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Low Cost Mask (Niqab) to Prevent COVID19 Spread in Muslim Countries

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Change Management and Creativity during Pandemic Covid-19 in Indonesia

👤 *Nadia Ashmi Atthahira, Anis Eliyana, Nurzalinar Joesah, Sudarsono, Bahagia Tarigan, Muhammad Ali Ahmad*

SRP. 2021; 12(1): 953 - 959

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.133

Review Article

Adsorption Study Of Basic Fuchsin Dye On The Astragalus Root Surface In Al-Muthanna Province


👤 *Sahar Ismail Naji, Khawla. K. Jasim*

SRP. 2021; 12(1): 850 - 857

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.120

Research Article

Biological Resources of Entomophilous Plants and Melliferous Bees in Russia


 *Vladimir Kulakov, Anna Brandorf*

SRP. 2021; 12(1): 539 - 544

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.77

Review Article

Comparing the Biochemical Effects of Oral Isotretinoin Vs Azithromycin in The Treatment of Moderate to Severe Acne Vulgaris


 *Alaa Shawqi Abdulbari, Noor Mustafa Ali, Ahmed R. Abu Raghif, Nadheer A. Matloob*

SRP. 2021; 12(1): 60 - 64

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.11

Research Article

Increasing of IL-17 and IL-23 levels in Acid-Fast Bacilli Conversion of Drug Resistant Tuberculosis Patients after One Month Treatment


 *Sugiri Yani Jane, Loeki Enggar Fitri, Hani Susianti, Sumarno Reto Prawiro.*

SRP. 2021; 12(1): 771 - 780

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.112

Research Article

Generating the Responses Immune with Honey, Saussurea costus, and Nigella Sativa in Cellular and Humoral May Resolve COVID-19?


 *Sumarno Reto Prawiro, Khoiril Anam, Bobi Prabowo, Rendra bramanthi, Avin Ainur Fitriyaningsih, Dwi Yuni Nur Hidayati, Siwipeni Imawati, Etty Fitria, and Sri Winarsih*

SRP. 2021; 12(1): 1588 - 1593

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.224

Research Article

Response of Cucumber Plants to PGPR Bacteria (Azospirillum brasilense, Pseudomonas Fluorescens and Bacillus Megaterium) and Bread Yeast (Saccharomyces cerevisiae)


 *Hussein Ali Salim, Ali A. Kadhum, Abbas Fadhil Ali, Uday Nayef Saleh, Nassif Hameed Jassim, Ali Rahim Hamad, Jamal Abdulrahman Attia, Jamal Jumaa Darwish, Abdulhafid Falih Hassan*

SRP. 2021; 12(1): 969 - 975

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.135

Research Article

Cases of Adolescent Sudden Cardiac Death During Physical Exercise: Autopsy, Histological Findings

 T. Z. Zhakupova, K. E. Ospanova

SRP. 2021; 12(1): 1343 - 1348

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.188

Research Article

Treatment Satisfaction and Medication Adherence among Hypertensive Patients at Rumah Sakit Umum Daerah Labuang Baji Makassar


 Rusli, Raimundus Chaliks, Neni Widiasmoro, Agust

SRP. 2021; 12(1): 545 - 550

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.78

Research Article

Anti-angiogenic Effect of Black Rice Bran (*Oryza Sativa* L. ? Sembada Hitam?) on Soluble Fms-Like Tyrosine Kinase and Placental Growth Factor in Preeclampsia


 David Randel Christanto, Johanes C. Mose, Tetty Yuniarti, Muhammad Begawan Bestari, Prima Nanda Fauziah, Yekti Asih Purwestri, Jefferson N. Munthe

SRP. 2021; 12(1): 1594 - 1597

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.225

Research Article

The Potential of Refined Tempeh Hydrolyzated Flour as a Raw Material for Functional and Natural Cooking Spices in Indonesia


 Mujiyanto, Wignyanto, Indarwati

SRP. 2021; 12(1): 1437 - 1451

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.205

Review Article

Effect of Mobile Phones on Blood Biochemistry and General Health: A review

 Suad Azeez Hassan, Saad Abdulkareem Mohamed, Aya Nabeel Hameed


SRP. 2021; 12(1): 65 - 67

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.12

Research Article

Identification of BlaTEM and BlaSHV Genes of Extended Spectrum

**Beta Lactamase (ESBL) Producing Escherichia coli from Broilers
Chicken in Blitar, Indonesia**


 *Mustofa Helmi Effendi, Freshinta Jellia Wibisono, Adiana Mutamsari
Witaningrum, Dian Ayu Permatasari*

SRP. 2021; 12(1): 976 - 981

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.136

Research Article

**Comparison of Immunological Surface Marker of CD4 +
Lymphocytes in Patients with Pulmonary Tuberculosis Pre- and
Post-Intensive Phase of Treatment**


 *Herry Priyanto, Muhammad Amin, Jusak Nugraha, Paul Edward
Hutchinson*

SRP. 2021; 12(1): 551 - 556

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.79

Research Article

**Factors Affecting the Quality of Working Life at the College of
Allied Health Sciences, Suan Sunandha Rajabhat University Samut
Songkhram Education Center**


 *Phanee Rojanabenjakun, Jatuporn Ounprasertsuk, Pongsak
Jareanngamsamear, Tipvarin Benjanirat, Sasipen Krutchangthong, Sunatcha
Choawai, Thitinan Jakpet, Jirawat Sudsawat*

SRP. 2021; 12(1): 1349 - 1353

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.189

Research Article

**Increasing Modern Contraceptive Use among Early Marriage
Partners: An Experimental Study in Rural Indonesia**


 *Najib, Efa Nugroho*

SRP. 2021; 12(1): 982 - 986

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.137

Research Article

**Research Study of Management of Drug Related Problems (DRPS)
in Patients with Congestive Heart Failure (CHF)**


 *Gemy Nastity Handayani, Nirmalasari Husain, Yessy Kurniati*

SRP. 2021; 12(1): 1452 - 1458

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.206

Review Article


**Analysis of The Reality of Crisis Management Under the
Circumstances of the COVID-19 Pandemic in Babylon
Governorate: A Case Study**

 *Mina Hilal Mohammed, Bashar Abbas Al-Himyari*

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.13

Research Article

Correlation between Level of Soluble Endoglin and Soluble FMS-Like Tyrosine Kinase-1 on Severe Preeclampsia and Normal Pregnancy


 *Vaulinne Basyir, Prima Nanda Fauziah, Sofie R. Krisnadi, Anita Deborah Anwar, Yanwirasti, Johannes C. Mose, Fadil Oenzil*

SRP. 2021; 12(1): 1598 - 1601

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.226

Research Article

The Antioxidant Effect of Indonesian Propolis In Rats Induced by Anthrax Spores


 *Dhani Redhono, Bambang Purwanto, Brian Wasita, Dono Indarto, Rahmat Setya Adji, Arie Kusumawardani, Risya Cilmiaty*

SRP. 2021; 12(1): 557 - 562

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.80

Review Article

The Rate of Carbon Dioxide (CO₂) Emission in Various Ages and Conditions of Balangeran Plant (Shorea Balangeran) at Ombrogenous Peatlands in Central Kalimantan

 *Usis, Sih Winarti, Sosilawaty, Fengky F. Adji, Kitso Kusin, Untung Darung*

SRP. 2021; 12(1): 982 - 991

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.137

Research Article

Improving Foot Peripheral Blood Circulation with Indicators of Ankle Brachial Index (ABI) through Diabetic Foot Spa in Diabetes Mellitus Patients of Type 2


 *Abdul Aziz Alimul Hidayat, Ricky Riyanto Iksan, Buntar Handayani, Isnayati, Rona Febriyona*

SRP. 2021; 12(1): 1354 - 1357

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.190

Review Article

Exploring the Role of Regadenoson As an Ointment Dosage Form in Inducing Wound Healing in Mice

 *Ali Mazin Talib, Abdulkareem H. Abd, Mohammed Hussain Al-Mayahy*

SRP. 2021; 12(1): 76 - 82

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.14

Review Article

Learning and Memory under Stress: A Review Study with Evaluation Techniques

Abdelhadi Alzyoud, Omar AlShorman, Mahmoud Masadeh, Fahad Alkahtani, Ra'ed Bani Abdelrahman

