Molecular and Cellular Biomedical Sciences

Volume 6, Number 1, March 2022

REVIEW ARTICLE

RESEARCH ARTICLES

Print ISSN: 2527-4384
Online ISSN: 2527-3442

https://www.cellbiopharm.com/ojs/index.php/MCBS

Cell and Biopharmaceutical Institute

Volume 6, Number 1, March 2022 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

PRINCIPAL CONTACT

MCBS OFFICE
Prodia Tower 8th Floor, Jl. Kramat Raya No.150, Jakarta Pusat 10430
Email: mcbs_office@cellbiopharm.com

SUPPORT CONTACT

Nurrani Mustika Dewi
Email: nurranimustika@gmail.com

EDITOR IN CHIEF

EDITORIAL BOARD

PEER-REVIEWERS

FOCUS AND SCOPE

Molecular and Cellular Biomedical Sciences (MCBS) is an open access, peer-reviewed journal that supports all topics in Biology, Pathology, Pharmacology, Biochemistry, Histology and Biomedicine in the aspect of molecular and cellular.

MCBS is dedicated to publish review and research articles. The editors will carefully select manuscript to be delivered for peer-reviewing process. Therefore MCBS is committed to present only the valuable and recent scientific findings.

SECTION POLICIES

REVIEW ARTICLE
Review Article should consist of no more than 10,000 words, not including the words in abstract, references, table, figure, and figure legend. The manuscript should have no more than six figures and/or tables in total and no more than 200 references.

RESEARCH ARTICLE
Research Article should consist of no more than 3,500 words, not including the words in abstract, references, table, figure, and figure legend. The manuscript should have no more than six figures and/or tables in total and no more than 40 references.

PEER REVIEW PROCESS

All manuscripts submitted to Molecular and Cellular Biomedical Sciences will be selected and blind peer-reviewed by 2 or more reviewers when necessary, to present valuable and authentic findings. All details will also be reviewed, including appropriate title; content reflecting abstract; concise writing; clear purpose, study method and figures and/or tables; and summary supported by content. The reviewing process will take generally 2-3 months depends on sufficiency of information provided.

Peer-reviewers were selected based on their specialties that fit to the topic. Additional reviewer/s can also be pointed when necessary. Author can suggest reviewer/s that not having publication together within five years and should not be member/s of the same research institution.

PUBLICATION FREQUENCY

Molecular and Cellular Biomedical Sciences is published triannually (in March, July, and November).

OPEN ACCESS POLICY

This journal provides immediate open access to its content on the principle that making research freely available to the public supports a greater global exchange of knowledge.

Molecular and Cellular Biomedical Sciences

ARCHIVING

This journal utilizes the LOCKSS system to create a distributed archiving system among participating libraries and permits those libraries to create permanent archives of the journal for purposes of preservation and restoration.

PLAGIARISM SCREENING POLICY

All manuscripts submitted to Molecular and Cellular Biomedical Sciences will be screened for plagiarism by using Grammarly.

CONTENT LICENSING

CONFLICT OF INTEREST POLICY

AUTHOR'S CONFLICT OF INTEREST

At the point of submission, Molecular and Cellular Biomedical Sciences requires that each author reveal any personal and/or financial interests or connections, direct or indirect, or other situations that might raise the question of bias in the work reported or the conclusions, implications, or opinions stated. When considering whether you should declare a conflicting interest or connection, please consider the conflict of interest test: Is there any arrangement that would embarrass you or any of your co-authors if it was to emerge after publication and you had not declared it? Corresponding authors are responsible to confirm whether they or their co-authors have any conflicts of interest to declare, and to provide details of these. The statement includes any information regarding whether the manuscript is under consideration for other publication, or whether you have any patents that relevant to the manuscript. If the manuscript is published, any conflict of interest information will be written in the Conflict of Interest statement.

