

Correlation between Superoxide Dismutase (SOD) with Malondialdehyde (MDA) level in blood plasma of seborrheic keratosis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4034>)

Yesie Elvira, Imam Budi Putra, Nawa K. Jusuf

Online First: Apr 25, 2023 |

[Abstract](#)

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ORIGINAL ARTICLE

Ultrasound evaluation of post-cesarean uterine wound healing based on a figure of eight suturing technique (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4241>)

Makmur Sitepu, Muhammad Birza Rizaldi, Djafar Siddik

Online First: Apr 18, 2023 |

[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4241/2694\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4241/2694)

ORIGINAL ARTICLE

Different clinicopathological characteristics in Indonesian colorectal patients with RAS mutations and LC3 over-expression: a cross-sectional study (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4519>)

Rio Andreas, Renio Rudiman, Kiki Lukman, Bambang Am Am Setya Sulthana, Andriana Purnama, Mochammad Riskie Aditya Putra, Prapanca Nugraha, Etis Primastari

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[Abstract](#)

[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4519/2822\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4519/2822)

ORIGINAL ARTICLE

Survival analysis of breast cancer patients luminal subtype B on lymphovascular invasion (LVI), tumor-infiltrating lymphocyte (TIL), and expression of mammaglobin A (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4381>)

I Wayan Sudarsa, Nyoman Dwiya

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[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4381/2730\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4381/2730)

ORIGINAL ARTICLE

The effect of *Chromolaena odorata* on endometriosis implants in mice model of endometriosis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4096>)

Rusnadi, Rajuddin, Reno Keumalazia Kamarlis, Dasrul

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[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4096/2799\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4096/2799)

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The effectiveness of platelet rich fibrin (PRF) graft to expression of IL-1 and TNF- α in cornea post NaOH exposure: an experimental study (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4389>)

Marisa Surya Airlangga, Reni Prastyani, Nurwasih, Hani Plumeriastuti, Budi Utomo

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Abstract

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The number of lymphocytes in rabbit gingival wounds covered with a periodontal pack with lime peel extract (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4121>)

Malianawati Fauzia, Ega Lucida Chandra Kumala, Ayu Nabiliatul Ummah

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4121/2795>)

ORIGINAL ARTICLE

Medication adherence and visiting compliance: interventions self-management education based on health belief model (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4302>)

Joni Iskandar, Eppy Setyowati, Chilyatis Zahron

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4302/2692>)

ORIGINAL ARTICLE

Risk factors of ventilator-associated pneumonia in intensive care patients at tertiary referral hospital (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4446>)

Ayu Permatasari Tribuana Tungga Dewi, Ni Made Mertaniasih, Bambang Pujo Semedi, Lindawati Alimsardjono, Pepy Dwi Endraswari

Online First: May 3, 2023 |

Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4446/2754>)

ORIGINAL ARTICLE

Genetic heterogeneity of thalassemia major patients in Rembang Regency, Central Java, Indonesia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4482>)

Nyoman Suci Widyastiti, Ita Margaretha Nainggolan, Edward Kurnia Setiawan Limijadi, Meita Hendrianingtyas, Dwi Retnoningrum, Ariosta, Yetty Moweta Nancy, Mayasari Dewi, Sutarni, Tri Ratnaningsih, Usi Sukorini

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4482/2791>)

ORIGINAL ARTICLE

Description of screen time and dry eye syndrome in medical students of UIN Alauddin Makassar (<https://www.balimedicaljournal.org/index.php/bmj/article/view/3710>)

Ulfah Rimayanti, Gita Yustika, Sri Rezeki Wahdania Jamaluddin

Online First: May 23, 2023 |

Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/3710/2810>)

ORIGINAL ARTICLE

Evaluation of hearing limits post tympanoplasty in patients with chronic suppurative otitis media (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4203>)

Nico Probosutejo, Titiek Hidayat, Ahadih

Online First: Apr 23, 2023 |

Abstract

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ORIGINAL ARTICLE

Histopathological findings of the liver and kidneys of wistar rat exposed to insect repellent (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4315>)

Ary Andini, Lysa Veterini, Edza Aria Wikurendra, Achmad Syafuddin, Delfi Rimasari, Munifa Nur Aida

Online First: Apr 26, 2023 |

[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4315/27281\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4315/27281)

ORIGINAL ARTICLE

Effect of intravenous methylprednisolone on the degree of hepatic ischemia/reperfusion injury in class III hypovolemic shock conditions performed continuous clamping in rats
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4488>)

Suryo Wahyu Raharjo, Tonny Lesmana

Online First: Jun 19, 2023 |

[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4488/28331\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4488/28331)

ORIGINAL ARTICLE

Evaluation of the severity of striae distensae using the new scoring system
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/3994>)

A. Viera Yulianita Anzal, Imam Rudi Putra, Nela Karmila Jusuf, Khaletina Nasirul

Online First: Apr 25, 2023 |

[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/3994/27181\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/3994/27181)

ORIGINAL ARTICLE

Mirror therapy combined with flashcards on the extremity function and stages of self-acceptance of stroke patients
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4225>)

Maria Magdalena Purba, Christine Aden, Mars Khendra Kusfiryadi

Online First: May 11, 2023 |

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ORIGINAL ARTICLE

Retrospective study on nasopharyngeal cancer (RENOCs): outcome management of in-hospital patients
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4512>)

Achmad Chusnu Romdhoni, Hayyu Fath Rachmadhan, Yuli Aulia Azmi, Faisal Yusuf Ashari, Astri Dewayani

Online First: May 25, 2023 |

[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4512/28001\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4512/28001)

ORIGINAL ARTICLE

The ethical dilemma of medical specialists in the era of national health insurance in Semarang
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4068>)

Sigid Kirana Lintang Bhima, Yayi Suryo Prabandari, Edward Kurnia Setiawan Limijadi, Astika Utomo, Laila Mubarakah, Mohammad Hakimi

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[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4068/26831\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4068/26831)

ORIGINAL ARTICLE

Effect of probiotics as adjuvant therapy of antidepressants in male Wistar rats with anhedonia behavior
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4263>)

Wati Evilia, Anak Ayu Sri Wahyuni, Ida Aju Kusuma Wardani, I Wayan Gede Artawan Eka Putra, Lely Setyawati Kurniawan, Ni Ketut Sri Diniani, I Gusti Ayu Indah Ardani, I Gusti Kamasan Nyoman Arijana