SRP. 2021; 12(1): 1602 - 1610

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.227

Research Article

Interleukin - 6 Relationship on Response of Effectiveness of Mindfulness Based Cognitive Therapy for Cancer in Cervical Cancer Patients

Cut Sheira Elnita, Heru Priyanto, Supriyadi Hari Respati, Uki Retno Budihastuti, Affi Angelia

SRP. 2021; 12(1): 563 - 569

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.81

Research Article

Prognostic Implications of Sokal, Hasford, and EUTOS scores on Complete Hematologic and Early Molecular Responses in Newly Diagnosed Chronic Myeloid Leukemia Patients: A Prospective Cohort Study

Indra Wijaya, Fachreza Aryo Damara, Rully M. A. Roesli, Lelani Reniarti Marsaman, Muhammad Hasan Bashari

SRP. 2021; 12(1): 987 - 992

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.138

Research Article

Investigating the Effects Perceived Value, Technology Adoption, the Level of Value Orientation, and Customer Satisfaction on Buyer Engagement of B2B Marketplace in Indonesia

Muhamad, Edi Abdurachman, Amalia E. Maulana, Pantri Heriyati, Kadek Wiweka

SRP. 2021; 12(1): 1459 - 1478

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.207

Review Article

Chemical Design, Synthesis And Biological Evaluoation Of Mutual Prodrug Of Gabapentin With Different Types Of Phenolic And Alcoholic Antioxidants

Zahraa B. Mohammed and Tagreed N. Omar

SRP. 2021; 12(1): 858 - 868

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.121

Research Article

Machine Learning Methods for Predicting Tumor Volume in Rats after Termination of Complex Treatment with a Varying Dose of Cyclophosphamide

✎ *Konstantin Sarin, Marina Bardamova, Mikhail Svetlakov, Ilya Hodashinsky, Evgeny Kostyuchenko, Denis Pakhmun, Artem Slezkin, Victoria Pakhmunina, Gennadiy Mikhilchenko, Ivan Sidorov*

SRP. 2021; 12(1): 993 - 1005

» Abstract » PDF DOI: 10.31838/srp.2021.1.139

Research Article

Pre and Postnatal Histological Changes in Eyelid and Hyaloid Artery in Rabbits (*Oryctolagus cuniculus*)

✎ *Ali Faris Reshag, Azhar Saleem Khalaf.*

SRP. 2021; 12(1): 1084 - 1087

» Abstract » PDF DOI: 10.31838/srp.2021.1.150

Research Article

Pluchea indica Extract as a Potential Source of Nutrition for Accelerate Wound Healing

✎ *Vinna Kurniawati Sugiaman, Nur Qolbiyatun Nisyah, Niki Anisa, **Natallia Pranata***

SRP. 2021; 12(1): 570 - 573

» Abstract » PDF DOI: 10.31838 / srp.2021.1.82

Review Article

Imatinib Mesylate Adherence in Chronic Myeloid Leukemia Patients: Data from Middle Euphrates Region of Iraq

✎ *Ahmed Mjali, Saja Khudhiar Abba*

SRP. 2021; 12(1): 83 - 87

» Abstract » PDF DOI: 10.31838/srp.2021.1.15

Review Article

Role of Herbal Medicine in Periodontics- A Review

✎ *Prabhu Manickam Natarajan, Asok Mathew, Eyas Abuhijleh, Aesa Alzaroug Jaber, Aysha Al Ansari, B. Bhuvaneshwari, N. Aravindha Babu*

SRP. 2021; 12(1): 1611 - 1613

» Abstract » PDF DOI: 10.31838/srp.2021.1.228

Research Article

Mozzarella Whey Indigenous Yeasts and their Potential in Amino acid and Peptide Production through Fermentation


✎ *Gemilang Lara Utama, Faysa Utba, Yana Cahyana, Roostita L. Balia*

SRP. 2021; 12(1): 1358 - 1366

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.191

Research Article

Immunoassay and Genotyping of Hepatitis C virus in Ramadi City


 *Noor Naji Al-Hayani, Huda Rafaa Al-Alwani, Muntaha M. Hasan Al-alouci.*

SRP. 2021; 12(1): 1088 - 1093

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.151

Research Article

Characterization and Structural Properties of Glycam1 Gene of Some Domestic Animals


 *Nevien M. Sabry, Tarek A. A. Moussa*

SRP. 2021; 12(1): 1006 - 1017

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.140

Review Article

The Biomarkers Associated With Myocardial Infarction


 *Suaad Abaas Lafta, Awatif Hameed Issa, Mazin Abed Hazza, Alaa Hussein Abed*

SRP. 2021; 12(1): 869 - 877

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.122

Research Article

Potential Effect of Jellyfish Aurelia aurita Collagen Scaffold Induced Alveolar Bone Regeneration in Periodontal Disease


 *Ranny Rachmawati, Mohammad Hidayat, Nur Permatasari, Sri Widyarti*

SRP. 2021; 12(1): 1479 - 1486

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.208

Research Article

Correlation between Leprosy Children with Nutritional Status, Personal Hygiene, BCG Vaccination History and Occupancy Density in Gresik Regency


 *FRS Prakoeswa, DI Haerani, UD Ratnaasri, illustrator, Santi Martini, H Soebono, D Husada, HB Notobroto, MY Listiawan, A Endaryanto, CRS Prakoeswa*

SRP. 2021; 12(1): 574 - 578

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.83

Research Article


Potential Extract Ethanol Citrus Amblycarpa as a Bioinsecticide Against Aedes Aegypti Larvae

 *Kasman, Nuning Irnawulan Ishak, Poedji Hastutiek, Endang Suprihati*
SRP. 2021; 12(1): 1614 - 1618

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.229

Review Article


Association of TH17 cell and IL-17A With Autoimmune Inflammatory Disorders: A Review

 *Abeer Thafer Naji AL-Hasnawi, Sawsan M. Jabbar AL-Hasnawi*
SRP. 2021; 12(1): 88 - 91

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.16

Research Article


Comparison between Dexmedetomidine and Midazolam as an Adjuvant to Lidocaine in Intravenous Regional Anesthesia for below Elbow Surgeries

 *Tarek E. Hassan, Adel R. Botros, Yaser M. Nasr.*
SRP. 2021; 12(1): 1094 - 1102

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.152

Research Article


The Effect of Nano Bentonite Supplementation in Some Carcass Characteristics of Awassi Lambs

 *Hoida Mohammed Khalaf Al-Sudani, Amara Mohammed Saleh Al-Rubeii.*
SRP. 2021; 12(1): 1103 - 1113

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.153

Review Article


Ethnopharmacological Relevance of Eusideroxylon Zwageri Teijsm. et Binnend: A Review

 *Kris Herawan Timotius, Ika Rahayu*
SRP. 2021; 12(1): 1619 - 1623

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.230

Review Article

The Role of Immune System and Sterilization on the Covid-19 Spread Control

 *Hazim Saad Jabbar Al-Maliki, Rana Adnan Fayez Al-jaberi, Abdul Amir H. Kadhum, Moad E. Al-Gazally, Rahem Mahdy Rahem, Sameer H. Abbood Al Competitive*

SRP. 2021; 12(1): 579 - 592

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.84

Review Article

Molecular search of some antibiotic-borne genes of the clinical *Pseudomonas aeruginosa* plasmid

👤 *Raheem Hashim Abdallah, Sanaa Ghali Gabur.*

SRP. 2021; 12(1): 170 - 189

» Abstract » PDF DOI: 10.31838/srp.2021.1.29

Research Article

A Comparison Between The Effect Of Shisha And Cigarette Smoking On Thyroid Function Of Males

👤 *Sundus Kareem Hamzah*

SRP. 2021; 12(1): 1367 - 1370

» Abstract » PDF DOI: 10.31838/srp.2021.1.192

Review Article

The Association of prolactin receptor gene polymorphism with recurrent miscarriage in a sample of Iraqi women

👤 *Hamsa A. Jassim, Sanaa Jasim Kadhim, Header Alhabbobi.*

SRP. 2021; 12(1): 176 - 179

» Abstract » PDF DOI: 10.31838/srp.2021.1.28

Research Article

The 5 Dimensions of Happiness Program in Elderly: A Case Study of Samut Songkhram Elderly Clubs in Samut Songkhram Province