AUTHOR'S ACKNOWLEDGEMENT

Authors whose manuscripts are submitted for publication must declare all relevant sources of funding in support of the preparation of a manuscript. Molecular and CellularBiomedical Sciences requires full disclosure of financial support as to whether it is from government agencies, the pharmaceutical or any other industry, or any other source. Authors are required to specify sources of funding for the study and to indicate whether or not the manuscript was reviewed by the sponsor prior to submission. This information should be included in the Acknowledgements section of the manuscript. In addition to disclosure of direct financial support to the authors or their laboratories and prior sponsor-review of the paper, corresponding authors will be asked to disclose all relevant consultancies since the views expressed in the contribution could be influenced by the opinions they have expressed privately as consultants. This information should also be included in the Acknowledgments section of the manuscript.

REVIEWER'S CONFLICT OF INTEREST

Reviewers must disclose to editors any conflicts of interest that could bias their opinions of the manuscript, and should recuse themselves from reviewing specific manuscripts if the potential for bias exists. As in the case of authors, silence on the part of reviewers concerning potential conflicts may mean either that such conflicts exist that they have failed to disclose, or that conflicts do not exist. Reviewers must not use information of the manuscript they are reviewing before it is being published, to further their own interests.

PROTECTION OF HUMAN SUBJECT AND ANIMAL IN RESEARCH POLICY

When reporting experiments on human subjects, authors should indicate whether the procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the World Medical Association Declaration of Helsinki. If doubt exists whether the research was conducted in accordance with the said declaration, the authors must explain the rationale for their approach, and demonstrate that the institutional review body explicitly approved the doubtful aspects of the study.

When reporting experiments on animals, authors should be asked to indicate whether the institutional and national guide for the care and use of laboratory animals was followed. Further guidance on animal research ethics is available from the International Association of Veterinary Editors' Consensus Author Guidelines on Animal Ethics and Welfare.

INFORMED CONSENT POLICY

Patients have a right to privacy that should not be violated without informed consent. Identifying information, including names, initials, or hospital numbers, should not be published in written descriptions, photographs, or pedigrees unless the information is essential for scientific purposes and the patient (or parent or guardian) gives written informed consent for publication. Authors should disclose to these patients whether any potential identifiable material might be available via internet as well as in print after publication. Nonessential identifying details should be omitted.

Molecular and Cellular Biomedical Sciences decides that patient confidentiality is better guarded by having the authors archive the consent, and instead providing us with a written statement in the manuscript attesting that they have received and archived written patient consent. When informed consent has been obtained, it should be indicated later in the published article.

ROLE OF JOURNAL EDITOR

Editors of Molecular and Cellular Biomedical Sciences have responsibilities toward the authors who provide the content of the journals, the peer reviewers who comment on the suitability of manuscripts for publication, also toward the journal's readers and the scientific community. Editors are responsible for monitoring and ensuring the fairness, timeliness, thoroughness, and civility of the peer-review and other editorial processes.

Peer review by external reviewers with the proper expertise is the most common method to ensure manuscript quality. However, our editors may sometimes reject manuscripts without external peer review to make the best use of their resources. Reasons for this practice are usually that the manuscript is outside the scope of Molecular and Cellular Biomedical Sciences, does not meet our quality standards or lacks originality or novel information.

Editor Responsibilities toward Authors

- Providing guidelines to authors for preparing and submitting manuscripts
- Providing a clear statement of the Journal's policies on authorship criteria
- Treating all authors with fairness, courtesy, objectivity, honesty, and transparency
- Establishing and defining policies on conflicts of interest for all involved in the publication process, including editors, staff, authors, and reviewers
- Protecting the confidentiality of every author's work
- Establishing a system for effective and rapid peer review
- Making editorial decisions with reasonable speed and communicating them in a clear and constructive manner
- Being vigilant in avoiding the possibility of editors and/or referees delaying a manuscript for suspect reasons
- Establishing a procedure for reconsidering editorial decisions
- Describing, implementing, and regularly reviewing policies for handling ethical issues and allegations or findings of misconduct by authors and anyone involved in the peer review process
- Informing authors of solicited manuscripts that the submission will be evaluated according to the journal's standard procedures or outlining the decision-making process if it differs from those procedures
- Clearly communicating all other editorial policies and standards