Online First: Apr 27, 2023 |

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ORIGINAL ARTICLE

The bcl-2 and caspase-3 expression after purple sweet potato treatment on isoniazid and rifampicin-induced liver injury
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4370>)

I Gusti Ayu Artini, Ketut Widayani Asutji, I Gusti Made Gede Suryo Chandra Trapika, Agung Wwitek Indrayan

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Correlation between sebum level and severity of male androgenetic alopecia
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4084>)

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ORIGINAL ARTICLE

Efficacy and safety of topical doxycycline reduce MMP-9 expression towards populations with corneal alkali burn (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4533>)

Anindita Juwita

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[Abstract](#)[pdf \(https://www.balimedicaljournal.org/index.php/bmj/article/view/4533/28391\)](https://www.balimedicaljournal.org/index.php/bmj/article/view/4533/28391)

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Causality relationship between Hounsfield Unit in epidural hematoma and subdural hematoma and hematoma expansion (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4114>)

Gunna Hutomo Putra, Agus Turchan, Sri Andreani Utomo, Muhammad Arifin Parenrengi, Asra Al Fauzi, Arief Wibowo

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ORIGINAL ARTICLE

Plasma collection in Indonesia - a challenge to implement fractionation (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4296>)

Teguh Triyono Triyono, Hasna Fadlilatul Bidayah

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ORIGINAL ARTICLE

Impact of Abelmoschus esculentus fruit extract on endonuclease G and apoptosis index in adenocarcinoma mammae. A laboratory experiment: rats given chemotherapy AC (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4412>)

Selamat Budjitho, Satrio Putra Prawiro, Eriawan Agung Nugroho, Luqman Alwi, Putu Anda Tusta Adiputra

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ORIGINAL ARTICLE

Comparison of efficacy, safety, and cost between ultrasonography and fluoroscopy-ultrasonography as a target device in extracorporeal shock wave lithotripsy in kidney stones less than 1.5 centimeters (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4133>)

Gede Wriya Kusuma Duarsa, Firman Pribadi

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ORIGINAL ARTICLE

Analysis of the characteristics of pregnant women affect nurse interaction with self hypnosis approach in prevention of preeclampsia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4306>)

Faridah Umamah, Budi Santoso, Esti Yunitasari, Siti Nur Hasina, Raden Khairiyatul Afiyah

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ORIGINAL ARTICLE

Optimization of a local type rabbit model for arteriovenous fistula, focused on study neointimal hyperplasia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4459>)

Yopie Afrandi Habibie, Cut Merry Sahara Putri, Putri Oktaviani Zulfa, Dessy Rakhmawati Emril, Azharuddin, Dedy Syahrizal, Fauzan Fajri, Hiyah Ferdian

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ORIGINAL ARTICLE

Prevalence and characteristics of Postoperative Cognitive Dysfunction (POCD) in on-pump cardiac surgery patients at Dr. Kariadi General Hospital Semarang (<https://www.balimedicaljournal.org/index.php/bmj/article/view/3689>)

Widya Istanto Nurcahyo, Ginanto Auzan Adhyatmoko, Muhammad Farhan Kurniawan, Chandra Hermawan Manapa, Satrio Adi Wicaksono, Cindy Elifira Boom, Zainal Muttaqin

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Effect of mini low carbohydrate diet and eating speed in obese adults on fasting blood glucose (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4189>)

Muhammad Aloni Amul Yaqin, Anik Lestari, Sumardiyono

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The effect of lavender aromatherapy on the incidence of dyspareunia in post partum mothers (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4313>)

Yunik Windanti, Fitrta Dewi Anggraini, Hinda Noviani

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ORIGINAL ARTICLE

LOX-1 rs1050283 TT genotype is associated with the severity of peripheral artery disease: a cross-sectional study in Mataram, Indonesia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4221>)

Yanna Indrayana, Irawan Yusuf, Agussalim Bukhari, Idar Mappangaro, Herpan Syafii Harahap

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The effect of family background on autism spectrum disorder student's pronunciation mastery: a case study (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4326>)

Nurul Latifetul Azizah, Triyas Sepatri, Syddiatul Budury

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ORIGINAL ARTICLE

Modification of BACAP score as a predictor of pancreatic carcinoma resectability at Dr. Cipto Mangunkusumo National Center Hospital Jakarta (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4502>)

Ahmad Ravles, Aji Satria Putranto, Dhanasari Vidiawati Trisna

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The effect of giving extract of Giwang ferns (*Euphorbia milii*) cactus leaves on the number of fibroblast white rats burn infected with *Pseudomonas aeruginosa* (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4050>)

I Made Agus Sunedi Putra, Ni Nyoman Wahyu Ubayan, I Made Yoga Winatni

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ORIGINAL ARTICLE

The character of PA3235 virulence factors of *Pseudomonas aeruginosa* PAO1 – a preliminary study (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4364>)

Mariana Wahjudi, Samuel Stefanus Widodo, Ida Bagus Made Artadana, Yulanda Antonius

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Identification of tumor infiltrating lymphocyte CD8 in Indonesian colorectal cancer population: a cross-sectional study (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4520>)

Elit Irawan, Kiki Lukman, Nurhayat Usman, Bambang Am Am Setya Sulthana, Reno Rudiman, Deny Budiman, Prapanca Nugraha, Etis Primastari

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ORIGINAL ARTICLE

Do scientists still believe in mindfulness meditation for pain therapy? a bibliometric analysis regarding meditation trends for therapy from 1946 To 2022 (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4080>)

Arman Yurisdidi Saleh, Rizky Valentina

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ORIGINAL ARTICLE

Comparison on the efficacy and safety of bipolar transurethral vaporization of the prostate (B-TUVP) with bipolar transurethral resection of the prostate (B-TURP) for benign prostatic hyperplasia (BPH): a systematic review and meta-analysis of randomized controlled trial (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4531>)

Made Adi Wiratama, Dimas Panca Andhika, Chi-Fai Ng, Lukman Hakim

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ORIGINAL ARTICLE

Medical students' mental health state during pandemic COVID-19 in Indonesia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4104>)

Putu Asih Primantani, Yuda Turana, Wawang S. Sakarya, Marwito Wiyanto, Artha Budi Susila Duarsa

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The effectiveness of the application of self-hypnosis and prenatal gentle yoga on emesis gravidarum in the first-trimester pregnant women (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4303>)

