Molecular and Cellular Biomedical Sciences

Volume 2, Number 1, March 2018

REVIEW ARTICLES

RESEARCH ARTICLES

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

www.CellBioPharm.com/ojs

Cell and Biopharmaceutical Institute

Volume 2, Number 1, March 2018 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

MAILING ADDRESS

MCBS OFFICE
Jl. Raya Kelapa Sawit Ruko Sektor IE Blok BD.12 No.14
Gading Serpong, Tangerang.
Email: mcbs_office@cellbiopharm.com

PRINCIPAL CONTACT

Dr. Marshel Tendean
Phone: +62-81285043419
Email: dr.mars.23@gmail.com

SUPPORT CONTACT

Dr. Allen Weber
Email: mcbs_office@cellbiopharm.com

EDITOR IN CHIEF

EDITORIAL BOARD

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 biannually (in March and September).

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.

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.

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

Molecular and Cellular Biomedical Sciences

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 OFJOURNAL 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
- 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

Molecular and Cellular Biomedical Sciences

- 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:

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.

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

Molecular and Cellular Biomedical Sciences

- 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 2, Number 1, March 2018 Print ISSN: 2527-4384, Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

CONTENT

REVIEW ARTICLES

RESEARCH ARTICLES

Molecular and Cellular Biomedical Sciences

Abstract

DDC 616.0797

Setiawan KW, Sandra F (Prodia Clinical Laboratory, Jakarta, Indonesia)

Naïve T Cells in Immunosuppression Diseases: Human Immunodeficiency Virus and Cytomegalovirus

Mol Cell Biomed Sci. 2018; 2(1): 1-10

Abstract (English)

Dynamic changes of naïve T cells determine mature T cells activity in cell-mediated immune response. It is important to understand the mechanism of homeostasis maintenance affect response to novel antigen toward T cell receptor-major histocompatibility complex interaction. Most of the analysis of naïve T cells relies on flow cytometric immunophenotyping to observe surface antigen alteration within maturation stage. The combination of different surface molecules, such as the cluster of differentiation 62L (CD62L), C-C chemokine receptor type 7 (CCR7), CD27, CD28, and CD45, can give satisfied discrimination between naïve T cells and other subsets. This parameter can be used to monitor the dynamic change of naïve T cells in some chronic diseases, like human immunodeficiency virus (HIV) and cytomegalovirus (CMV). Most of the patient experience loss of naive T cells due to a chronic immune response, which related to apoptotic induction in proliferating cells by viral activity. Some pathogens trigger the migration of naive T cells into lymph nodes to facilitate direct contact with the host cells. The virus infects the cells, use cells proliferation to multiply, and induce apoptosis of host cells after the virions released. Alteration of naive T cells in chronic disease becomes a parameter to oversee the treatment and to determine the future prognosis of the disease. In highly active antiretroviral therapy for HIV infection, observation of naïve T cells and combination of surface molecules, CD45RO− and CD27+ is used to show the improvement and proliferation rate of total naïve T cells. On the other hand, the transformation of naïve T cells into CMV-specific T cells become really important in CMV prognosis. These conditions suggest that dynamic change of naïve T cells affect to the clinical condition of chronic disease patients.

Keywords: naïve T cells, immunophenotyping, HIV, CMV

DDC 617.632

Ketherin, Sandra F (Faculty of Dentistry, Trisakti University, Jakarta, Indonesia)

Osteoclastogenesis in Periodontitis: Signaling Pathway, Synthetic and Natural Inhibitors

Mol Cell Biomed Sci. 2018; 2(1): 11-18

Abstract (English)

Osteoclast activities are responsible for the resorption of bone cells found in several bone diseases, one of which is periodontitis and arthritis. The upregulating signals of Receptor Activator of Nuclear Factor kB (RANK)-RANK Ligand and Tumor Necrosis Factor (TNF)-a are the major cause of the bone destruction. Studies and experiments have been performed to overcome this matter. Various medications are now available to treat bone-related diseases, targeting the specific aspect of the signaling. Synthetic drugs such as denosumab and bisphosphonates have complex pharmacological action and have been the leading choice in treatment. Evidence in studies proved that natural resources including herbal products have potential application to therapy for bone loss, with caffeic acid and Caffeic Acid Phenethyl Ester (CAPE) showing significant inhibitory results and Chinese herbs such as Herba epimedii (Yín Yáng Huò) and Fructus psoraleae (Bǔ Gǔ Zhī) proved to contain components that give similar effects to estrogen. The purpose of this review is to discuss the therapy value of available synthetic and natural therapeutic agents. Understanding the mechanisms of both agents will not only clarify their function as therapeutic agents, but can also be the key to the treatment of diseases caused by bone resorption by targeting specific aspects of osteoclastogenesis.