Editor Responsibilities toward Reviewers

- Assigning papers for review appropriate to each reviewer's area of interest and expertise
- Establishing a process for reviewers to ensure that they treat the manuscript as a confidential document and complete the review promptly
- Informing reviewers that they are not allowed to make any use of the work described in the manuscript or to take advantage of the knowledge they gained by reviewing it before publication
- Providing reviewers with written, explicit instructions on the journal's expectations for the scope, content, quality, and timeliness of their reviews to promote thoughtful, fair, constructive, and informative critique of the submitted work

Molecular and Cellular Biomedical Sciences

- Requesting that reviewers identify any potential conflicts of interest and asking that they recuse themselves if they cannot provide an unbiased review
- Allowing reviewers appropriate time to complete their reviews
- Requesting reviews at a reasonable frequency that does not overtask any reviewer
- Finding ways to recognize the contributions of reviewers, for example, by publicly thanking them in the journal; providing letters that might be used in applications for academic promotion; offering professional education credits; or inviting them to serve on the editorial board of the journal
- Making final decision regarding a submission status after receiving review result from reviewers

Editor Responsibilities toward Readers and the Scientific Community

- Evaluating all manuscripts considered for publication to make certain that each provides the evidence readers need to evaluate the authors' conclusions and that authors' conclusions reflect the evidence provided in the manuscript
- Providing literature references and author contact information so interested readers may pursue further discourse
- Requiring the corresponding author to review and accept responsibility for the content of the final draft of each paper
- Maintaining the journal's internal integrity (e.g., correcting errors; clearly identifying and differentiating types of content, such as reports of original data, corrections/errata, retractions, supplemental data, and promotional material or advertising; and identifying published material with proper references)
- Ensuring that all involved in the publication process understand that it is inappropriate to manipulate citations by, for example, demanding that authors cite papers in the journal
- Disclosing all relevant potential conflicts of interest of those involved in considering a manuscript or affirming that none exist
- Working with the publisher to attract the best manuscripts and research that will be of interest to readers

AUTHOR GUIDELINES

1. General Terms

Molecular and Cellular Biomedical Sciences welcomes articles covering all aspects of biomedical sciences. All submitted manuscripts must not be previously published and not under consideration for publication elsewhere. Papers may come from any country but must be written in English. The manuscript may be submitted as review articles, research articles, and short communications. There are no submission and processing charges for this journal.

All manuscripts are subjected to peer review. All submissions must be accompanied by abstracts of the authors' manuscripts on related subjects that are in press or under editorial review. Electronic reprints of related published papers by the author/s or manuscripts in the press also may be helpful to the reviewers.

All manuscripts must be accompanied by a covering letter signed by all author/s. Upon acceptance, author/s must transfer copyright to Cell and BioPharmaceutical Institute (CBPI). Accepted papers become the permanent property of CBPI and may be used according to copyright policy, or for particular purposes, please contact CBPI. It is the author/s' responsibility to obtain permission to reproduce illustrations, tables, etc. from other publication.

2. How to Submit

Authors are required to submit manuscripts electronically by using online journal system cellbiopharm.com/ojs.

3. Requirements of Each Manuscript Type

Review Article: Review Article should consist of no more than 10,000 words, not including the words in abstract, references, table, figure, and figure legend. The manuscript should have no more than six figures and/or tables in total and no more than 200 references.

Research Article: Research Article should consist of no more than 3,500 words, not including the words in abstract, references, table, figure, and figure legend. The manuscript should have no more than six figures and/or tables in total and no more than 40 references.

4. Absract

Provide an abstract of no more than 300 words (for Review Article) or 250 words (for Research Article). Structured-abstract should be followed in writing Research Article.

5. References

- References should be according to the Vancouver system.
- List all authors when there are six or fewer; when there are seven or more, list the first six, followed by "et al.".
- A sequential number of references in the main text. Please follow in detail all examples below:

Article:

Sandra F, Esposti MD, Ndebele K, Gona P, Knight D, Rosenquist M, et al. Tumor Necrosis Factor-Related Apoptosis-Inducing Ligand Alters Mitochondrial Membrane Lipids. Cancer Res. 2005; 65(18): 8286-97.

Book

Murray PR, Rosenthal KS, Kobayashi GS, Pfaller MA. Medical microbiology. 4th ed. St. Louis: Mosby; 2002.