👤 *Jatuporn Ounprasertsuk, Tipvarin Benjanirat, Pornnapa Burankun, Ammara Sanpasa, Kanaphat Toamud, Thanya Jarusing, Pitakpong Jantawong*

SRP. 2021; 12(1): 1487 - 1492

» Abstract » PDF DOI: 10.31838/srp.2021.1.209

Review Article

Review: Characteristics of Whole Wheat Grain Bread Quality

👤 *Medhat M. Elsayhookie, Saddam H. Cheyed, A. A. Dawood.*

SRP. 2021; 12(1): 593 - 597

» Abstract » PDF DOI: 10.31838/srp.2021.1.85

Review Article

Synthesis and preliminary pharmacological evaluation of some new triazole derivatives bearing nabumetone moiety targeting cyclooxygenase enzyme

👤 *Hussien A. Karim, Ayad M.R. Raauf, and Karima F. Ali.*

SRP. 2021; 12(1): 190 - 195

» Abstract » PDF DOI: 10.31838/srp.2021.1.30

Research Article

Association between Glycated Hemoglobin A1c Levels with Genomic Instability in Type 2 Diabetes Mellitus Patients

👤 *Huda Muhammed Muzher, Farha A. Ali Shafi, Abdul Ameer N. Ghloub Alrekabi.*

SRP. 2021; 12(1): 598 - 605

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.86

Review Article

Post-Hospitalization, Levels of D-dimer, C-Reactive Protein, Ferritin, And Lactate Dehydrogenase in Recovered COVID-19 Iraqi Patients

👤 *Tamarah Hmed Ahmed, Noor H. Al-Mousawi*

SRP. 2021; 12(1): 92 - 99

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.17

Research Article

Correlation of the Magnesium Serum Levels in Maternal and Fetal over the Fetal Brain-Derived Neurotrophic Factor (BDNF) after Antenatal Magnesium Sulphate (MgSO₄) Provision in the Preterm Birth Neuroprotection Strategy

👤 *Sri Sulistyowati, Muhammad Adrianes Bachnas, Septiana Ekasari, Agung Sari Wijayanti*

SRP. 2021; 12(1): 1624 - 1629

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.231

Review Article

In Vitro, Evaluation of Antioxidant and Antibacterial Activities of New 1,2,3-Triazole Derivatives containing 1,2,4-Triazole Ring

👤 *Ali Shakir Razzaq, Riyadh J. Nahi.*

SRP. 2021; 12(1): 196 - 200

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.31

Research Article

Potential Pharmacological Options and New Avenues Using Inhaled Curcumin Nanoformulations for Treatment of Post-COVID-19 Fibrosis

👤 *Edward Christopher Yo, Marcello Mikhael Kadharusman, Adrian Prasetya Karman, Melva Louisa, Wawaimuli Arozal.*

SRP. 2021; 12(1): 1119 - 1128

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.155

Review Article

Model Prediction Maximum Oxygen Intake (VO2max) Using the Bleep Test in Male Junior Athletes

✎ Ruliando Hasea Purba, Angela B M Tulaar, Faisal Yunus, Ermita Isfandary Ibrahim, Murdani Abdullah, Tirza Z. Tamin, James Tangkudung.

SRP. 2021; 12(1): 1243 - 1247

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.173

Review Article

Review on the Pharmacological and Health Aspects of Apium Graveolens or Celery: An Update

✎ Aswin Rafif Khairullah, Tridiganita Intan Solikhah, Arif Nur Muhammad Ansori, Akvyan Rafi Hidayatullah, Erwan Budi Hartadi, Sancaka Cashyer Ramandinianto, Amaq Fadholly

SRP. 2021; 12(1): 606 - 612

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.87

Review Article

The Correlation of Maternal and Fetal Blood Irisin with Fetal Growth Pattern and Birth Weight

✎ Esraa Hameed Humadi Al-Maini, Maysoon Shallal Mizher, Farah Fadhil Shafi

SRP. 2021; 12(1): 359 - 366

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.56

Research Article

The Effectiveness of an Emotional Intelligence Promotion Program in the Emotional Intelligence of Preschool Children in Kanchanaburi Province

✎ Jatuporn Ounprasertsuk, Wanich Suksatan.

SRP. 2021; 12(1): 613 - 617

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.88

Research Article

Antidiabetic Effects of Tithonia diversifolia and Malus domestica Leaf Extracts in Alloxan-Induced Sprague Dawley Rats

✎ Fatmawaty Yazid, Shania O. Salim, Faizal D. Rahmadika, Rosmalena Rosmalena, Nina Artanti, Andini Sundowo, Vivitri D. Prasasty

SRP. 2021; 12(1): 1630 - 1638

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.232

Review Article


Assessment Of Vitaminb12, Copper And Potassium Levels In Adults Patients With Tinnitus In Hilla City ?Iraq

✎ Fatema Jassim Mohammed AL-Kanani, Ban Mahmood Shaker Al-joda,

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.193

Review Article

COMPARISON BY SERUM HUMANIN BETWEEN WOMEN WITH PREECLAMPSIA AND WOMEN WITH UNCOMPLICATED PREGNANCIES


 *Basma Z. Jameel, Maysoon Shallal Mizher, Zinah Wajeesh Hammad.*

SRP. 2021; 12(1): 201 - 206

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.32

Review Article

X-ray Sensor Used for Digital Dental Imaging

 *Ali Hussein Abduljabar, Ziad Tarik Al-Dahan*

SRP. 2021; 12(1): 367 - 370

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.57

Research Article

Effect of Beluntas Leaf Extract (*Pluchea indica*) on Oral Mucosal Wound Healing in Terms of Density of Inflammatory Cells and Collagen


 *Natallia Pranata, Gabriella Evita Datu Boli, Rabecka Sinta, Vinna Kurniawati Sugiaman.*

SRP. 2021; 12(1): 618 - 622

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.89

Review Article

Therapeutic Effect of Vitamin A on COVID-19 Patients and Its Prophylactic Effect on Contacts


 *Mahmood M. Al-Sumiadai, Hazim Ghazzay, Rafi Khaleel Al-Ani.*

SRP. 2021; 12(1): 207 - 210

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.33

Review Article

Synthesis, Characterization and Spectral Studies and Biological Screening Study of Transition Metal Complexes with New Heterocyclic Ligand Derived from Pyridoxal Hydrochloride


 *Muna Abass Hadi, Mithaq Saeed Mohammed, Afaq Jaber Kadhium*

SRP. 2021; 12(1): 371 - 383

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.58

Review Article

RULES-RAISED ETHICAL ISSUES DURING THE COVID-19 PANDEMIC IN INDONESIA


 *Gunawan Widjaja, Hotmaria Hertawaty Sijabat.*

SRP. 2021; 12(1): 623 - 632

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.90

Research Article

Early Onset Sepsis Risk Calculator and Vitamin D Level in Newborn Exposed to Premature Rupture of Membranes


 *Helmy AS, ELMeneza SA, ELBagoury IM*

SRP. 2021; 12(1): 1375 - 1380

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.194

Review Article

Evaluation of some Heavy Metals in three aquatic plants in Sulaimani Governorate/ Kurdistan Region- Iraq


 *Yousry Sadoon Rasheed, Mohammed Rawf Hussain, Mahmoud Mustafa Al-Mahdawi.*

SRP. 2021; 12(1): 211 - 216

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.34

Research Article

Effect of Tamarind (*Tamarindus indica* L.) to Increase Force Expiratory Volume in One Second (FEV1) among Active Smokers


 *Saminan Saminan, Nirwana Lazuardi Sary, Rezania Razali, Linda Julisafrida*

SRP. 2021; 12(1): 1248 - 1250

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.174

Review Article

Adsorption Thermodynamics of a Ciprofloxacin Drug from Aqueous Solutions on [Graphene Oxide/ poly Acrylic Acid /Microcrystalline Cellulose] Composite


 *Zainab Hashim Khudhair, Layth Sameer Jasim*

SRP. 2021; 12(1): 384 - 393

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.59

Review Article

An Interpretation of Algorithm Results for Narrative Blood Chemistry Laboratory: A Systematic Review


 *Djuna Lamondo, Ismail Husein, Sudirman Suparmin, Unang Wahidin, Marischa Elveny, Rahmad Syah, Sigit Apriyanto, Muqdad Irhaeem Kadhim, Abeer Hamoodi Jabbar, Sonya Hariska Lubis..*

