Biology 19th May 2014 Past Paper Edex

Advances in Marine Biology has been providing in-depth and up-to-date reviews on all aspects of marine biology since 1963--over 40 years of outstanding coverage! The series is well known for its excellent reviews and editing. Now edited by Barbara E. Curry (University of Central Florida, USA) with an internationally renowned Editorial Board, the serial publishes in-depth and up-to-date content on many topics that will appeal to postgraduates and researchers in marine biology, fisheries science, ecology, zoology, and biological oceanography. Volumes cover all areas of marine science, both applied and basic, a wide range of topical areas from all areas of marine ecology, oceanography, fisheries management and molecular biology and the full range of geographic areas from polar seas to tropical coral reefs. Review articles on the latest advances in marine biology Many of the authors are leading figures in their fields of study Material is widely used by managers, students, and academic professionals in the marine sciences
A comprehensive integrative handbook on fertility treatment, and Assisted Reproduction Techniques (ART), the book is written by specialist contributors for health professionals and Complementary and Alternative Medicine (CAM) practitioners, and for those seriously considering ART themselves. Integrated approaches to infertility offer both a greater awareness and understanding of the combination of factors that can influence the chances of success when undergoing different types of ART. Leading experts review the evidence and discuss the benefits of different approaches to support the physiological and emotional aspects of fertility and fertility treatment. The book covers everything from identifying and treating conditions that may reduce fertility, including immunological abnormalities and specific male and female factors, to how nutrition, acupuncture, reflexology and yoga can support couples going through assisted reproduction, including helping to improve some immunological aspects. There is also a chapter that looks specifically at support for the over 40's.
This comprehensive volume describes how ecosystem services-based approaches can assist in addressing major global and regional water challenges, such as climate change, biodiversity loss, and water security in the developing world, by integrating scientific knowledge from different disciplines, such as hydrological modelling, environmental economics, psychology and international law. Empirical assessments at the national, catchment and regional levels are used to critically appraise this systemic approach, and the merits and potential limitations are presented. The practicalities of this approach with regard to water resources management, nature conservation, and sustainable business practices are discussed, and the role of society in underpinning the concept of ecosystem services is explored. Presenting new insights and perspectives on how to shape future strategies, this contributory volume is a valuable reference for researchers, academics, students and policy makers, in environmental studies, hydrology, water resource management, ecology, environmental law, policy and economics, and conservation biology.
This eBook contains the 19 articles that were part of a Special Topic in Frontiers in Genetics entitled “Genetics Research in Electronic Health Records Linked to DNA Biobanks”. The Special Issue was published on-line in 2014-2015 and contained papers representing the diverse research ongoing in the integration of electronic health records (EHR) with genomics through basic, clinical, and translational research. We have divided the eBook into four Chapters. Chapter 1 describes the Electronic Medical Records and Genomics (eMERGE) network and its contri-bution to genomics. It highlights methodological questions related to large data sets such as imputation and population stratification. Chapter 2 describes the results of genetic studies on different diseases for which all the phenotypic information was extracted from the EHR with highly specific ePhenotyping algorithms. Chapter 3 focuses on more complex analyses of the genome including copy number variants (CNV), pleiotropy com-bined with phenome-wide association studies (PheWAS), and epistasis (gene-gene interactions). Chapter 4 discusses the use of genetic data together with EHR-derived clinical data in clinical settings, and how to return genetic results to patients and providers. It also contains a comprehensive review on genetic risk scores. We have included mostly Original Research Articles in the eBook, but also Reviews and Methods papers on the relevant topics of analyzing and integrating genomic data. The release of this eBook is timely, since several countries are launching Precision Medicine initiatives. Precision Medicine is a new concept in patient care taking into account individual variability in genetic, environmental and lifestyle factors, when treating diseases or trying to prevent them from developing. It has become an important focus for biomedical, clinical and translational informatics. The papers presented in this eBook are well positioned to educate the readers about Precision

Medicine and to demonstrate the potential study designs, methods, strategies, and applications where this type of research can be performed successfully. The ultimate goal is to improve diagnostics and provide better, more targeted care to the patient.
Science, Regulation and Business Strategies
The Carbon Fix
An Encyclopedia
No-Drama Leadership
ADAPTATION STRATEGIES OF THE AQUACULTURE SECTOR TO THE IMPACTS OF CLIMATE CHANGE
Vanishing Act - People who disappeared mysteriously or did they ?
Concepts of Biology