Keywords: osteoclastogenesis, TNF, RANKL, bone resorption, natural resource, signaling, treatment

DDC 616.02774

Sandra F (Department of Biochemistry and Molecular Biology, Division of Oral Biology, Faculty of Dentistry, Trisakti University, Jakarta, Indonesia)

Role of Herbal Extract in Stem Cell Development

Mol Cell Biomed Sci. 2018; 2(1): 19-22

Abstract (English)

Stem cell research has been developed, and today we can witness some stem cell clinical trials are on going in Indonesia. To meet a successful stem cell treatment, several factors need to be considered, such as cell number. Cell number has been reported to be crucial, and therefore optimal cell number should be achieved. Meanwhile, in some circumstances, cell number is not enough, therefore cell number should be enriched in an in vitro stem cell culture setting. In an in vitro stem cell culture, besides suitable and sterile equipment,

Molecular and Cellular Biomedical Sciences

reagents such as culture medium, serum and antibiotics are all important. Although all those criteria are fulfilled, somehow stem cell enrichment cannot be achieved, cell number is still below the target. Modification of stem cell microenvironment should then be an alternative. The addition of growth factors is a part of the strategies to reach a better enrichment. So that, stem cells could later be induced to proliferate at a higher rate. This strategy was then pursued by the scientist involved in herbal medicine. Herbal extracts were now highly investigated due to its potential to induce cell proliferation. Some herbal extracts inducing proliferation and differentiation of stem cell will be shown and described.

Keywords: herbal extract, stem cell, progenitor cell, proliferation, differentiation

DDC 616.994
Sudiono J, Thalib S (Department of Oral Pathology, Faculty of Dentistry, Trisakti University, Jakarta, Indonesia)
Angiogenesis Intensity within Benign and Malignant Oral Mucosa Epithelial Tumor
Mol Cell Biomed Sci. 2018; 2(1): 23-7
Abstract (English)
Background: Angiogenesis is an important and fundamental process for new blood vessels to provide nutrients and oxygen needed by tumor cells to grow, develop, and in case of cancer also to metastasize into other organs. This study aims to evaluate the intensity of angiogenesis within benign (papillomas) and malignant (squamous cell carcinoma) epithelial tumors.
Materials and Methods: This analytic observational study with cross-sectional design using histopathology slide sample that were clinically diagnosed as squamous cell carcinoma (n=3) and papilloma (n=3). Microscopically, the angiogenesis characterized with lumen lined by endothelial cells with or without red blood cells inside within sub epithelial connective tissue of papilloma and squamous cell carcinoma by Hematoxylin Eosin stain. Angiogenesis intensity was counted from four areas under magnification of (10x10), each area was scored under (10x40) magnification.
Results: Angiogenesis intensity of papilloma and squamous cell carcinoma are (45.17±14.573) and (55.18±6.26041) respectively. T-test analysis showed there was no significant difference (p=0.336>0.05).
Conclusions: Angiogenesis intensity of papilloma is less than those of squamous cell carcinoma.

Keywords: angiogenesis, oral epithelial tumor, benign, malignant.

DDC 612.82
Gonzalez D, Afadlal S, Lizal K, Hermanto Y, Miki T, Takeuchi Y, Satriotomo I (Department of Anatomy and Neurobiology, Faculty of Medicine, Kagawa University, Kagawa, Japan)
Enucleation Induces Parvalbumin and Glial Fibrillary Acidic Protein, but Not Calbindin D28k Protein Expression in Superior Colliculus of Wistar Rats
Mol Cell Biomed Sci. 2018; 2(1): 28-37
Abstract (English)
Background: It is known that eye enucleation causes various morphological and functional alterations in the central nervous system (CNS). The purpose of this study was to examine the sub-chronic effects of monocular enucleation on the distribution of the calcium binding proteins calbindin D28k (CB) and parvalbumin (PV) as well as the glial fibrillary acidic protein (GFAP) immunoreactivity in the superior colliculus (SC) of Wistar rats.
Materials and Methods: Thirty young adult (8 weeks) male Wistar rats from SLC (Shizuoka, Japan), weighing 200-250 grams, were housed in separate cages under controlled conditions with a constant temperature kept in 12:12 light/dark cycle and ad libitum water and food. In this study the rats were divided into two groups, a control and an enucleated groups. The experimental group received unilateral eye enucleation and was allowed 1, 4 or 12 weeks recovery before sacrificed.
Results: Unilateral enucleation over a period of 1 week or more caused a decrease in the number CB-immunoreactive (CB-IR) neurons. This loss was associated with an increase in GFAP-IR astrocytes in the superficial gray layer and the optic layer of the SC with contralateral side predominance. In addition, the CB-IR neurons illustrated a smaller soma and poor dendritic arborization. Conversely, the GFAP-IR astrocytes were hypertrophied with longer foot processes on the contralateral side of enucleation. Interestingly, the number of PV-IR neurons was elevated for up to 4 weeks in enucleated rats versus sham-operated rats.
Conclusions: This study demonstrates the importance of calcium-binding protein homeostasis and reversible glial response for maintaining variability of neuronal function in sub-cortical visual centers following optic nerve deafferentation.

Keywords: enucleation, superior colliculus, calbindin D28k, parvalbumin, glial fibrillary acidic protein

Print ISSN: 2527-4384

Online ISSN: 2527-3442

Molecular and Cellular Biomedical Sciences

Volume 2, Number 1, March 2018

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