Chapter in a book:

Rosenberg GA. Matrix metalloproteinase and proteolytic opening of the blood-brain-barrier in neuroinflammation. In: deVries E, Prat A, editors. The Blood-brain Barrier and Its Microenvironment Basic Physiology To Neurological Disease. New York: Taylor and Francis Group; 2005. p.335-58.

Dissertation/Thesis/Essay:

Arlauckas SP. Near infrared fluorescent choline kinase alpha inhibitors for cancer imaging and therapy [Dissertation]. Philadelphia: University of Pennsylvania; 2015.

Part of Website/Monograph:

Medline Plus [Internet]. Bethesda: US National Library of Medicine; ©2009. Diabetic Kidney Problems [update 2015 Nov 2; cited 2015 Nov 16]. Available from: https://www.nlm.nih.gov/medlineplus/diabetickidneyproblems.html/.

Conference Paper:

Fledelius HS. Myopia and significant visual impairment: global aspects. In: Lin LLK, Shin YF, Hung PT, editors. Myopia Updates II: Proceedings of the 7th International Conference on Myopia 1998 Nov 17-20, Taipei. Tokyo: Springer; 2000. p.3-17.

6. Unit of Measurement

- Authors can express all measurements in Conventional or International System (SI) units.
- Drug names must use generic names. When proprietary brands are used in research, include the brand name, the name and location (city & country) of the manufacturer in parentheses after the first mention of the generic name.

SUBMISSION PREPARATION CHECKLIST

As part of the submission process, authors are required to check off their submission's compliance with all of the following items, and submissions may be returned to authors that do not adhere to these guidelines.

1. The submission has not been previously published, nor is it before another journal for consideration (or an explanation has been provided in Comments to the Editor).
2. The submission file is in OpenOffice, Microsoft Word, RTF, or WordPerfect document file format. Formatted as standard A4 page setup.
3. Where available, URLs for the references have been provided.
4. The text should be double-spaced with the 1-inch margin on the left and right sides. Use 12-point Times New Roman font.
5. The text adheres to the stylistic and bibliographic requirements outlined in the Author Guidelines, which is found in About the Journal.
6. Running title provided (not more than 8 words).
7. Proof of permission was obtained to reproduce illustrations, tables, etc. from other publication.
8. Complete information about author/s (first, middle, last name), author/s's affiliation, and email address of the corresponding author.
9. All pages are numbered at bottom right.

COPYRIGHT NOTICE

For the submission of a manuscript to Molecular and Cellular Biomedical Sciences, I hereby certify that:

 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

1. I have been granted authorization by my co-author/s to enter into these arrangements.
2. I hereby declare, on behalf of myself and my co-author/s, that:
   - The manuscript submitted is an original work and has neither been published in any other peer-reviewed journal nor is under consideration for publication by any other journal. More so, the work has been carried out in the author/s' lab and the manuscript does not contravene any existing copyright or any other third party rights.
   - I am/we are the sole author/s of the manuscript and maintain the authority to enter into this agreement and the granting of rights to the publisher: The Cell and BioPharmaceutical Institute (CBPI), does not infringe any clause of this agreement.
   - The manuscript contains no such material that may be unlawful, defamatory, or which would, if published, in any way whatsoever, violate the terms and conditions as laid down in the agreement.
   - I/we have taken due care that the scientific knowledge and all other statements contained in the manuscript conform to true facts and authentic formulae and will not, if followed precisely, be detrimental to the user.
   - I/we permit the adaptation, preparation of derivative works, oral presentation or distribution, along with the commercial application of the work.
   - No responsibility is assumed by Molecular and Cellular Biomedical Sciences (MCBS) and CBPI, its staff or members of the editorial boards for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products instruction, advertisements or ideas contained in a publication by MCBS.