Yasi Anggasari, Fauziyatun Nisa, Ratna Ariesta Dwi Andriani, Yunik Windarti

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ORIGINAL ARTICLE

Effects of diabetes mellitus regulation on antibody response to inactivated virus vaccine: a systematic review (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4171>)

Dewi Prasetyaningtyes, Gebot Soejarto, Laksmi Wulandari

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ORIGINAL ARTICLE

Estimating the safe duration and concentration of benzene exposure in the workplace in the printing industry (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4311>)

Moch. Sahri, Octavianus Hutapea, Musliha Nourma Romadhoni, Friska Ayu, Efi Sriwahyuni, Shamsul Bahari Shamsudin

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ORIGINAL ARTICLE

The description of mothers' knowledge of exclusive breastfeeding according to the maternal characteristics at Dr. Ramelan Central Naval Hospital, Surabaya (<https://www.balimedicaljournal.org/index.php/bmj/article/view/3745>)

Anne Marie Mantofa, Peter Prayogo Hsieh, Fricilia Mapantow, Monique Wongsodiharjo, Exousia Kirana Chandra, Devina Theo Hengky Handoyo, Rizqi Rokhmadoni Pikir, Dian Ardana

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ORIGINAL ARTICLE

Drug-Induced Liver Injury (DILI) related to Propylthiouracil (PTU) in hyperthyroidism with liver cirrhosis
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4206>)

Arina Salsabila, Ulfa Kholili, Hermina Novde

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The effectiveness of the ERACS (Enhanced Recovery After Caesarean Surgery) method on postoperative pain and the onset of colostrum excretion
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4324>)

Esty Puji Rahayu, Fauziyatun Nisa, Ratna Ariesta Dwi Andriani, Fritria Dwi Anggraini

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ORIGINAL ARTICLE

Prognostic scoring system to predict mortality after surgery in resectable colorectal cancer
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4491>)

Aldila Hendy Prihanda Suryaningprang, Agi Satria Putranto, Luthfan Aby Nurachman

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ORIGINAL ARTICLE

Effect of isothiocyanate therapy on trophoblast cell culture-hyperglycemia atmosphere against Tumor Necrosis Factor- α (TNF- α) and Transforming Growth Factor- β (TGF- β) levels
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4016>)

Harry Kurniawan Gondo

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ORIGINAL ARTICLE

Characteristics of patients with nasopharyngeal carcinoma in Dr. Soetomo General Academic Hospital Surabaya
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4228>)

Nasopharyngeal Carcinoma
Audi Wahyu Utomo, Achmad Chusnu Romdhoni

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ORIGINAL ARTICLE

Impact of preeclampsia on the outcome of COVID-19 infection
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4341>)

Jonathan Kevin Djuanda, M. Aidika Akbar, Agus Sulistyono, Rozi Aditya, Ernawati

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ORIGINAL ARTICLE

Prostate specific antigen-age volume score in predicting prostate cancer among the Indonesian population
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4517>)

Agus Rizal Ardy Hariandy Hamid, Putu Angga Risky Raharja, Fakhri Rahman, Chaidir Arif Mochtar, Rainy Umbas

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ORIGINAL ARTICLE

The influence of social media on the treatment and psychosocial of acne vulgaris patient
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4076>)

Kristin Stephanie, Nelva Karmila Jusuf, Imam Budi Putra

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Community behavioral change and attitudes on the health protocol during the Covid-19 vaccination period and level 1 restriction (PPKM) (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4269>)

Reny Sulistyowati, Khoirunnisa, Vissia Didin Ardiyani, Syam'ani

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Abstract

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High levels of interleukin-6 and triglycerides and low levels of soluble leptin receptors as risk factors for leptin resistance in obese adolescents (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4371>)

Komang Januartha Putra Pinatih, I Putu Gede Karyana, Ni Nyoman Metriani Nesa, Ni Luh Sri Apsari, Desak Made Wihandan

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4371/2693>)

ORIGINAL ARTICLE

Efficacy and safety of microsurgical varicocelectomy with subinguinal and inguinal approaches: a systematic review and meta-analysis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4528>)

Muhammad Wahyu Ali, Agung Ravi Saputra Sangadji, Yufi Aulia Azmi, Fikri Rizaldi, Duddy Moesbadianto Soebadi

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Abstract

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Effect of dexmedetomidine administration on malondialdehyde levels in lower extremity surgery using tourniquets (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4386>)

Bayu Wijanarko, Prananda Surya Airlangga, Mariza Fitriati, Christrijogo Sumartono, Prihatma Kriswidyatomo, Pudji Lestari

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ORIGINAL ARTICLE

Bevacizumab and triamcinolone acetonide intravitreal effect on Transforming Growth Factor Beta (TGF-β) and Plasminogen Activator Inhibitor-1 (PAI-1) expression in open globe injury model (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4534>)

Kautsar Abiyoga, Delfitri Lutfi, Yulia Primitasari, Citra Dewi Maharani, Clarisa Finanda, Wimbo Sasono, Nurwasis, Evelyn Komarath, Joko Legowo

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ORIGINAL ARTICLE

The role of mean platelet volume (MPV) and platelet distribution width (PDW) pre-operating as sepsis indicators in laparotomy patients in Dr. Zainoel Abidin Hospital Banda Aceh, Indonesia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4116>)

Darul Illah, Dien Adi Syahputra, Muhammed Yusuf

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Abstract

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ORIGINAL ARTICLE

Comparison of freeze dried human amniotic membrane and its combination with platelet rich fibrin for the epithelial acceleration in an acute wound excision using Rattus Novergicus study model (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4300>)

Yanuar Ari Pratama, Lobredia Zarasade, Beta Subakti Nata'atmadja, Arif Rahman Nurdianto

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4300/2690>)

ORIGINAL ARTICLE

Determinants of fracture patients in nonunion or delayed union
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4427>)

Su Dije To Rante, S. M. J. Koamesah, Prisca Pakan, Conrad Liab Hendricson Folamauk

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REVIEW

Effectiveness of relevant interventions with readiness for discharge in transitional care of low birth weight infants: a systematic review (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4314>)

Resti Utami, I Dewa Gede Ugrasena, Ernawati, Yuni Sutyanti Ariet, Wesiana Heris Santy

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REVIEW

The effect of bisphosphonate and platelet-rich plasma in anterior cruciate ligament reconstruction: an article review (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4292>)

Tangkas Sibarani, Bambang Purwanto, Ambar Mudigdo, Brian Wasita

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REVIEW

The role of stem cell secretome on spinal cord injury regeneration: a systematic review and meta-analysis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4131>)

