

CONTENTS

Preface

v

SECTION 1

HEAVY METAL STRESS AND ECOTOXICOLOGY

- 1 Effect of Chromium on the Germination, Growth Physiology and Antioxidant Enzymes of Hydroponically Grown Black Gram [*Vigna mungo* var. B3-8-8 (L.) Hepper] 1.1-1.14
Ayushee Rath and Anath Bandhu Das
- 2 Chromium Induced Toxicity on Physiological and Biochemical Parameters of Horse Gram [*Macrotyloma uniflorum* (L.) Verdc.] var. Madhu 2.1-2.14
Shilpee Dhali and Chinmay Pradhan
- 3 Effect Nickel and Chromium Stress on Growth and Biochemical Parameters of *Fischerella* sp. 3.1-3.14
Pratibha Rani Deep, Shantanu Bhattacharyya and Binata Nayak
- 4 Effects of Cadmium Induced Stress on Growth, Biochemical Parameters and Arbuscular Mycorrhizal Root Association of *Vigna radiata* (L.) R. Wilczek 4.1-4.12
Poonam Hira Hansda and Bandana Kullu
- 5 Ecotoxicological Effects of Pesticides on Soil and it's Biological Community 5.1-5.8
Maminee Panda, Nilam Dash, Smita Bhoi and Aliva Patnaik

SECTION 2

BIODIVERSITY AND BIOROSPECTING OF SILKWORM

- 6 A Perspective Study on the Cultivation of Eri Silkworm in Badgoan Block, Sundergarh District of Odisha 6.1-6.8
Priti Pragyan Ray, Purushatam Dash and Prasanta Kumar Kar
- 7 Bio-prospecting Potential of Tasar Silk Industry and its Relevance with Human Welfare 7.1-7.10
Jay Prakash. Pandey, Karmabeer Jena, Virendra Pal Gupta, Mohammad Muzuradeen Baig, Gajendra Pal Singh and Ajit Kumar Sinha

- 8 **Why Bio-technological Exploration and Endeavor are Requisite for Tasar Silk Industry?** 8.1-8.12
Jay Prakash. Pandey, Karmbeer Jena, Gajendra Pal Singh and Ajit Kumar Sinha
- 9 **Biodiversity of Tasar Silkworm** 9.1-9.6
Bhaskar Behera
- 10 **Conservation and Sustainable Utilization of Modal Ecorace of Tasar Silkworm in Similipal: An Assessment** 10.1-10.10
Prasanta Kumar Kar, Sanjiv Kumar Sinha and Ajit Kumar Sinha

SECTION 3

IMMUNE RESPONSE AND DISEASE BIOLOGY

- 11 **Bioprospecting the Natural Products for Hematopoietic Stem Cell Expansion: Novel Screening Tools and Strategies** 11.1-11.12
Jayadev Joshi, Namita Indraganti, Subhajit Ghosh and Premi Kumar Indraganti
- 12 **Cancer Immunotherapy with Chimeric Antigen Receptor Tcells** 12.1-12.24
Dipanjana Ghosh, Adhiraj Dasgupta, Oindrila Bhattachajee, Debasmita Mukhopadhyay, Rajveer Singh, V. Ravichandiran and Dhruvaji Chatteropadhyay
- 13 **Therapeutic Approach Targeting Cancer Stem Cells in Oral Cancer** 13.1-13.20
Prajna Paramita Naik and Sujit Kumar Bhutia
- 14 **Use of Vaginal pH in Screening for Bacterial Vaginosis in Resource Poor Settings** 14.1-14.10
Padmalaya Das and Belen Torondel
- 15 **Insect Hemocytes: Current Status and its Prospective Utilisation in Bio-prospecting** 15.1-15.18
Jay Prakash Pandey and Ram Krishna Tiwari

SECTION 4

MEDICINAL PLANTS

- 16 **Phytochemical Analysis of *Hyptis suaveolens* from Khordha, Odisha** 16.1-16.14
Sasmita Jagat, Priyadarshini Samal and Bhabatarini Panda
- 17 **Ethno Medicinal Plants Used by the Tribals of Gandhamardana Hill for Gynecological Disorder** 17.1-17.8
Pragnya Sahoo and Yashoda Nayak

SECTION 5 ADVANCE TECHNIQUES IN LIFE SCIENCES

- | | |
|---|------------|
| 18 Genetic Diversity Study of Pigeonpea (<i>Cajanus cajan</i> (L.) Millsp.) Genotypes Using DNA Markers
<i>Alok Ranjan Sahu and Jogeswar Panigrahi</i> | 18.1-18.14 |
| 19 Targeting Collagen Fibril Formation Through Selected Natural Compounds
<i>Karunakar Kar, Bibin. G. Anand and Kailash Prasad Prajapati</i> | 19.1-19.10 |
| 20 Identification and Characterization of Gender-specific Semiochemicals in Indian Ladybirds for Effective and Sustainable Pest-Management Practices
<i>Rojalin Pattanayak and Chandra Sekhar Mohanty</i> | 20.1-20.14 |
| 21 Comparative Assessment of Protein Extraction Methods for Leaf and Seed of <i>Vigna radiata</i> (L.) R. Wilczek Plant [†]
<i>Bhaskar Chandra Sahoo, Shakti Kanta. Rath and Nihar Ranjan Singh</i> | 21.1-21.16 |
| 22 <i>In vitro</i> Evaluation of EGCG as a Potential Radiomitigator
<i>Mrinalini Tiwari, Rajendra Kumar Behera and Paban Kumar Agrawala</i> | 22.1-22.16 |

SECTION 6 CLIMATE CHANGE

- | | |
|--|------------|
| 23 Global Cooling the Other Side of Global Catastrophic Change in Climate
<i>Rageshree Swain, Pragyan Paramita Rout and Sanhita Padhi</i> | 23.1-23.12 |
| 24 Tiller Dynamics of Wild Rice <i>Oryza rufipogon</i> Griff.: A Versatile Plant with Potential for Resilience to Climate Change Induced Stresses
<i>Rashmi Panigrahi and Ekamber Kariali</i> | 24.1-24.8 |