SRP. 2021; 12(1): 217 - 224

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.35

Review Article

Production Of ?? Amylase By Fungi Isolated From Oil-Contaminated Soil In Karbala, Iraq


 *Alaa Abdul Hussein Kareem Al- Daamy*

SRP. 2021; 12(1): 878 - 883

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.123

Review Article

IMPACT OF DANGEROUS ENVIRONMENTAL AND HYGIENIC REASONS ON CHILDREN'S- HEALTH


 *Tuktibayeva S. A., Ishigov I.A., Babayeva & 1050;S., Akhtamanov J.M., Zhumabekova R.B., Kulmakhanbetova A.M..*

SRP. 2021; 12(1): 633 - 639

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.91

Research Article

Capacity Building of Kader Dakwah Sehat as Stunting Prevention in Islamic Boarding School


 *Pulung Siswantara, Riris Diana Rachmayanti, Muthmainnah, Astri Meidah Setiawati.*

SRP. 2021; 12(1): 225 - 230

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.36

Review Article

E-Learning Design Based on Moodle to Develop Mathematical Communication Skills of Students


 *Fatimatus Solihah, Suparman, Bahran Taib, Tedy Machmud, Misran Rahman, Muhammad Syakir Y Hairun, Roswita M. Aboe, Farida Ardiani, Selfi Artika*

SRP. 2021; 12(1): 394 - 401

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.60

Review Article

Fermentation extract of *Penicillium italicum* and *Fusarium oxysporum* and a statement of its Biological Effectiveness

 *Heyam G. Al Mousawi, Raghda Abbas Razaq*

SRP. 2021; 12(1): 1493 - 1500

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.210

Research Article

The Indonesian Government Strategy of Herd Immunity in Handling of Pandemic COVID 19

Andi Azikin, Baharuddin Thahir, Andi Masrich, Siti Zulaika, Jatnika Dwi Asri, Anya Risnawati Soerya Putri, Etin Indrayani, Yoyok Cahyono, Djuhrrijjani, Fitriani, Intan Rachmina Koho, Asri Setiani.

SRP. 2021; 12(1): 640 - 647

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.92

Review Article

Effect Of Topically Applied Melatonin And Their Combination With Minoxidil Solution For Enhancement Of Hair Growth In Male Mice

Hasanain H. Ali, Sarmad N.Gany, Najah R. Hadi, Rihab H. Al-Mudhafar, Dhefah H. Al-Mudhafar

SRP. 2021; 12(1): 402 - 410

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.61

Research Article

Determinant Factors of Stunting Events of Toddler in Batu City Indonesia

Juin Hadisuyitno, Bastianus Doddy Riyadi, Suprajitno.

SRP. 2021; 12(1): 231 - 234

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.37

Research Article

Predictive Indexes of Tuberculosis Case Under Reporting of Hospital in Kudus, Central Java, Indonesia

Rusnoto, Bhisma Murti, Reviono, Vitri Widyaningsih, Eti Poncorini Pamungkasari, Chatarina Umbul Wahyuni, Sofia Februanti

SRP. 2021; 12(1): 1251 - 1260

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.175

Research Article

Anthology of Forms of Management of Students' Cognitive Activity Institutions of Higher Education in the Use of Modern Information Technologies

Roksoliana Zozuliak-Sluchyk, Nataliia Tytova, Oleksandr Kozliuk, Halyna Salata, Nataliia Ridei, Svitlana Yashnyk, Svitlana Litvinchuk.

SRP. 2021; 12(1): 235 - 241

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.38

Research Article

Understanding LCMS Data for Identification of Chemical Compounds Contained in Rodent Tuber: Timeseries or Not

Iwan Binanto, Harco Leslie Hendric Spits Warnars, Nesti Fronika Sianipar,


Widodo Budiharto.

SRP. 2021; 12(1): 648 - 654

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.93

Review Article

The Anti-Apoptotic, Anti-Inflammatory And Anti-Oxidant Effects Of Olmesartan On Renal I / R Injury In Male Rat Model


 *Ahmed M. Abdul Hameed, Murooj L. Altemimi, Rihab H. Al-Mudhafar, Dhefah H. Al-Mudhafar, Najah R. Hadi*

SRP. 2021; 12(1): 411 - 425

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.62

Research Article

Association of Ki-67 Level on Bone Destruction in Chronic Suppurative Otitis Media Patients with Cholesteatoma


 *Lina Lasminingrum, Sally Mahdiani, Dina Riana.*

SRP. 2021; 12(1): 655 - 660

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.94

Research Article

Assessment of Relationship between Antioxidant Activity, Toxicity and Phenol Content of Cayratia trifolia Ethanolic Extract


 *Muchammad Yunus, Endang Suprihati, Agus Wijaya*

SRP. 2021; 12(1): 1261 - 1266

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.176

Review Article

Work Quality among China Police towards Customer Satisfaction


 *Ban Di1, Qu Daofeng, Mahadevan Supramaniam, Faria Rabbi.*

SRP. 2021; 12(1): 242 - 253

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.39

Review Article

The Association of Dental Health Services Quality with Patient Satisfaction Level in Indonesia

 *Fuad Husain Akbar, Luthfiah Humairah Akhmad.*


SRP. 2021; 12(1): 1 - 10

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.1

Research Article

Factors Associated with Reasons for Contraceptive Discontinuation among Indonesian Women: A Multinomial

Logistic Regression Analysis


 Sari Kistiana, Sri Lilestina Nasution, Mugia Bayu Raharja.

SRP. 2021; 12(1): 661 - 667

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.95

Review Article

Using Of Area Under The Curve Method For The Spectrophotometric Determination Of Betamethasone Sodium Phosphate In Its Pure And Pharmaceutical Forms


 Khalaf F. Alsamarrai, Harith Jameel Mahdi Alsamarraie, and Menaa AbdulSalam Al-Abbasi.

SRP. 2021; 12(1): 254 - 258

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.40

Review Article

Formulation And Evaluation Of Antiretroviral Drug Loaded Unsaturated Phospholipid Based Stealth Liposome


 Ahmed S. Abdul Jabbar, Suhair M. Ashour

SRP. 2021; 12(1): 884 - 888

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Review Article

Impression Techniques for Fixed Partial Denture: A Systematic Review


 Ike Damayanti Habar, Eri Hendra Jubhari, Irfan Dammar, Andres Jordan Siahay, Herawati Hasan, Bashierah Ika Sari, Nina Permatasari, Andre Kusoemo.

SRP. 2021; 12(1): 11 - 15

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.02

Review Article

The Nature Of Dust Storms In Tikrit And Their Effect On Plants


 Muqdad altae, Raghad Mukdad Mahmood, Israa Salman dalas

SRP. 2021; 12(1): 1388 - 1392

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.197

Review Article

Synthesis, Spectral and Biological Studies of Co (III), Ni (II), and Cu (II) Complexes with New Heterocyclic Ligand Derived from Azo dye


 Makarim A. Mahdi, Layth S. Jasim and Moslem H. Mohamed

SRP. 2021; 12(1): 426 - 434

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.63

Research Article

Formulation and Characterization of Chitosan-PEG Nanoparticles based on Cork fish (*Channa striata*) Protein Hydrolysate as a Baseline Research Solution for Treatment of Type 2 Diabetes Mellitus


 *Lintang Dian Saraswati, Bagoes widjanarko, Johannes Hutabarat, Vivi Endar Herawati, Meiny Suzery, Apriliani Ismi Fauziah*

SRP. 2021; 12(1): 668 - 674

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.96

Review Article

Family Planning Methods Knowledge, Attitude And Usage Among Married Women In Reproductive Age In Mosul City.