I Nyoman Semita, Dwikora Novembri Utomo, Heri Suroto

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REVIEW

Lupus nephritis and kidney transplantation: past, present and future
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4456>)

Dana Pramudya, Decsa Medika Hertanto, Afina Thara Pitaloka, Artaria Tjempakasari, Pranawa

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REVIEW

Clinicopathological and Prognostic Significance of SRY-Box Transcription Factor 2 (SOX2) Overexpression in Central Nervous System Tumor: A Meta-Analysis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4493>)

I Gede Aswin Parisya Sasmana, Sinta Wiranata, Komang Chandra Yogananda, Desak Made Wihandani, I Gede Putu Supadmanab

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REVIEW

Comparison of the efficacy of hot saline irrigation and tranexamic acid on Boezaart score, intraoperative blood loss, and duration of surgery in functional endoscopic sinus surgery: a systematic review and meta-analysis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4362>)

Timmy Wibisono, Budi Sutikno, Titiek Hidayati Ahadiyah, Budi Utomo, Citrawati Dyah Kenconowungu

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REVIEW

Topical nonsteroidal anti-inflammatory drugs in the prevention of pseudophakic cystoid macular edema following phacoemulsification: A systematic review (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4079>)

Ni Putu Ayu Pande Arista Dewi, Cokorda Istri Dewiyani Pemayun

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REVIEW

Determinants of patient satisfaction after total knee arthroplasty (TKA): a literature review
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4529>)

Anggi Dwi Putera, Muhamad Hasan, Muhammad Riyadli, Muhammad Nadrir Fakhry

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REVIEW

Managing and diagnosing fibromyalgia in psychiatry
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4289>)

Popy Arizona, Yunias Setiawati

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REVIEW

Effect of platelet rich fibrin membrane on the expression of smooth muscle actin and transforming growth factor beta in corneal wound healing Pseudomonas aeruginosa keratitis patient: a literature review
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4535>)

Bimanda Rizki Nurhidayat, Nurwasid, Evelyn Komaratih

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REVIEW

The immune response of SARS-CoV-2 vaccine in population with obesity: a systematic review
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4170>)

Nur Arafah, Geot Soegjono, Laksmi Wulandari

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REVIEW

The role of Platelet Rich Fibrin (PRF) membrane and conjunctival autograft on TGF- β and collagen type 1 expression in conjunctival wound healing: a literature review (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4310>)

I Nyoman Ananta Karisma, Wimbo Sasono, Susy Fatmariyanti

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REVIEW

Intravitreal triamcinolone acetonide and bevacizumab injection as prevention of proliferative vitreoretinopathy in open globe injury (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4339>)

Kautsar Abryoga, Yulia Primitasari, Delfitri Lutfi

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REVIEW

Platelet rich fibrin effect in MMP-9 and TIMP-1 expression as bacterial keratitis therapy
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4385>)

Oggy Satriya Putra, Nandang Sudrajat, Bimanda Rizki Nurhidayat, Luki Indriaswati, Yulia Primitasari

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REVIEW

Efficacy of topical medroxyprogesterone acetate 1 % and topical doxycycline reduce MMP-9 and TGF- β 1 expression as corneal ulceration due to alkali burn: literature review
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4278>)

Anindita Juwita, Lukisari Agustini, Rozalina Loebis, Ismi Zuhria, Ridholia, Chrismawan Ardianto

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REVIEW

Epigallocatechin gallate effect on Interleukin-1 and MMP-9 expression as Pseudomonas aeruginosa keratitis adjuvant therapy (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4382>)

Tarosa Yodia Urolita, Fariztah Sukainah Nur Fathimah, Annisa Karima, Nurwasli, Ismi Zuhria

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4382/2803>)

REVIEW

Comparison of Cost-Effectiveness Analysis (CEA) between sevoflurane inhalation anesthetic and Propofol Total Intravenous Anesthesia (TIVA) in craniotomy surgery: a literature review (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4390>)

Petrus Davi Onko Rehi

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4390/2828>)

REVIEW

The role of Resveratrol as a neuroprotective agent in the prevention of retinal ganglion cell loss in ischemic reperfusion injury animal model: a literature review (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4449>)

Amelia Shinta Prasetya, Evelyn Komaratih, Wimbo Sasono, Mercia Chrysanti, Maria Debora Niken Larasati, I Ketut Sudiana

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Abstract

pdf (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4449/2829>)

CASE REPORT

The outcome of leprosy associated asthma in pregnancy: a case report (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4081>)

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Abstract

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CASE REPORT

Efficacy of 1064nm neodymium-doped yttrium aluminum garnet (Nd: YAG) laser and 2940nm fractional erbium laser for severe acne with acne scar: a case report (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4107>)

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Abstract

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CASE REPORT

Non-motor seizure diagnosed after mild traumatic brain injury: a case report (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4402>)

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CASE REPORT

Scleromalacia perforans in young patient: a unique case (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4560>)

a unique case
Annisa Karima, Delfini Irfi, Awallid, Ismi Zuhria

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CASE REPORT

Cryptococcal meningoencephalitis in an immunodeficiency virus positive patient coinfectd with tuberculosis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4180>)

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CASE REPORT

A-39 year old, nulligravida woman with giant leiomyomas: a case report (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4275>)

Endy Cahyono, Teuku Mirza Iskandar, Ediwibowo Ambari, Very Great Eka Putra, Lubena, I Made Prasetya Wardana

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CASE REPORT

Workplace interventions to overcome stigma and depression in patients with Multiple drug-resistant tuberculosis (MDR TB) (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4287>)

Keylie Magña Mawey, Azimatul Karimah, Tutik Kusmiati

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CASE REPORT

Diagnosis of high-grade prostate cancer in patients with unexpectedly low prostate specific antigen levels: a rare case series (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4486>)

Armad Fauzan, Wahjoe Djelisesanto

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CASE REPORT

Chronic limb-threatening ischemia Rutherford VI, successful infra inguinal stenting: a case report (<https://www.balimedicaljournal.org/index.php/bmj/article/view/3962>)

Putri Oktaviani Zulfia, Yopie Afriandi Habibie

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CASE REPORT

A Stevens-Johnson syndrome due to rifampicin in a patient with acquired immune deficiency syndrome (AIDS) and pulmonary tuberculosis (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4249>)

Aiza Dwitri Aminditya, Ari Beskora

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CASE REPORT

A case report of a woman with SLE and lupus enteritis as the first manifestation of active systemic lupus erythematosus (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4291>)