Volume 6, Number 1, March 2022 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

CONTENT

Volume 5, Number 1, 2021 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

Abstract

DDC 616.978
Liana P, Murti K, Hafy Z, Liberty IA, Umar TP (Department of Clinical Pathology, Faculty of Medicine, Universitas Sriwijaya/Dr Mohammad Hoesin General Hospital, Palembang, Indonesia)
Neutrophil Extracellular Traps and Its Correlation with Several Pathological Conditions: Prosperities and Deleterious Implications
Mol Cell Biomed Sci. 2022; 6(1): 1-11
Abstract (English)
Neutrophil extracellular traps (NETs) are immune components found in a variety of pathological states. It has been shown to have either beneficial or harmful implications, depending on how it is controlled and has been particularly observed in three major scenarios: infection, autoimmune disease, and cancer. In this article, we compiled some of the roles of NETs in pathological conditions, as well as the benefits of targeting them for improved patient outcomes. The role of NETs were primarily positive in infectious disease, whether caused by bacteria, virus, or fungal infection. In non-infectious inflammatory scenarios, on the other hand, it's the complete opposite, with the effects being mainly deleterious and even worse than the original disease states. Targeting NETs directly or indirectly may help to prevent complications and improve patient outcomes. A plethora of compounds, including immunomodulators, anti-thrombosis, nicotinamide adenine dinucleotide phosphate (NADPH)/reactive oxygen species (ROS) inhibitors, nuclease, and other compounds, may be used to accomplish the therapeutic goals.
Keywords: autoimmune disease, cancer, DNase, infection, neutrophil extracellular traps

DDC 617.96
Maritska Z, Iswara R, Winardi IA, Marantika YD, Tambunan IF, Lovina, Murtadho MAR, Nugraha SA, Legowo C, Seda VP, Saksono AB (Department of Biology Medicine, Faculty of Medicine, Universitas Sriwijaya, Palembang, Indonesia)
Role of Genetics in Anesthesiology
Mol Cell Biomed Sci. 2022; 6(1): 12-9
Abstract (English)
One thing that differentiates one person from another is one's genetic make-up. Genetic plays a role in every branch of medicine, including anesthesiology. An anesthesiologist must be well familiarized with hereditary (genetic) conditions, chromosomal traits, heredity-familial disorders, and even recessive variants because particular conditions might demand a different anesthetic and perioperative pharmacological management. These circumstances may lead to an opening of a rapidly expanding state of pharmacogenetics/genomics and its relevancy in anesthesia nowadays. This narrative review provides insight into the role of genetics in the field of anesthesiology.
Keywords: genetics, anesthesiology, pharmacogenetics

DDC 576.549
Yuliawuri H, Christian JE, Steven N (Biomedical Science Program Study, Calvin Institute of Technology, Jakarta, Indonesia)
Non-Synonymous Mutation Analysis of SARS-CoV-2 ORF3a in Indonesia
Mol Cell Biomed Sci. 2022; 6(1): 20-7
Abstract (English)
Background: The report of mutation sites ORF3a SARS CoV-2 in Indonesia is still limited. Some research showed that mutations in ORF3a protein might alter SARS-CoV-2 pathogenesis. Observation of new variants should be conducted as a risk monitoring framework.
Materials and method: We assessed the impact of mutations in ORF3a protein by analyzing 3,751 SARS-CoV-2 DNA sequences from the GISAID database from March 2020 until July 2021. The whole-genome sequences were aligned using Clustal Omega Multiple Sequence Alignment from EMBL-EBI and analyzed using BioEdit version 7.2.5 software. The reference whole genome sequence was taken from the Genbank database with accession number NC045512. We excluded the samples containing N letters due to inaccurate reading. Effect of point mutations on protein structure was analyzed using PredictProtein (*https://predictprotein.org*) and Protein Variation Effect Analyzer (PROVEAN) v1.1.3. online software.
Results: We identified five most frequent non-synonymous mutations in ORF3a protein of SARS-CoV-2 which were Q57H (58.04%), S26L (27.25%), S220I (10.37%), D155H (8.98%), and P104S (5.47%).
Conclusion: These mutation data showed the phenomenon of amino acid changes in ORF3a SARS-CoV-2 in Indonesia until July 2021. The implication of this mutation needs to be determined in further studies.
Keywords: Indonesia, mutations, non-synonymous, SARS-CoV-2, whole genome