 *Nadia Hazem Saied*

SRP. 2021; 12(1): 891 - 896

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.125

Review Article

The Effect of Follicular Fluid Supplementation on Embryo Development in Iraqi Buffalo


 *Husamaldeen A. Alsalim, Ihsan A. Habeeb, Ahzan K. Abdulameer*

SRP. 2021; 12(1): 100 - 106

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.18

Review Article

Prevalence Of Poor Oral Health Practices And Problems Among Students In Ajman, UAE

 *Aysha Rashed Al-Suwaidi, Shatha Al-Sharbatti, Sura Ali Al-Bayati.*

SRP. 2021; 12(1): 259 - 267

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.41

Review Article

Prevalence Of Fungi In Clinically Suspected Cases Of Pulmonary Tuberculosis In Iraq, Wasit


 *Hazim Muttair Hussein, Azhar Ali Sekhi, Hassan Saad Sekeb*

SRP. 2021; 12(1): 1393 - 1396

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.198

Review Article

Off-label Prescribing Practice in Pediatric Settings: Pros and Cons

 *Aysha Muthanna Shanshal, Saad Abdulrahman Hussain*

SRP. 2021; 12(1): 1267 - 1275

Review Article

Non-odontogenic Pain and its Treatment: A Systematic Review

👤 *Bahrudin Thalib, Irfan Dammar, Vinsensia Launardo, Pra Purnama Ramadhan, Asmawati, Al'qarama Mahardhika Thalib.*

SRP. 2021; 12(1): 16 - 19

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.03

Research Article

Evaluating The Effect Of Air Abrasive Polishing On Friction And Surface Micromorphology Of Ceramic Brackets Using Different Wires

👤 *Ahmed R. Mohammed Hassan, Shahbaa A. Mohammed*

SRP. 2021; 12(1): 897 - 904

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.126

Review Article

The Role of Administrative Creativity in the Functioning of the Administration of Sports Clubs for Football in Iraq from the Point of View of Players of Excellent Clubs

👤 *Hussein Mousa Hussein, Mohammed Abdulridha Hassan, Awrad Asaad Mahmood*

SRP. 2021; 12(1): 675 - 681

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.97

Review Article

Clinical, Serological and Histopathological Aspect of Celiac Disease at AL-Ramadi Province West of Iraq

👤 *Yasin H. Majeed*

SRP. 2021; 12(1): 435 - 439

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.64

Review Article

Effectiveness Magnetized Water On Multi-Drug Resistance (Mdr) *Pseudomonas Aeruginosa*

👤 *Sarah Amir AbdalAbass, Khalid Hadi Mahdi, Hanna Salih Saba, Nebras Rada Mohammed*

SRP. 2021; 12(1): 1402 - 1405

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.200

Review Article

Evaluation Of Vitamin D Level In Serum Blood Of Rheumatoid Arthritis Patients In Babylon Province

Mustafa Jawad Abed Al Imari, Laith A.I.K. Al-Kaif, Fuad Ghazi Hassan, Saif Anwar Jaafar, Hayder A. A. Al-Asady, Marwa fadhil Alsaffar, Wathiq Essam Hameed, and Ziyad Trik.

SRP. 2021; 12(1): 268 - 271

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.42

Review Article

Copper (II) and Mercury (II) Complexes with Schiff Base ligands from Benzidine with Isatin and Benzoine: Synthesis, Spectral Characterization, Thermal Studies and Biological Activities

Hiyam Hadi Alkam, Eman Mutar Atiyah, Noor Mohammed Majeed, Wasan Mohammed Alwan

SRP. 2021; 12(1): 107 - 115

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.19

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Assessment Knowledge Of Pregnant Women About Tetanus Toxoid Vaccination In Mosul City"

Rana Mohammed Jasim, Shaymaa Riyadh thanoon, Zainab Faisal Alzaidy, Nadia khalaf sulaiman

SRP. 2021; 12(1): 1501 - 1505

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.211

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The Description of Personal Protective Equipment use during the COVID-19 Pandemic Period among Workers in Surabaya

Dani Nasirul Haqi, Shintia Yunita Arini.

SRP. 2021; 12(1): 682 - 685

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.98

Research Article

Risk Factors Of Cervical Spines Osteoarthritis In Adult Women: Case-Control Study

Dhafer Basheer Al-Youzbaki, Nawar Sahib Khalil, Ruqaya Subhi Tawfeeq.

SRP. 2021; 12(1): 272 - 275

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Isolation, Identification and Synthesis of Neolignans from Phoebe declinata Leaves: Molecular Modeling and Anticancer Evaluation


Rosmalena Rosmalena, Vivitri D. Prasasty, Fatmawaty Yazid, Emil Budianto, Berna Elya, Puspa Lotulung, Hanita Omar, Muhammad Hanafi.

SRP. 2021; 12(1): 1129 - 1141

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.156

Review Article

Differences between Iraqi General Dental Practitioners & Orthodontists in Discharging Commitments towards Infection Control Guidelines


 *Fudhla Sadoon Al- Zubaydi, Noor Nourie Abbass Abdulla, Rehab Adil Al-Rawi*

SRP. 2021; 12(1): 440 - 446

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Effect of Lithium Ascorbate on the Biochemical Parameters of Sows


 *Konstantin Sergeevich Ostrenko, Ilya Nikolaevich Medvedev, Valentine Petrovna Galochkina, Viktor Olegovich Lemiasheuski, Elena Sergeevna Tkacheva, Anastasiya Nikitovna Ovcharova, Ivan Vladimirovich Kutin.*

SRP. 2021; 12(1): 20 - 27

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.04

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Rheological Properties of Nanoclay-Polyethylene Composite Through Capillary Rheometry


 *Saja S. Al-Taweel, Hasan M. Luaibi*

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.20

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Association Of The Melatonin Receptor C Gene With Egg Production Traits In Local Iraqi Chicken


 *Israa Luay Hamdan AL-Jaryan, Walaa Salih Hassan, Muhannad Munthir AL-Rekabi*

SRP. 2021; 12(1): 1406 - 1413

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.201

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Comparative Chemical Study For Species Of The Family Poaceae

 *Salwah Hamza Hussein Al-hassnwy, Ruqaya Manoon HasanAl-nomani*

SRP. 2021; 12(1): 905 - 920

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Research Article

The Effect of Ginsenoside 4% on Inflammation, Bacteremia and Clinical Improvement in Community Acquired Pneumonia Patients

Yusup Subagio Sutanto, Reviono Reviono, Jatu Aphridasari, Anita Ramlie, Hendra Kurniawan.

SRP. 2021; 12(1): 686 - 691

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Research Article

Preparation of Healthy Mayonnaise by Using Plant and Animal Gums as Oil Replacer

Inas Mudhafar Khaleel Al-Aubadi.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.157

Review Article

Clinical Profile Of A Group Of Iraqi Children With Transplanted Liver

Rabab Farhan Thejeal.

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[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.44

Review Article

High Neutrophils/ lymphocyte ratio and MPO levels associated with low expression of miRNA-146a and apolipoprotein E in Type2 diabetic patients with atherosclerosis

ANWAR JASIB THAABAN ALMZAIEL, NAWAL KHINTEEL JABBAR, ZAINB NAJAM AL-ABADY, REMAH ABDULHASSAN SABIT

SRP. 2021; 12(1): 124 - 130

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Review Article

Thermal Stability of Novel Maleimide Polymers Based on Dapsone

Zaied A Mosaa and Ezzat Hussein Zimam

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[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.66

Mini Review

The Impact of Nurse Caring on the Recovery of COVID-19 Patients: A Systematic Review


Eni Sumarliyah, Luthfiyah Nurlaela, Andi Mariono, Dede Nasrullah, Ira Purnamasari, Idham Choliq

SRP. 2021; 12(1): 1506 - 1513

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Research Article

Preparation of Mentha Crispata Extract and Detection of its Biological Application.


 *Afnan I. Abdulwahab, Butheina A. Hasoon, Raghad Khwater Maeah, Khalida F. Al-azawi.*

SRP. 2021; 12(1): 1151 - 1155

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.158

Review Article

Biological activity of Nd: YAG laser and Beta, Gamma radiation on Klebsiella pneumoniae resistance Colistin


 *Nebras Rada Mohammed, Hanaa Salih Sabaa and Sanaa Rasool Salim*

SRP. 2021; 12(1): 28 - 33

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.05

Review Article

Synthesis And Characterization Of NTADCIP/P(AA-Co-AM) Composite: Adsorption And Removal Studies Of Drug From Aqueous Solutions


 *Safaa H. Ganduh, Aseel M Aljeboree, Makarim A. Mahdi, Layth S. Jasim.*

SRP. 2021; 12(1): 282 - 289

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.45

Review Article

Effect Of Chlordiazepoxide Oral Tablet On Oral Recurrent Bruxism, A Clinical Trial Human Study


 *Ghadah Ali AL-Oudah, Ameer Hamdi AL-Ameedee, Ali Ameer AL-Ameedee*

SRP. 2021; 12(1): 921 - 924

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.128

Review Article

In Patients with Coronary Heart Disease: Does Oral Hygiene Matter? A Case-Control Study Among Iraqis

 *Iraqis Muntathar Muhsen Abusanna, Ali Falah Hassan, Amal Oleiwi Hassan, Nawres Bahaa Muhammed*

SRP. 2021; 12(1): 458 - 463

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Research Article

Prevalence of Oral Trichomoniasis in Dawn Syndrome Children

with Gingivitis in Baghdad


 Hanaa Kamil Hamad.