Fitria Yulistawati, Awallie

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CASE REPORT

Successful treatment of superior vena cava syndrome due to internal jugular vein thrombosis in a 55-year-old man with comorbid diabetes mellitus type 2 and pneumonia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4538>)

Rezdy Tofan, Shinta Oktya Wardhani, Arif Rahman Nurdianto

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CASE REPORT

Prediction of criminal profiles based on forensic medical investigations in Banda Aceh, Indonesia (<https://www.balimedicaljournal.org/index.php/bmj/article/view/4125>)

Ia'ufik Suryedi, Kulsum

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CASE REPORT

Brunner's gland hyperplasia as a cause of gastric outlet obstruction in a seven year old boy
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4484>)

Ni Nyoman Metriani Nesa, Andy Darma, Alpha Fardah Athiyah, IGM Reza Ranuh, Khadijah Rizky Sumitro, Subjanto Marto Sudarmo

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CASE REPORT

Progressive ovarian sertoli – leydig cell tumor: case report
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A patient with acute fatty liver of pregnancy (AFLP) with acute pancreatitis manifestations
(<https://www.balimedicaljournal.org/index.php/bmj/article/view/4288>)

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Committee of 15th MICTOPH 2022

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SOD2 and HIF-1 α expression in rat ovaries (*Rattus norvegicus*) administered with forest bee honey (*Apis dorsata*) following physical stress



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ABSTRACT

Introduction: Excessive physical activity can pose risks to various organs due to induced stress. This study aims to investigate the impact of the supplementation of wild bee honey on the expression of SOD2 and HIF-1 α in rats undergoing the forced swimming test (FST) as a model of physical stress.

Methods: As many as 24 adult female rats were categorized into four groups: control (C) with FST only; (T1) FST and honey supplementation of 2 g/day; (T2) FST and honey supplementation of 4 g/day; and (T3) FST and honey supplementation of 6 g/day. The FST was conducted for 5 minutes daily over a period of 14 days. The collected ovaries were histopathologically prepared and subjected to immunohistochemical staining for SOD and HIF-1 α proteins.

Results: The findings of this study revealed an increase in SOD2 expression in the group supplemented with honey. Similarly, HIF-1 α expression exhibited a similar trend, with a decrease observed in the group receiving 6 g/day of honey. However, these three parameters did not demonstrate significant differences among them.

Conclusion: In conclusion, honey supplementation does not significantly influence the expression of SOD2 and HIF-1 α in the ovarian follicles of rat models subjected to physical stress.

Keywords: Endogenous antioxidants, hypoxia, natural medicine, oxidative stress, physical activity.

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INTRODUCTION

Regular physical activity and exercise offer numerous health benefits but can also have implications for female fertility.¹ Engaging in exercise at appropriate levels promotes muscle contraction, improves blood circulation, and enhances oxygen supply.² Nonetheless, exercise is known to elicit stress responses in humans and animals, with the degree of stress influenced by exercise type, intensity, and duration.³

Intensive swimming, as a form of high-intensity physical activity, has significantly decreased the total number of ovarian follicles compared to moderate physical activity.¹ The hormone cortisol indicates stress in the body⁴ and inhibits the synthesis of brain-derived neurotrophic factor (BDNF), which plays a protective role against malondialdehyde (MD) toxicity. MD is a marker of oxidative stress caused by reactive oxygen species (ROS).⁵ Excessive ROS production can encompass

oxidative stress and contribute to ovarian disorders.⁶

The body relies on the antioxidant defense system to eliminate surplus ROS and maintain ovarian homeostasis.⁶ This defense system encompasses both enzymatic and non-enzymatic antioxidants. Enzymatic antioxidants, such as superoxide dismutase (SOD), catalase (CAT), glutathione reductase (GR), and glutathione peroxidase (GPx), play crucial roles in maintaining ROS balance.⁷ Specifically, the three SOD enzymes (SOD1, SOD2, and SOD3) are activated in the presence of catalytic metals (Cu or Mn) and catalyze the conversion of O₂^{•-} to H₂O₂.⁸

Hypoxic conditions are strongly associated with heightened intracellular oxidative stress, specifically through increased ROS production at the mitochondrial respiratory complex III.⁹ In the face of Hypoxia Inducible Factor-

1 α (HIF-1 α) activation has long been recognized as a regulator of exercise-induced oxidative adaptation.^{10,11} HIF-1 protein levels rise significantly during low oxygen concentrations.¹¹ HIF-1 activation facilitates glucose utilization and rapid ATP generation at the cellular level, benefiting proliferating cells and cells facing stressors like nutritional deficiencies and damage from physical, chemical, and mechanical causes.¹¹

Indonesia, renowned for its rich biodiversity, boasts abundant natural resources with potential therapeutic applications for various ailments.¹² Forest honey, derived from the nectar collected by *Apis dorsata* bees, represents a variety of polyfloral honey indigenous to Indonesia.¹³ Honey, a readily available natural substance, contains carotenoids, ascorbic acid, simple sugars, flavonoids, and phenolic acids.¹⁴ Previous studies have explored the administration of

honey to animal models with various oxidative stress models. Under conditions of oxidative stress, honey's antioxidants act as scavengers of free radicals and have demonstrated an ability to enhance the production of SOD, CAT, and GPx and improve the liver's histological structure in rat models.^{15,16} Additionally, administering honey to malnourished rats for five days increased SOD activity, anti-inflammatory cytokines, and regenerated ovarian tissue while decreasing MDA and pro-inflammatory cytokines.¹³ This study aims to examine the effects of administering forest bee honey on the expression of SOD2 and HIF-1 α proteins in the ovarian follicles of rats subjected to physical stress.

METHODS

Experimental animals

Female Wistar rats (*Rattus norvegicus*) weighing an average of 200 grams at three months were utilized as experimental animals. As many as 24 rats were randomly assigned to four treatment groups. The rats could acclimate for seven days with adequate food and water. During the study, the rats were kept in cages measuring 53 x 30 x 17 cm, furnished with wood chips as bedding, and housed in a room maintained at a humidity level of 50% and a temperature of 34 °C. To induce animal stress and simulate depression, the forced swimming test, as described by Porsolt,¹⁷ was employed. The rats were subjected to daily swimming sessions lasting five minutes for a period of 14 days in a barrel filled with water, with the water level at approximately 2/3 of the barrel's height.

