

Peer Reviewed & Refereed

Indexing and Abstracting in Following Databases

1. Bowker: A ProQuest Affiliate

Bowker.
a ProQuest affiliate

2. Crossref


Crossref

Current Research in Biology

Volume - 4

Chief Editor
Dr. R. Raveen

Co-editor
Dr. Samuel Tennyson

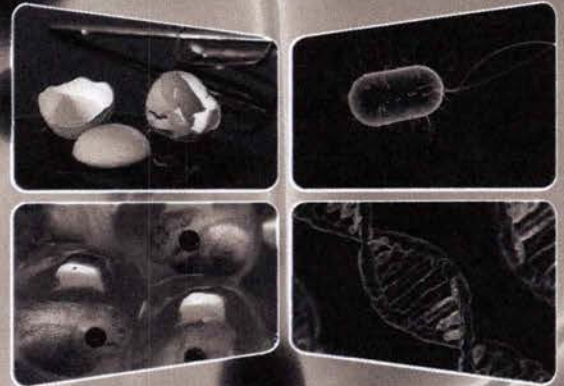


₹ 696, US \$14

Published by
AKINIK Publications,
#169, C-11, Sector - 3, Rohini,
Delhi-110085, India
Toll Free (India) 18001234070



Attribution-NonCommercial-ShareAlike
4.0 International (CC BY-NC-SA 4.0)




AKINIK PUBLICATIONS
NEW DELHI

**Certified as
TRUE COPY**


Principal
Ramniranjan Jhunjhunwala College,
Ghatkopar (W), Mumbai-400086.

Published By: AkiNik Publications

AkiNik Publications
169, C-11, Sector - 3,
Rohini, Delhi-110085, India
Toll Free (India) – 18001234070
Phone No. – 9711224068, 9911215212
Email – akinikbooks@gmail.com

Chief Editor: Dr. R. Raveen

Co-Editor: Dr. Samuel Tennyson

The author/publisher has attempted to trace and acknowledge the materials reproduced in this publication and apologize if permission and acknowledgements to publish in this form have not been given. If any material has not been acknowledged please write and let us know so that we may rectify it.

© AkiNik Publications

Publications Year: 2021

Pages: 86

ISBN: 978-93-5570-100-8

Book DOI: <https://doi.org/10.22271/ed.book.1438>

Price: ₹ 696/-

**Certified as
TRUE COPY**



Principal

**Ramniranjan Jhunjhunwala College,
Ghatkopar (W), Mumbai-400086.**

Current Research in Biology

Volume - 4

Chief Editor

Dr. R. Raveen

Associate Professor, Department of Zoology, Madras Christian College,
Chennai, Tamil Nadu, India

Co-editor

Dr. Samuel Tennyson

Assistant Professor, Department of Zoology, Madras Christian College,
Chennai, Tamil Nadu, India

AkiNik Publications

New Delhi

**Certified as
TRUE COPY**

Principal

**Ramniranjan Jhunjhunwala College,
Ghatkopar (W), Mumbai-400086.**

Contents

Chapters	Page No.
1. Behavioural Analysis of Pet Dogs and Street Dogs: A Comparative Study <i>(Hema Kumar Nayak, Lokanath Mishra and Prasanti Mishra)</i>	01-14
2. Forensic Entomology: A Noble Branch of Insects in Crime Detection and Generating Bright Job Perspectives <i>(Dr. Arti Prasad, Suman, Dr. Ashok Kumar and Sanjay Kumar Meena)</i>	15-32
3. Insights into Computational Protein Design <i>(Bondeepa Saikia, Aziza Rahman and Anupaul Baruah)</i>	33-48
4. Pesticides Induced Oxidative Stress and Reproductive Toxicity <i>(Hajer Ben Saad, Ahmed Hakim and Ibtissem Ben Amara)</i>	49-59
5. Macroalgae: Biological Activities and Utilization <i>(Hajer Ben Saad, Ahmed Hakim and Ibtissem Ben Amara)</i>	61-73
6. Recent Approaches to Wound Healing <i>(Dr. Janhavi Aameya Bhagwat)</i>	75-86

**Certified as
TRUE COPY**



Principal
Ramniranjan Jhunjhunwala College,
Ghatkopar (W), Mumbai-400086.

Chapter - 6
Recent Approaches to Wound Healing

Author

Dr. Janhavi Ameeya Bhagwat

Assistant Professor, Department of Zoology, Ramniranjan
Jhunjhunwala College (Autonomous), Ghatkopar West,
Mumbai, Maharashtra, India

Page | 75

**Certified as
TRUE COPY**



Principal
Ramniranjan Jhunjhunwala College,
Ghatkopar (W), Mumbai-400086.

Chapter - 6

Recent Approaches to Wound Healing

Dr. Janhavi Ameeya Bhagwat

Abstract

The chapter discusses the physiology of wound healing which involves an interplay of various molecules. The healing of chronic wounds is difficult and sometimes may lead by fatal or lead to amputation. Various types of conventional and modern approaches to wound healing are described in the chapter.

Keywords: Wound healing, wound dressing, debridement, growth factors, antibiotics, engineered skin replacement, hyperbaric oxygen therapy

1. Introduction

Wound encompasses everything from small cuts, which occur very often in our day-to-day life to chronic ulcers caused by various physiological and pathological conditions. Thus, a wound is disruption of cellular structure, anatomic structure and functional continuity of living tissue. It can be caused by physical factors such as trauma caused due to accidents, surgery, warfare or an assault or it can also occur due to chemical and physical burns¹. As the agencies causing wound differ, the nature of the injury also varies. Wounds are of different types, e.g., incised wounds, penetrating wounds, lacerated wounds, crushed and devitalised wounds to name a few. Normally, the incised wounds are confined to superficial layers of skin whereas the penetrating wounds are deep wounds that disrupt the skin along with muscles, blood vessels and nerves. In comparison, the lacerated wounds are with jagged edges, commonly seen following road accidents and are often contaminated with organic matter. Finally, the industrial and major road accidents as well as the war injuries account for crushed and devitalised wounds. The area and the depth of devitalised tissue not only depend upon the area and the weight of the crushing force but also on the duration and velocity of the impact. A severe crushing injury may have a profound general as well as local effect.

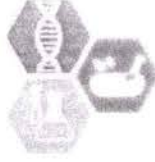
The living body has a tremendous capacity to naturally repair or heal the wounds. However, this process is disrupted due to metabolic imbalance or

Certified as
TRUE COPY



Principal

Ramniranjan Jhunjhunwala College,
Ghatkopar (W), Mumbai-400086.



AkiNik Publications

Printing Press License No.: F.1 (A-4) press 2016

Publication Certificate

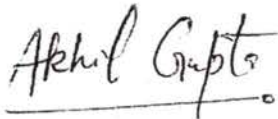
Ref. No.: CRB-04-0601

Date: 13-01-2022

To,
Dear Dr. Janhavi Ameeya Bhagwat

This certificate confirms that **Dr. Janhavi Ameeya Bhagwat** is the author of book chapter titled "**Recent Approaches to Wound Healing**" of published book entitled "**Current Research in Biology (Volume - 4)**" having ISBN 978-93-5570-100-8.


Yours Sincerely,





Akhil Gupta
Manager
AkiNik Publications

**Certified as
TRUE COPY**


Principal
Ramniranjan Jhunjhunwala College,
Ghatkopar (W), Mumbai-400086.