SRP. 2021; 12(1): 1156 - 1158

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Review Article

Spectrophotometric Determination of Metoprolol and Atenolol by Iron (III) and Ferricyanide


 Amal H. Mhemeed

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Research Article

Eugenol Nanoparticle Encapsulated Chitosan Enhances Cell Cycle Arrest in HeLa Human Cervical Cancer Cells


 Happy Kurnia P, Riz'q Threevisca C, Dhanang Puruhita TR, Muhammad Nazhif Haykal.

SRP. 2021; 12(1): 692 - 699

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.100

Review Article

Pharmacological Insight into Possible Treatment Agents for the Lethal Covid-19 Pandemic in Kurdistan Region- Iraq

 Diyar Salahuddin Ali, (ID), Hazha Omar Othman (ID)

SRP. 2021; 12(1): 786 - 804

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.114

Review Article

A Chemical Study By Using GC-Mass Spectrometry Of The Peel And Seeds Of Punica Granatum L. Plant


 Arkan Ali Al-Tai, Taiba Falihi Al-Mayyahi

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Review Article

Synthesis And Medicinal Attributes Of Thiazole Derivatives: A Review


 Linda R. Abdu-Rahem, Ahmad Kh. Ahmad, Faris T. Abachi.

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Research Article

Evaluation of Moist Beef Jerky's (dendeng lambok) Nutrition as a Specific-Spiced Traditional Food at West Sumatera, Indonesia


 Rini, Vioni Derosya, Ririn Fatma Nanda, Daimon Syukri

SRP. 2021; 12(1): 1276 - 1281

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.178

Review Article

Study the Effects of some Neuroleptic Drugs on the Haloperidol-Induced Tardive Dyskinesia in Male Mice


 Huda R. Atiyah, Selman M. Selman, Alaa J. Mahrath

SRP. 2021; 12(1): 464 - 469

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Review Article

Effect of Biosurfactant produced from Streptococcus thermophilus against Staphylococcus aureus and some physiological parameters in White Rats Male

 Batool Shakir Abed Almjlawi, Rukaibaa Ali Chechan, Uroba A. Shama

SRP. 2021; 12(1): 137 - 148

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.22

Research Article

Detection of HbA1c in Blood Using Diode Laser (491) nm


 Layla M.H. Al-ameri, Rawaa A. Faris, Sara J. Belal

SRP. 2021; 12(1): 700 - 704

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.101

Review Article

How Does Attitude Towards Behavior, Perceived Behavioral Subjective Norm And Control Program Of Work Unit In Patient Safety? Indonesia: A Descriptive Qualitative Study


 Mirrah samiyah, Usman Hadi, Widodo J. Pudjiraharjo, Nyoman Anita Damayanti, Djazuly Chalidyanto, Retno Dewi Suminar

SRP. 2021; 12(1): 925 - 930

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Research Article

The Current Situation of Anemia and Zinc Deficiency of Children Ages 6-59 Months with Anorexia WHO Examined at National Institute of Nutrition

 Nguyen Trong Hung, Pham Thi Thu Huong, Tran Thi Tra Phuong, Truong Tuyet Mai, Nguyen Thi Lam, Nguyen Thi Luong Hanh, Nghiem Nguyet Thu, Nguyen Hong Truong, Le Danh Tuyen

SRP. 2021; 12(1): 1422 - 1425

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Review Article

**Pathogenicity of Metabolites of Nematophagous Fungus
Paecilomyces Lilacinus Against the Larvae of Anopheles Stephensi
And Culex Quinquefasciatus**

👤 *Mohammed R. Annon Al- hasnawi*

SRP. 2021; 12(1): 40 - 44

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Review Article

**Design Of Primer And Probe To Detect SNP Rs 1892901 In Fosl-
1Gene In Different Types Of Cancer In Iraqi Population**

👤 *Safa Ahmed Abed, Hiba Muneer Al-Khafaji.*

SRP. 2021; 12(1): 296 - 300

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.47

Review Article

**The Effect of Using a Suggested Sport's Diet on Increased Thyroid
Secretion and Its Effect on Obesity**

👤 *Mohammed Nader Shalaby, Mona Mostafa Abdo Sakoury, Sherin
Hussien, Wafaa Gaber Mohamed, Heba Fathy Heikal, Mentallah Ahmed
Rabei, Mohamed Selim Mohamed Ahmed*

SRP. 2021; 12(1): 805 - 817

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.115

Review Article

**Molecular Detection Of Klebsiella Pneumoniae Isolated From
Different Clinical Source**

👤 *Boraq Abbas Abd Alwahed, Noor Saad latteef, Wathiq Abbas Hatite Al-
Daraghi*

SRP. 2021; 12(1): 931 - 934

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.130

Review Article

**The Therapeutic Potential of Bioactive Polysaccharides in Tissue
Repairing and Wound Healing**

👤 *Ahmed Al Qteishat, Sidgi S Hasson, Ali A. Al-Jabri*

SRP. 2021; 12(1): 470 - 479

[» Abstract](#) [» PDF](#) DOI: 10.31838 / srp.2021.1.69

Review Article

Novel oral solid self-nanoemulsifying drug delivery system (S-SNEDDS) of rosuvastatin calcium: Formulation, characterization, bioavailability and pharmacokinetic study

Adnan Burhan Qader, Ahmed Abbas Hussein

SRP. 2021; 12(1): 137 - 148

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.23

Review Article

A COMPARATIVE STUDY OF CHEMICAL COMPOUNDS AND ANTI-BACTERIAL EFFICACY OF DIFFERENT ALLIUM CEPA PLANT EXTRACTS

Alaa F. Sulaiman, Wasan M. Alwan, Samir A. Salman, Entisar E. Al-Abodi

SRP. 2021; 12(1): 45 - 48

[» Abstract](#) [» PDF](#) DOI: 10.31838/srp.2021.1.08

Review Article

The Urgency Of The Adolescent Breast Health Service Model Involving Puskesmas Nurses And The Role Of Uks Teachers Based On The Whatsapp Application

Halimatussakdiah, Aprina, Reni Chairani, Ta'adi, Syamsul Firdaus.

SRP. 2021; 12(1): 1159 - 1169

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Effect of Beluntas Leaf Extract (*Pluchea indica*) on Oral Mucosal Wound Healing in Terms of Density of Inflammatory Cells and Collagen

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ABSTRACT

Traumatic injury is one of the acute injuries that often occur in the oral cavity. The wound healing process consists of the phases of hemostasis, inflammation, proliferation, and tissue remodeling. Some of the active components of herbal plants can help speed up the wound healing process and have anti-inflammatory effects. Beluntas leaves which contain flavonoids, tannins, and saponins have the potential to be used as herbal medicine because they have anti-inflammatory effects, but standardization is needed first. The purpose of this study was to determine the effect of beluntas leaf extract (*Pluchea indica*) on wound healing in the oral mucosa in terms of the number of inflammatory cells and collagen in tissue preparations stained with Hematoxylin Eosin. The method in this research is a descriptive laboratory experimental research design with the post-test only control group design. The number of samples of 30 Wistar rats, divided into 6 groups that had been treated and terminated on the 3rd and 6th days were then continued to the microscopic stage by making paraffin blocks, making preparations, and staining using Hematoxylin Eosin (HE). The assessment of HE streaks was semiquantitative, all data from the research results were statistically tested using the Kruskal-Wallis Test. Based on the test results, it is known that there are significant differences in the effect of beluntas leaf extract on the density of inflammation and collagen cells compared to the negative control and the positive control (povidone iodine). The conclusion from this study is that it can be seen that beluntas leaf extract can help accelerate the process of wound healing in the oral mucosa as indicated by a significant decrease in the density of inflammatory cells and an increase in collagen density.