Experimental procedure

The rats were divided into four treatment groups: Group C underwent the forced swimming test (FST) only; Group T1 underwent FST and received 2 g/day of honey supplementation; Group T2 underwent FST and received 4 g/day of honey supplementation; and Group T3 underwent FST and received 6 g/day of honey supplementation. The FST was conducted for 14 days, and honey supplementation was administered orally via gavage. On the 15th day, the rats were sacrificed, and a laparotomy procedure was performed to collect the ovaries.

Tissue processing

The collected organs were processed for histological examination according to the following procedure:¹⁸ the ovaries were fixed in 10% neutral buffered formalin. After that, the tissues were dehydrated using a series of alcohol gradients and cleared with xylene. Subsequently, the tissues were impregnated with molten paraffin at temperatures ranging from 56 to 60 °C. Thin serial sections measuring 3 μ m in thickness were cut from the solid tissue blocks, washed, and mounted on glass slides.

Immunohistochemistry staining

After deparaffinization and rehydration, the tissue slides underwent a 10–15-minute incubation with hydrogen peroxide, followed by a 5-minute blocking step. Primary antibodies (SOD, 1:200; HIF-1 α , 1:200) were then applied to the slides and incubated for 60 minutes, followed by incubation for 30 minutes with secondary antibodies. The slides were then treated with streptavidin peroxidase for 10 minutes, and DAB chromogen and substrate were added for a duration of 15 minutes. To conclude, counterstaining was performed using Mayer's hemalum solution.

Statistical analysis

The immunohistochemical protein expressions in ovarian follicles were recorded using a Nikon Eclipse Ci microscope at a magnification of 200x, and their interpretation was conducted utilizing the IRS scoring system. Positive expression was identified when a brownish-yellow color change, resulting from

antigen-antibody binding in the granulosa cells of ovarian follicles, was observed. Five fields of view were examined, and the results were averaged. The obtained data were subsequently subjected to statistical analysis using the Kruskal-Wallis test in SPSS for Windows.

RESULTS

This study aims to assess the efficacy of *Apis dorsata* forest honey in alleviating ovarian disorders induced by physical stress by evaluating the expression levels of enzymatic antioxidant SOD2 and the key protein HIF-1 α under hypoxic conditions.

Immunohistochemical analysis was performed to examine the expression of SOD2 and HIF-1 α . The results of the SOD2 analysis revealed increased protein expression in groups T1 (16.06), T2 (17.81), and T3 (20.50) compared to the control group (C) without honey supplementation (11.63). However, these differences did not reach statistical significance ($p > 0.05$), as shown in Table 1 and Figure 1.

Similarly, the analysis of HIF-1 α expression demonstrated a slight increase in the T1 (17.75), T2 (18.63), and T3 (19.56) groups compared to group C (10.06). Nevertheless, the observed variances were not statistically significant ($p > 0.05$), as denoted in Table 1 and Figure 2.

DISCUSSION

The forced swimming test, coupled with honey supplementation, demonstrated an increase in the expression of SOD2, with the highest response observed in the T3 group receiving a dose of 6 g/day of honey.

Table 1. Mean of SOD and HIF-1 α expression in all treatment groups with no significant difference ($p > 0.05$)

Dose Group (grams/rat)	Mean Rank	
	SOD	HIF-1 α
0 (C)	11.63	10.06
2 (T1)	16.06	17.75
4 (T2)	17.81	18.63
6 (T3)	20.50	19.56
Asymp. Sig.	0.278	0.157

Notes: C refers to the control group receiving only the forced swimming test (FST); T1 represents the treatment group receiving FST and a daily dose of 2 g honey; T2 corresponds to the treatment group receiving FST and a daily dose of 4 g honey; T3 denotes the treatment group receiving FST and a daily dose of 6 g honey.

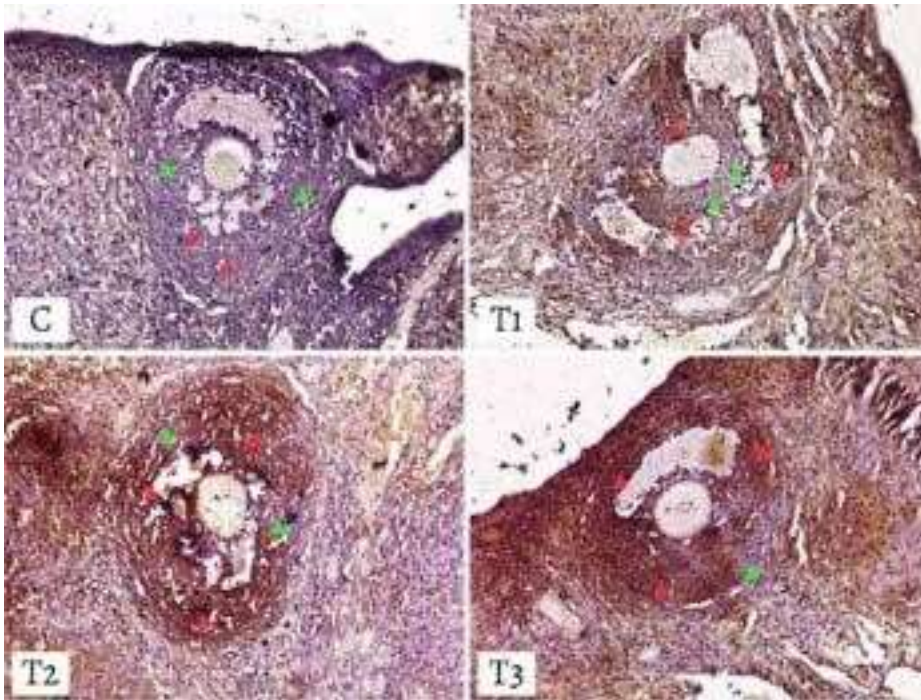


Figure 1. Immunohistochemical staining of SOD2 expression in hepatocytes of rats subjected to physical stress. The four groups depicted are: FST without honey (C), FST with a daily dose of 2 g honey (T1), FST with a daily dose of 4 g honey (T2), and FST with a daily dose of 6 g honey (T3). The green arrowheads indicate granulosa cells that did not exhibit SOD2 expression, while the red arrowheads indicate granulosa cells expressing SOD2. Notably, all groups exhibit brownish-yellow coloration indicative of protein expression, ranging from moderate to strong intensity. The T3 group demonstrates the strongest intensity among the groups. The image is magnified at 200x.

