Record Nr.	UNINA9910805574403321
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Titolo	Adaptation under Stressful Environments through Biological Adjustments and Interventions [[electronic resource] /] / edited by Rajkumar Tulsawani, Divya Vohora
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-9976-52-9
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (412 pages)
Altri autori (Persone)	VohoraDivya
Disciplina	615
Soggetti	Pharmacology
	Nutrition
	Cytology
	Stress (Physiology)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I. Hypoxic, High-Altitude, and Extreme Stress: Health Implications and Interventions Chapter 1. Stress and Adaptogens Chapter 2. Molecular Basis of Response to Hypoxia Chapter 3. Activation of the Hypoxia-Inducible Factor under High Altitude Stress Chapter 4. Regulation of Vascular Endothelial Growth Factor by SUMOylation in Hypoxic Cardiomyocytes Chapter 5. Expression of Vascular Endothelial Growth Factor at High Altitude Chapter 6. Thrombogenetic Risk at High Altitude: Early Diagnosis and Treatment Modalities Chapter 7. Leaky Gut at High Altitude: Synbiotics May be a Possible Solution Chapter 8. Human Gastrointestinal Tract: Impact of Hypobaric Hypoxia Chapter 9. Mechanism of Skeletal Muscle Atrophy at High Altitude: Role of Herbals and Nutraceuticals Chapter 10. Altitude Acclimatization via Pharmacological and Non- Pharmacological Interventions Chapter 11. Performance Enhancement under Extreme Stressful Environment Chapter 12. Military Footwear and Extreme Environment Operations: An Ergonomics Perspective Chapter 13. Therapeutic Significance of Tanshinone: Pathophysiology and Disruptive Technologies Chapter 14.

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	Acclimatization: A Way to Cope-up with a Stressful Environment Part II. Oxidative & Genotoxic Stress: Health Implications and/or Approaches to Management Chapter 15. Genotoxin Stress and the Role of Alkaloids Chapter 16. Cellular Stress, Survival Mechanism, and Adaptation Chapter 17. Malnutrition-Induced Oxidative Stress in the Nervous System and Its Health Implications Chapter 18. Oxidative Medicine & Novel Pharmacological Treatment Approaches in Liver Disease Chapter 19. Sleep, Brain, and Stress Chapter 20. Senolytics in Brain Disorders - A Novel Pharmacological Approach to Control Cellular Senescence and Oxidative Stress Part III. Stress Management through Dietary Modifications and Nutritional Interventions Chapter 21. Prevention of Pro-Inflammatory Markers by Medicinal Mushrooms Under Stressful Environment Chapter 22. Nutraceuticals in Alleviating Aging Chapter 23. Heat Stress and Dehydration Chapter 24. Management of Stress through Dietary Modifications Chapter 25. Dietary Modifications to Manage Stress.
Sommario/riassunto	The book delves into the intricate interplay of stress and adaptive responses, and their multifaceted dynamics influenced by stress type, exposure duration, genetic factors, and lifestyle elements. It unveils the complexity of stress management, unveiling how adaptive strategies evolve in response to stressors. By harnessing scientific breakthroughs in stress response comprehension, the book navigates the path to effective stress mitigation. Through avenues such as pharmacological interventions, dietary adjustments, psychological enhancement, and more, the book advocates for achieving adaptive resilience—a state where the system effectively copes with stress. The text encapsulates an array of stressors, including extreme stress, oxidative stress, and genotoxic stress, dissecting their impact on systemic equilibrium and health. The book's focal point rests on adaptive mechanisms that vary with stressor types, while also spotlighting how these mechanisms can be calibrated through pharmacological and alternative means. This is an invaluable resource for understanding, mitigating, and harnessing the power of adaptation in the face of stress-induced challenges.