Volume 5, Number 1, 2021 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

DDC 616.65
Pratiwi SE, Wahyuningrum SN, Putri RP, Danarto, Heriyanto DS, Arfian N, Haryana SM, Astuti I (Department of Biology and Pathobiology, Faculty of Medicine, Universitas Tanjungpura, Pontianak, Indonesia)
ZEB1 is Negatively Correlated with E-Cadherin in Prostatic Anomaly Tissue
Mol Cell Biomed Sci. 2022; 6(1): 28-34
Abstract (English)
Background: Prostatic anomalies are common in tumor or infection condition. The enlargement of prostate gland affects the epithelial cell polarity that involves epithelial-mesenchymal transition (EMT). Transition into mesenchymal is mediated by transcription factor ZEB1 and E-cadherin protein. Upregulation of ZEB1 and loss of E-Cadherin expression were associated to proliferation and metastasis of malignancy cells. This study aims to describe the correlation of ZEB1 and E-cadherin expression in prostatic anomaly.
Materials and method: Samples were Formalin Fixed Paraffin Embedded (FFPE) block consist of 8 block Benign Prostatic Hyperplasia (BPH), 6 blocks High Grade Prostatic Intraepithelial Neoplasia (HGPIN) and 6 blocks Prostate Carcinoma (PCA). The blocks then sliced into 5 sections to be prepared for RNA extraction procedures. ZEB1 and E-Cadherin expression was analyzed by semi-quantitative procedures using PCR and electrophoresis. Correlation between ZEB1 and E-Cadherin espression was analyzed using Spearman's rank correlation.
Results: Relative expression of ZEB1 and E-cadherin mRNA in each group of prostatic anomaly were not significantly different ($p>0.05$). ZEB1 and E-Cadherin mRNA expression showed a significant and moderate level of negative correlation ($p<0.05$; $0.40 < r < 0.59$). Increasing of ZEB1 mRNA expression will be followed by decreasing of E-Cadherin mRNA expression.
Conclusion: ZEB1 negatively correlates with E-cadherin due to EMT process in prostatic anomaly. High expression of ZEB1 induced down-regulation of E-cadherin and vise versa. Various studies can be developed, especially the development of targeted therapy against ZEB1 to suppress the EMT process by increasing the expression of E-cadherin.
Keywords: epithelial-mesenchymal transition (EMT), ZEB1, E-Cadherin, BPH, HGPIN, PCA

DDC 543.5
Ali SS, Ahsan H, Ansari S, Abdullah KM, Khan FH (Department of Biochemistry, Faculty of Life Sciences, Aligarh Muslim University, Aligarh, India)
Photo-illuminated Glutathione Inactivates Alpha-2-macroglobulin: Spectroscopic and Thermodynamic Studies
Mol Cell Biomed Sci. 2022; 6(1): 35-42
Abstract (English)
Background: Glutathione (GSH) is a principle thiol-containing tripeptide (cysteine, glutamic acid and glycine) antioxidant against free radicals and other harmful oxidants in cellular defence. The alpha-2-macroglobulin (α2M) is large tetrameric zinc-binding glycoprotein which inhibits proteinases regardless of their specificity and catalytic mechanism.
Materials and Methods: The interaction of GSH was analyzed with α2M including the structural and functional alterations in α2M using various biochemical and biophysical methods. UV-visible and fluorescence spectroscopy were used to study the binding of α2M with GSH and Fourier transform infrared (FT-IR) spectroscopy was explored to study the structural change induced in α2M.
Results: The results suggest that exposure of α2M to GSH decreases the antiproteolytic potential as suggested by the amidase assay. The UV-spectroscopic study showed the formation of α2M-GSH complex and fluorescence analysis showed significant quenching in fluorescence intensity of α2M suggesting GSH binding and structural alteration in the protein. FT-IR spectroscopy was explored to study the structural change induced in α2M which suggest that the secondary structure of α2M changes upon complex formation.
Conclusion: Our studies show that interaction of α2M with photoilluminated GSH results in functional and conformational changes of the protein.
Keywords: glutathione, GSH, alpha-2-macroglobulin, photo-illumination, ITC, FTIR