Similarly, the expression of HIF-1 α in ovarian follicles exhibited an upward trend, reaching its peak in the T3 group (honey supplementation, 6 g/day). However, statistical analysis indicated that these findings were not significant ($p > 0.05$), as depicted in Table 1. Figures 1 and 2 visually represent the immunohistochemical staining, illustrating the expression of SOD2 and HIF-1 α .

Honey is known for its antioxidant properties, which are beneficial in mitigating cell damage caused by physical stress and reactive oxygen species (ROS). Additionally, previous studies have shown that honey can enhance the production of endogenous antioxidants, including GPx, catalase, and SOD.^{15,16} However, in this study, the significant efficacy of honey supplementation was not established (Figure 2). This result could possibly be attributed to the high concentration of ROS, rendering the dosage used in this study inadequate to counteract

the cellular damage. Consequently, careful consideration should be given to the duration and dosage of honey administration to ensure its optimal benefits to the body.

The immunohistochemistry findings depicted demonstrate an elevation in HIF-1 α expression in the ovaries of rats subjected to the physical stress model. However, no significant differences were observed among the groups. From a physiological perspective, the existence of Hypoxia Inducible Factor-1 α (HIF-1 α) in the ovary is connected with the avascular state found in the dominant follicle.¹⁹ As the antrum of the follicle expands, the distance between the oocyte and theca interna cells, responsible for oxygen distribution, increases, resulting in a hypoxic environment.¹⁹ The activation of HIF-1 α in cumulus cells intensifies during the luteinizing hormone (LH) surge and peaks at ovulation.¹⁹⁻²² This activation initiates the production of the Vascular

Endothelial Growth Factor (VEGF) to facilitate angiogenesis, supporting energy transport in the oocytes even under hypoxic conditions. Although honey supplementation at doses of 2 g/day, 4 g/day, and 8 g/day demonstrated a reduction in cellular damage and subsequent increase in HIF-1 α activation compared to the non-supplemented group, the differences were not statistically significant. These findings suggest that the dosage and duration of honey administration in this study were insufficient to establish the preventive effects of honey supplementation on general ovarian damage in the physical stress model rats.

CONCLUSION

In conclusion, this study determined that the administration of *Apis dorsata* forest bee honey at the specified dosage did not result in a significant augmentation of SOD2 and HIF-1 α expression in the ovaries of rat models exposed to physical stress. Future studies should consider using a more tailored honey dosage and incorporate additional research parameters, such as follicle count and the quantity and quality of ovulated oocytes, to obtain a comprehensive profile of ovarian activity.

ETHICAL CLEARANCE

This study has been approved by the Ethics Commission of the Faculty of Veterinary Medicine, Universitas Airlangga (No. 1.KEH.041.04.2022).

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CONFLICTS OF INTEREST

The author reports that there are no conflicts of interest in this work.

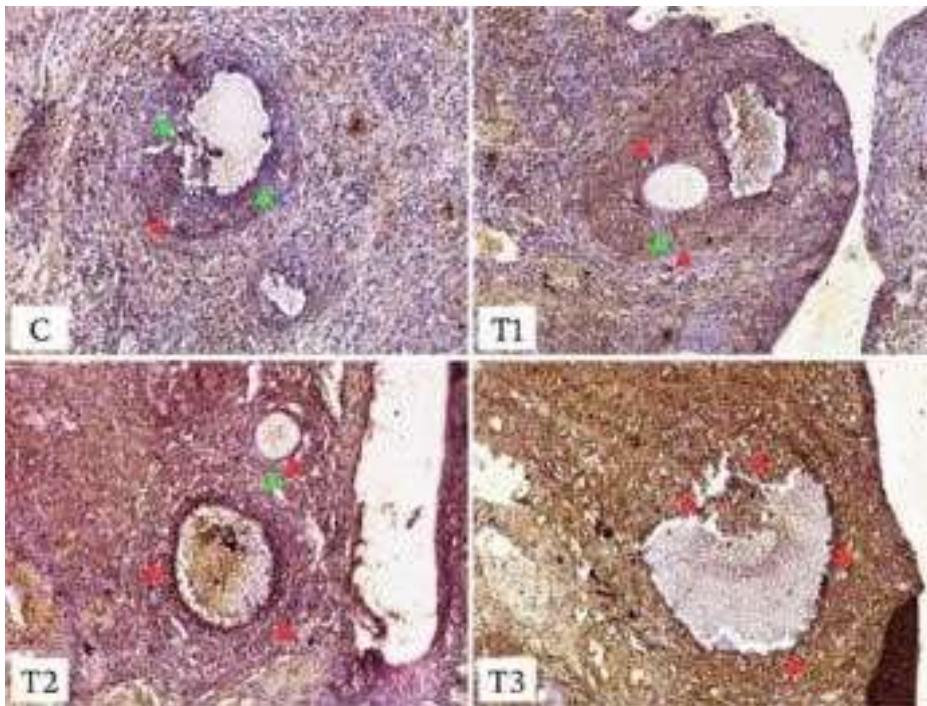


Figure 2. Immunohistochemical staining of HIF-1 α expression in hepatocytes of rats subjected to physical stress. The image is magnified at 200x. The four groups shown are: FST without honey (C), FST with a daily dose of 2 g honey (T1), FST with a daily dose of 4 g honey (T2), and FST with a daily dose of 6 g honey (T3). The brownish-yellow colorations in the image represent protein expression, ranging from moderate to strong intensity, found in all groups. Notably, the strongest intensity is observed in the T3 group.