Keywords: Anti-inflammatory, beluntas leaves, collagen, wound healing

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INTRODUCTION

Traumatic injuries or injuries caused by injuries can range from abrasions and small skin incisions or lacerations to wounds with extensive tissue damage or loss. The degree of tissue damage is influenced by the mechanism of injury, traumatic injuries can be caused by blunt trauma, penetrating trauma (such as stabbing and gunfire), crush injuries, explosion injuries, burns, and animal bites.^{1,2}

Traumatic injury is one of the most common acute injuries to the oral mucosa, which can be caused by thermal, physical, and chemical trauma. Sores that form can occur as a result of being bitten, eating hot and hard food, sharp teeth edges, or excessive brushing. Some injuries can also be caused by iatrogenic damage during dental work or other procedures related to the oral cavity such as intubation during general anesthesia. Likewise, chemical or physical injuries can result from improper or careless handling of chemicals and dental instruments during dental procedures. This condition causes the patient to feel uncomfortable, therefore medicine is needed to help accelerate wound healing.³⁻⁵

Acute or chronic wound healing is a challenge and there are various ways to heal wounds using synthetic polymers (iodine, ethyl alcohol, ether), growth factors, stem cells, and medicinal plants.^{6,7} Wound healing is a natural physiological reaction to the injury network. After the injury, rapid wound closure and rapid skin regeneration are essential to restore barrier function. Effective repair requires communication and interaction between many cells and this process is precisely regulated at any level. Wound healing has stages as in the following phases:

hemostasis or fibrin clot formation (0-hours after injury), inflammation/granulation (1-3 days), proliferation (4-21 days), and tissue remodeling (21 days-1 year).⁸

These phases can occur due to the integration of biological and molecular activities, such as cellular proliferation, differentiation, migration, secretion of cytokines and growth factors, as well as differentiation and production of the extracellular matrix. However, wound healing can be delayed if there is a failure to move from one phase to the next resulting in an imbalance in the normal sequence of acute wound healing.⁹

The main key to the wound healing process is the transition from the inflammatory phase to the proliferation phase. The inflammatory phase is very important because it leads to hemostasis and recruitment of the innate immune system, which protects us from invading pathogens and helps eliminate dead tissue.⁸ This inflammatory phase is then followed by the formation of granulation tissue, re-epithelialization, and the formation of the connective tissue matrix (the proliferation phase).¹⁰ One of the herbal plants that can be used to help accelerate wound healing is beluntas leaves (*Pluchea folium*). This can occur because this plant has astringent, antipyretic, and anti-inflammatory activities.¹¹ Beluntas (*Pluchea folium*) is one of the most widespread native Indonesian plants. Plants that are included in the Asteraceae family grow wild and are planted as hedges, as well as a traditional medicine because one of them has anti-inflammatory activity.¹²

Beluntas (*Pluchea folium*) is commonly used for traditional medicine in Asia in the form of stew, poultices,

and infusions. In Thailand, beluntas sticks are used as a treatment for kidney stones or work as a diuretic agent. The fresh leaves are used as a treatment for gangrenous ulcers. In India, boiled beluntas root has astringent and antipyretic action. Meanwhile, in Indonesia, boiled beluntas leaves can stimulate appetite, work as an antipyretic, aid in digestion, as a deodorant, antibacterial, and anti-diarrhea.¹¹

Beluntas leaves (*Pluchea folium*) contain phytochemical compounds such as essential oils, flavonoids, phenolics, tannins, saponins, phenol hydroquinones, and glycoside compounds.^{12,13} Flavonoids have biological functions such as anti-oxidant, anti-inflammatory, anti-mutagenic, anti-virus, and anti-allergies.¹⁴ The anti-inflammatory effect occurs by inhibiting a series of enzymes that are activated during the inflammatory process.¹⁵ The anti-inflammatory action of flavonoids involves inhibition of the synthesis and activity of various pro-inflammatory mediators such as eicosanoids, cytokines, adhesion molecules, and protein C-reactive.¹⁶ Tannins are antioxidants that induce TGF- β so that the proliferation of fibroblasts can occur. The more fibroblasts that are formed, the collagen will be formed which then accelerates wound contraction and will also accelerate wound healing.^{17,18}

The cytotoxicity test of beluntas leaf extract (*Pluchea folium*) against fibroblasts has been carried out and has shown non-toxic results, with an IC₅₀ value of 265.388 μ g / mL.¹⁹ Therefore, beluntas leaves are safe if used as herbal medicine. Besides, beluntas leaves (*Pluchea folium*) have also been used traditionally to increase appetite, smooth muscle relaxants, dysentery, eliminate body odor and disorders that cause cachexia.²⁰

MATERIALS AND METHODS

Animal preparation

This research has obtained ethical approval issued by the ethical committee of the Faculty of Medicine, Maranatha Christian University-Immanuel Hospital Bandung. The main goal is that in this study the minimum possible use of experimental animals, by treating them humanely. The experimental animals are kept in the Pharmacology Laboratory of the Faculty of Medicine, Padjadjaran University, Bandung. This study used thirty male Wistar

rats (weight 200-250 grams) aged 40-60 days. experimental animals were divided into six groups (n = 5 / group). Groups one and four were given wounds without topical treatment of Beluntas as negative controls. Group two and five were given the injuries and povidone iodine topical treatment as a positive control. Groups three and six were treated with topical beluntas leaf extract. All treatments were given to rats anesthetized with ketamine (10 mg/kg body weight) intramuscularly. Then a 5 mm long wound was made on the labial gingiva of the mandible and the treatment was applied. At the end of the experimental period, groups one, two, and three on the three days were terminated and groups four, five, and six on the sixth day were terminated and decapitated.

Beluntas leaf ethanol extract

The leaves of beluntas to be used in this study are \pm 10 years old, obtained from an experimental garden at the Indonesian Medicinal and Spice Crops Research Institute (Balitro), Agricultural Research and Development Agency (IAARD), Ministry of Agriculture in Bandung, West Java, Indonesia. This leaf was later determined by Dr. Iriawati at the Identification and Assignment Laboratory of the Faculty of Life Sciences, Bandung Institute of Technology (ITB). After the determination was carried out, then the crude extract of beluntas leaves was made by maceration method using 70% ethanol which was carried out at Aretha Medika Utama, the Center for Biomolecular and Biomedical Research.

Beluntas extract is applied to the wound that has been made twice a day at a dose of 5 μ g / gbw in the morning and evening. After the third day, the tissue cutting was done in groups one, two, and three which were then made preparations and stained with hematoxylin-eosin staining. The same procedure was performed on the sixth day for groups of four, five, and six.

Tissue preparations and microscopic examination

Make a paraffin block from the tissue to be examined and then cut the tissue 4-5 μ m thick using a microtome. Dehydrate using a multilevel ethanol solution, then color with Hematoxylin Eosin (HE). Inflammatory cells and collagen density were quantitatively calculated by an anatomical pathologist, unaware of the experimental data, using a light microscope (Olympus CX21FS1, Tokyo, Japan) at 100x magnification.²¹

Table 1: Scoring of Inflammatory Cell Density and Collagen Density

Score	Inflammatory Cell Density	Collagen Density
0	There are no inflammatory cells	There is no collagen
1	<20%	Slightly on the granulation tissue
2	20-50%	Enough on the granulation tissue
3	>50%	Lots and clear in granulation tissue

Statistical Analysis

Calculation of data based on measurement results according to each group with statistical testing of data analysis using the Kruskal-Wallis Test. All analyzes used Minitab version 17.0 software. The p-value of less than 0.05 (P<0.05) is considered significant.

RESULTS

HE staining showed the density of inflammatory and

collagen cells in the wound healing process of the mandibular labial gingival under a light microscope, as shown in Figure 1. Preparation of preparations was repeated 2 times for each subject so that the total number was 60 preparations. Semi-quantitative analysis was performed based on the percentage of inflammatory cells and collagen density in 5 visual fields for each preparation.