DDC 616.614
Purwati DD, Mustika A, Hakim L, Thaha M (Medical Program, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia)
Correlation of Serum Nitric Oxide and Urine Malondialdehyde Levels in Non-Hemodialysis Chronic Kidney Disease Patients
Mol Cell Biomed Sci. 2022; 6(1): 43-9
Abstract (English)
Background: In 2017, about 1.2 million people died because of Chronic Kidney Disease (CKD). Patients with CKD are known to have increased levels of oxidative stress which leads to decrease in NO production. NO is a highly reactive signaling molecule and a major determinant of vascular homeostasis. Thus, the decreased NO can be a risk factor for the development of atherosclerosis and increased cardiovascular risk. Meanwhile, Malondialdehyde (MDA) is known as excellent biomarker for oxidative stress. This study aims to determine the correlation of serum total nitric oxide (NO) and urine MDA levels in non-hemodialysis CKD patients.

Molecular and Cellular Biomedical Sciences

Materials and Methods: This study was an observational clinical study with a cross sectional design. Fourty-nine CKD subjects were selected by consecutive sampling. The samples for laboratory tests were collected from urine. MDA concentration was measured using the High-Performance Liquid Chromatography (HPLC) kit. NO concentration was measured with Griess reaction method and Total Nitric Oxide Parameter kit. The data were analyzed using the Statistic Package for Social Science (SPPS) software version 16.
Results: The data showed significant negative correlations between MDA with NO (r=-0.294; p=0.041).
Conclusion: There was a correlation between serum total NO and urine MDA levels in non-hemodialysis CKD patients.
Keywords: chronic kidney disease, malondialdehyde, nitric oxide, non-hemodialysis

DDC 616.24
Alalwiy AAA, Idris AAA (Faculty of Medical Laboratory Sciences, National University, Khartoum, Sudan)
The Effect of Thelison Use in The Etiology of Lung Disorders among Homeless People
Mol Cell Biomed Sci. 2022; 6(1): 50-4
Abstract (English)
Background: Thelison, the adhesive synthetic material that bind surface together, is widely used in industry and domestic purpose along with epoxy, glue and putty. The aim of this study was to detect the effect of thelison use in the etiology of lung disorders among homeless people in Khartoum State, Sudan.
Materials and method: This was a descriptive cross sectional study conducted in homeless people in Khartoum State.Sputum smears samples from 80 alcohol fixed homeless thelison user were collected. After the collection of the sample, Argyrophilic Nucleolar Organizer Region (AgNOR) technique and papanicolaou (PAP) stains were applied to each sample. A questionnaire to obtain essential data about respondents was also provided for each participant.
Results: Participant's ages range was 10-37, while the mean age was 17. The range of participants duration of use per years was 1-10, while the mean was 3 years. Number of thelesion dose use per day was ranged between 1-10, while the mean was 5 years. The majority of participants (80%) showed no cellular change and 20 % showed chronic inflammation. Results showed that 31 of the study population were males (77.5%), while the female population of the study was 9 (22.5%). The mean of AgNoR score was ranged between 1-4, while the mean AgNOR score was 1. AgNoR showed insignificant association with gender, duration and number of thelesion dose used per day (p>0.05), but showed significant association with cytomorhpological and age (p<0.05).
Conclusion: AgNoR score showed insignificant association with gender, duration and number of thelesion dose used per day (p>0.05), but showed significant association with cytomorhpological and age (p<0.05).
Keywords: AgNoRs score, cytological changes, sputum, homeless thelison users

Volume 5, Number 1, 2021 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

Thank to Reviewers

We thank the following reviewers for their contributions in this number:

Alex Pangkahila
Anna Meiliana
Arni Amir
Dedeh Yuniarty
Ditha Diana
Hori Haryanto
Ikhwan Resmala Sudji
Melanie Sadono Djamil
Noni Novisari Soeroso
Pusparini
Ria Bandiara
Rina Triana
St. Layli Prasojo

Print ISSN: 2527-4384

Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

Volume 6, Number 1, March 2022

Information of this journal can be accessed at: https://CellBioPharm.com/ojs/index.php/MCBS