AUTHOR'S CONTRIBUTION

All authors contributed equally to this review article

REFERENCES

- Rahayu FK, Dwiningsih SR, Sa'adi A, Herawati L. Effects of different intensities of exercise on folliculogenesis in mice: Which is better? *Clin Exp Reprod Med.* 2021;48(1):43-49. <https://doi.org/10.5653/cepm.2020.03937>
- Malm C, Jakobsson J, Isaksson A. Physical Activity and Sports-Real Health Benefits: A Review with Insight into the Public Health of Sweden. *Sports.* 2019;7(5):127. <http://dx.doi.org/10.3390/sports7050127>
- Seyed Saadat SN, Mohammadghasemi F, Ebrahimi H, Rafati Sajedi H, Chatnour G. Ovarian and uterine alterations following forced swimming: An immunohistochemical study. *Int J Reprod Biomed.* 2016;14(10):629-636. <https://pubmed.ncbi.nlm.nih.gov/27921086/>
- Mahabadi N, Doucet A, Wong AL, Mahabadi V. Glucocorticoid Induced Hypothalamic-Pituitary Axis Alterations Associated with Hypogonadotropic Hypogonadism. *Osteol Rheumatol Open J.* 2019;1(1):30-34. https://op.enventio.org/wp-content/uplo_ ads/Glucocorticoid-Induced-Hypothalamic-Pituitary-Axis-Alterations-Associated-with-Hypogonadotropic-Hypogonadism-ORHOJ-1-109.pdf
- Markham A, Bains R, Franklin P, Spedding M. Changes in mitochondrial function are pivotal in neurodegenerative and psychiatric disorders: how important is BDNF? *Br J Pharmacol.* 2014;171(8):2206-29. <https://doi.org/10.1111/bph.12531>
- Liang J, Gao Y, Feng Z, Zhang B, Na Z, Li D. Reactive oxygen species and ovarian diseases: Antioxidant strategies. *Redox Biol.* 2023;62:102659. <https://doi.org/10.1016%2Fj.redox.2023.102659>
- Niu Y, Zhang X, Xu T, Li X., Zhang H, Wu A, et al. Physiological and biochemical adaptations to high altitude in Tibetan frogs. *Front Physiol.* 2022;13:942037. <https://doi.org/10.3389/fphys.2022.942037>
- Fukai T, Ushio-Fukai M. Superoxide dismutases: role in redox signaling, vascular function, and diseases. *Antioxid Redox Signal.* 2011;15(6):1583-1606. <https://doi.org/10.1089/ars.2011.3999>
- D'Aiuto N, Hochmann J, Millán M, Di Paolo A, Bologna-Molina R, Silveira JS, Arocena M. Hypoxia, acidification and oxidative stress in cells cultured at large distances from an oxygen source. *Sci Rep.* 2022;12(1):21699. <https://doi.org/10.1038/s41598-022-26205-y>
- Ohno H, Shirato K, Sakurai T, Ogasawara J, Sumitani Y, Sato S, Imaizumi K, Ishida H, Kizaki T. Effect of exercise on HIF-1 and VEGF signaling. *J Phys Fitness Sports Med.* 2012;1(1):5-16. <https://doi.org/10.7600/jpfsm.1.5>
- Chen S, Sang N. Hypoxia-Inducible Factor-1: A Critical Player in the Survival Strategy of Stressed Cells. *J Cell Biochem.* 2016;117(2):267-278. <https://doi.org/10.1002%2Fjcb.25283>
- Tacharina MR, Ansori ANM, Plumeriastuti H, Kusnoto, Kurnijasanti R, Hestianah EP. Beneficial Effect of Grinting Grass (*Cynodon dactylon*) on the Streptozotocin Induced Diabetes Mellitus in the Mice. *Indian Vet J.* 2020;97(4):35-38. <https://ivj.org.in/journal-article-viewer/e50ce252-7954-464a-80d8-cca6f96aac6/>
- Safitri E, Purnobasuki H, Purnama MTE and Chhetri S. Effectiveness of forest honey (*Apis dorsata*) as therapy for ovarian failure causing malnutrition. *F1000Res.* 2022;11:512. <https://doi.org/10.12688/f1000research.110660.2>
- Moniruzzaman M, Khalil MI, Sulaiman SA, Guan SH. Physicochemical and antioxidant properties of Malaysian honeys produced by *Apis cerana*, *Apis dorsata* and *Apis mellifera*. *BMC Complement Altern Med.* 2013;13:43. <https://doi.org/10.1186/1472-6882-13-43>
- Waykar BB, Alqadhi YA. Protective Role of Honey and Royal Jelly on Cisplatin Induced Oxidative Stress in Liver of Rat. *Int J Pharm Sci Res.* 2019;10(8):3898-3904. [http://dx.doi.org/10.13040/IJPSR.0975-8232.10\(8\).3898-04](http://dx.doi.org/10.13040/IJPSR.0975-8232.10(8).3898-04)
- Mohamed NZ, Aly HF, El-Mezayen HAM, El-Salamony HE. Effect of co-administration of Bee honey and some chemotherapeutic drugs of dissemination of hepatocellular carcinoma in rats. *Toxicol Rep.* 2019;6:875-888. <https://doi.org/10.1016/j.toxrep.2019.08.007>
- Porsolt RD, Le Pichon M, Jalfre M. Depression: a new animal model sensitive to antidepressant treatments. *Nature.* 1977;266(5604):730-2. <https://doi.org/10.1038/266730a0>
- Proboningrat A, Plumeriastuti H, Utama S, Sudjarwo SA, Legowo D, Luqman EM, Widjiati. Effect of Moringa oleifera leaf extract on the Histopathological Features of Testicular Seminiferous Tubules of Mice (*Mus musculus*) Exposed to Methylmercury. *Ecol Environ Conserv.* 2022;28(1):233-237. <http://doi.org/10.53550/EEC.2022.v28i01.031>
- Lim M, Thompson JG, Dunning KR. Hypoxia and reproductive health: Hypoxia and ovarian function: follicle development, ovulation, oocyte maturation. *Reprod.* 2021;161(1):F33-F40. <https://doi.org/10.1530/rep-20-0509>
- Adhi Pangarsa E, Rizky D, Setiawan B, Santosa D, Mubarika Haryana S, Suharti C. Crosstalk between hypoxia and inflammation in non-Hodgkin lymphoma. *Bali Med J.* [Internet]. 2022 Sep. 6 [cited 2023 Jun. 4];11(3):1063-7. Available from: <https://www.balimedicaljournal.org/index.php/bmj/article/view/3491>.
- Darwis P, Yunir E, Kekalih A, Muradi A, Jusman SW, Yuwono HS, Purnomo SH. The association between hypoxia-inducible

factor 1 α tissue concentration and the risk of amputation in diabetic foot ulcer patients. Bali Med J. [Internet]. 2022 Aug. 29 [cited 2023 Jun. 4];11(2):1067-70. Available from: <https://www.balimedicaljournal.org/index.php/bmj/article/view/3508>.

22. ismawati ismawati, Romus I, Mukhyarjon, Salsabilqis J, Wulandari N. Effect of proteasome inhibitor on serum 8-OHdG and aortic SOD2 in a rat model of atherosclerosis. Bali Med J. [Internet]. 2022 Apr. 30 [cited 2023 Jun. 4];11(1):391-6. Available from: <https://www.balimedicaljournal.org/index.php/bmj/article/view/3126>.

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