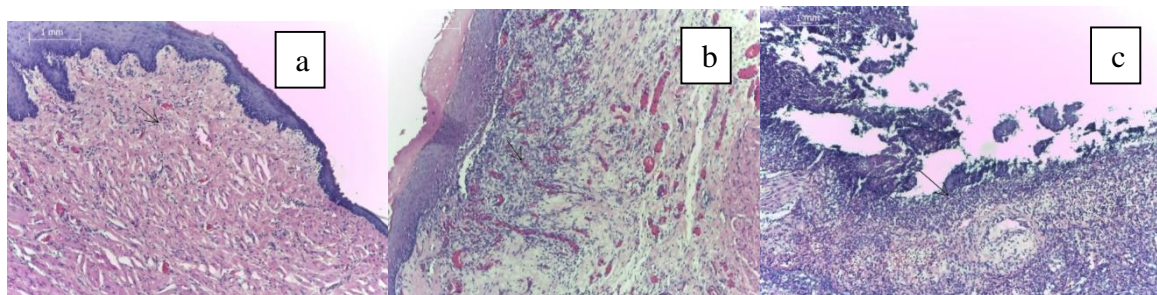


Figure 1: HE Staining for Inflammatory Cell and Collagen Density (100x enlargement)
 (a) number of inflammatory cells >50% and a little collagen;
 (b) The number of inflammatory cells is 20-50% and sufficient collagen;
 (c) The number of inflammatory cells <20% and a lot of collagen

Table 2: Score Inflammatory Cell Density

Group	1	2	3	4	5	6
	3	2	2	1	2	1
	2	2	1	1	2	1
	2	2	1	1	1	2
	2	2	1	1	1	2
	3	2	2	2	3	1
	3	2	2	3	3	2
	2	2	2	3	2	1
	2	2	1	3	1	1
	2	2	2	2	1	1
	2	2	1	3	1	1
Average	2,3	2	1,5	2,0	1,7	1,3

Information:

- Group-1: Group as a negative control was terminated on day 3
- Group-2: Group was given povidone iodine which was terminated on day 3
- Group-3: The group was given beluntas leaf extract which was terminated on day 3
- Group-4: The group as a negative control was terminated on day 6
- Group-5: Groups were given povidone iodine which was terminated on day 6
- Group-6: The group was given beluntas leaf extract which was terminated on day 6

Table 3: Collagen Density Score

Group	1	2	3	4	5	6
	1	3	2	3	2	3
	1	3	3	3	2	3
	2	3	3	3	3	3
	2	3	3	3	3	3
	1	3	2	2	2	3
	2	3	2	2	2	3
	2	3	3	2	3	3
	2	3	3	2	3	3
	3	3	3	3	3	3
	3	3	3	3	3	3
Average	1,9	3	2,7	2,6	2,6	3

Information:

- Group-1: Group as a negative control was terminated on day 3
- Group-2: Group was given povidone iodine which was terminated on day 3
- Group-3: The group was given beluntas leaf extract which was terminated on day 3
- Group-4: The group as a negative control was terminated on day 6
- Group-5: Groups were given povidone iodine which was terminated on day 6
- Group-6: The group was given beluntas leaf extract which was terminated on day 6

Based on the data obtained and tested by the Kruskal-Wallis Test, it was found that there was a significant decrease in the density of inflammatory cells ($P < 0.05$) with a value of $P = 0.028$. Therefore, it can be concluded that there is a significant difference in the effect of beluntas leaf extract on decreasing the density of inflammatory cells compared to negative controls (without treatment) and positive controls (povidone iodine) both on day 3 and day 6. Based on the data obtained and tested by the Kruskal-Wallis Test, it was found that there was a significant increase in collagen density ($P < 0.05$) with a value of $P = 0.012$. Therefore it can be concluded that there is a significant difference in the effect of beluntas leaf extract on the increased collagen density compared to negative controls (without treatment) and positive controls (povidone iodine) on both day 3 and day 6.

DISCUSSION

The wound healing process occurs in four interrelated phases. In the second phase, namely, the inflammatory phase, which lasts for 2-5 days and stops once the harmful stimuli have been removed, the cells that play a role in this phase are leukocyte cells, namely neutrophils, macrophages, and lymphocytes.⁸ The parameters used in this observation are the number of inflammatory cells (leukocytes and PMN) with the preparations used were preparations that had been stained with HE staining.

The data in Table 2 and Table 3 show that the results of statistical tests on day 3 and 6, showed a significant difference ($P < 0.05$) in the number of inflammatory cells and also collagen for the three groups. The difference between the untreated group, the group given povidone iodine, and the group was given beluntas leaf extract was influenced by the active ingredients contained in beluntas leaves. In the event of trauma, the circulating protein will recognize the microbes that enter the blood. The increased permeability of blood vessels will allow plasma proteins and leukocytes, as well as body defense mediators, to enter the site of infection or areas of damaged tissue. The wound healing process occurs because of the interaction between inflammatory cells, fibroblasts, and keratinocytes which causes changes in the microenvironment in the wound area.^{7,10}

Beluntas leaf extract contains several biologically active components such as saponins, flavonoids, and tannins, which can help accelerate wound healing through various mechanisms. Saponins have anti-inflammatory, antioxidant, antibacterial, and antiviral activity. The antibacterial activity of saponins occurs through denaturation of proteins present in bacteria so that cell membranes in bacteria become damaged and lysis, this causes the function of leukocytes for phagocytosis to be reduced, therefore from the 3rd and 6th day there is a decrease in the number of inflammatory cells namely leukocytes and PMN. With a series of reactions from the active ingredient of beluntas leaves, the inflammatory process occurs faster. In the wound healing process, saponins can also inhibit inflammatory reactions in the initial phase of wound healing and increase the synthesis of the collagen matrix through the phosphorylation of the SMAD-2 protein.^{7,22}

Flavonoids are one of the bioactive components of beluntas leaves which have biological and pharmacological activities, including activities as anti-inflammatory, antimicrobial, increase angiogenesis, and act as antioxidants that work together in accelerating

wound healing by controlling prostaglandins, leukotrienes, and cyclooxygenase cycles in the inflammatory phase of wound healing.^{6,23} Flavonoids contained in beluntas leaves can also inhibit cyclooxygenase and accumulation of leukocytes.²⁴ Inhibition of the cyclooxygenase enzyme can control pain and edema so that the wound healing process takes place better because there is an increase in the immune response during wound healing. In the cell signaling process, flavonoids also act as modulators and inhibit procollagen type I mRNA, so that they directly affect collagen synthesis which will help accelerate the wound healing process.^{23,25}

Tannins will protect the body's cell membranes by reducing inflammation by releasing hydrogen atoms to bind free radicals so that the lipid autoxidation reaction can be controlled and reduced.²⁶ Besides, tannins are also antioxidants that induce TGF- β so that they can cause increased fibroblast proliferation. The more fibroblasts that are formed, the more collagen will be formed to support other cells involved in the wound healing process, so that it will speed up wound contraction which will affect the acceleration of wound healing. In addition, TGF- β also directly plays a role in stimulating collagen production.^{17,18} In the process of wound healing, fibroblasts contribute to the formation of extracellular matrix (ECM) components consisting of collagen by breaking down fibrin clots through the expression of matrix metalloproteinases (MMPs). This collagen-containing extracellular matrix will support and regulate the migration and activity of fibroblasts which will then help speed up the wound healing process by signaling angiogenesis, granulation tissue formation, and reepithelization.^{17,18}

The low number of inflammatory cells on the 3rd day in the beluntas leaf extract group showed a faster healing process compared to the positive control group and the negative control group. The number of inflammatory cells in the negative control group was the highest compared to the positive control group and with beluntas leaf extract, so there may be still tissue damage and infection due to the absence of treatment which causes the inflammatory process to be long. The comparison between the positive control group (povidone iodine) and beluntas leaf extract showed different results, both on day 3 and 6, the number of inflammatory cells in beluntas leaf extract was lower than that in the positive control, so beluntas leaf extract had a significant effect. Better for wound healing as seen from the number of inflammatory cells compared with positive controls. Povidone iodine is an antimicrobial agent that contains iodine.²⁷ The above comparison shows that both the beluntas leaf extract group and the povidone iodine group experienced a decrease in the density of inflammatory cells. However, beluntas leaves have a lower amount because of the high content in beluntas and have astringent, antipyretic, and anti-inflammatory activity so that they have complementary work and help accelerate the wound healing process.

CONCLUSION

Beluntas leaf extract can help accelerate the process of wound healing in the oral mucosa as indicated by a decrease in the density of inflammatory cells and a significant increase in collagen density.

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