Diversities in Education is a challenging text that will help educators, teacher educators and trainee teachers to be more effective in teaching a range of diverse learners. It covers five major categories of difference: sex and gender; social class and socio-economic status; race, ethnicity and culture; beliefs and religion; and different abilities and asks the urgent questions all policy-makers, educators and students should consider: Why should we value diversity and human rights? How can inclusive education accommodate diversity? How do society's aspirations for cohesion and harmony impact on people who are different? What meanings are given to differences, culturally and historically? Should educators seek to accentuate, eliminate, reduce or ignore differences? By drawing attention to the latest research into the most effective educational policies and practices, this insightful book suggests strategies for meeting the challenges being posed in an era of superdiversity. It's a crucial read for any training or practising educator who wants to address the issue of diversity, learn effective ways to reach all learners and create more inclusive and harmonious societies.
Science and faith are often seen as being in opposition. In this book, award-winning sociologist Elaine Howard Ecklund questions this assumption based on research she has conducted over the past 15 years. She highlights the ways these two spheres point to universal human values, showing readers they don't have to choose between science and Christianity. Breathing fresh air into debates that have consisted of more opinions than data, Ecklund offers insights uncovered by her research and shares her own story of personal challenges and lessons. In the areas most rife with conflict--the origin of the universe, evolution, climate change, and genetic technology--readers will find fascinating points of convergence in 8 virtues of human existence: curiosity, doubt, humility, creativity, healing, awe, shalom, and gratitude. The book includes discussion questions for group use and to help pastors, small group leaders, and congregants broach controversial topics and bridge the science-faith divide.
"Synthetic biology" is the label of a new technoscientific field with many different facets and agendas. One common aim is to "create life", primarily by using engineering principles to design and modify biological systems for human use. In a wider context, the topic has become one of the big cases in the legitimization processes associated with the political agenda to solve global problems with the aid of (bio-)technological innovation. Conceptual-level and meta-level analyses are needed: we should sort out conceptual ambiguities to agree on what we talk about, and we need to spell out agendas to see the disagreements clearly. The book is based on the interdisciplinary summer school "Analyzing the societal dimensions of synthetic biology", which took place in Berlin in September 2014. The contributions address controversial discussions around the philosophical examination, public perception, moral evaluation and governance of synthetic biology.
Most of the contributions in this volume were presented at the seventh International Workshop on African Archaeobotany (IWAA), held in Vienna, 2-5 July 2012. They address past interrelationships between people and plants as evident in the rich archaeobotanical, ethnographic, and linguistic record of Africa. Since its inception two decades ago, IWAA has developed into a tightly knit community of scholars from all continents who share a profound interest in African ways of plant exploitation, trade networks, questions of origin, domestication and subsequent dispersal of African crops, as well as the introduction of crops of Asian and American origin.
Dangerous Fishes of the Eastern and Southern Arabian Peninsula
ESC Textbook of Vascular Biology
World Ocean Assessment
Gregory S. Ezra
A Proposed Framework for Identifying Potential Biodefense Vulnerabilities Posed by Synthetic Biology
The Human Dimensions of Forest and Tree Health
Water Ecosystem Services

It ' s a troubling phenomenon that many of us think of as a modern psychological epidemic, a symptom of extreme emotional turmoil in young people, especially young women: cutting and self-harm. But few of us know that it was 150 years ago—with the introduction of institutional asylum psychiatry—that self-mutilation was first described as a category of behavior, which psychiatrists, and later psychologists and social workers, attempted to understand. With care and focus, Psyche on the Skin tells the secret but necessary history of self-harm from the 1860s to the present, showing just how deeply entrenched this practice is in human culture. Sarah Chaney looks at many different kinds of self-injurious acts, including sexual self-mutilation and hysterical malingering in the late Victorian period, self-marking religious sects, and self-mutilation and self-destruction in art, music, and popular culture. As she shows, while self-harm is a widespread phenomenon found in many different contexts, it doesn ' t necessarily have any kind of universal meaning—it always has to be understood within the historical and cultural context that surrounds it. Bravely sharing her own personal experiences with self-harm and placing them within its wider history, Chaney offers a sensitive but engaging account—supported with powerful images—that challenges the misconceptions and controversies that

surround this often misunderstood phenomenon. The result is crucial reading for therapists and other professionals in the field, as well as those affected by this emotive, challenging act.

This book is devoted to the dangerous fishes found offshore the eastern and southern Arabian Peninsula. It covers information about the main groups of dangerous fish species i.e., biting and predator fish group, venomous stinging fish, electric shock fish, harmful stinging fish, and poisonous fish. In the latter group, the book gives details about fishes that cause several types of toxicities to human. The purpose of this book is to thoroughly introduce life, nature and methods of dangerous fishes in order to form awareness about their danger and to take the proper preventive steps. It will appeal to researchers, scholars, divers, the sea coast visitors and students of marine biology as it is highly informative and carefully presented. This book is the first of its kind for the Arabian region in particular and the Middle East in general.

People disappear everyday, the book examines 16 peoples disappearance some famous and some not so famous, Its gives you the background of each person and the nature of their disappearance from they day they disappeared to either their reappearance or what is know about each case today.

The identification of drug targets in a given disease has been central to pharmaceutical research from the latter half of the 20th century right up to the modern genomics era. Human Drug Targets provides an essential guide to one of the most important aspects of drug discovery – the identification of suitable protein and RNA targets prior to the creation of drug development candidates. The first part of the book consists of introductory chapters that provide the background to drug target discovery and highlight the way in which these targets have been organised into online databases. It also includes a user ' s guide to the list of entries that forms the bulk of the book. Since this is not designed to be a compendium of drugs, the emphasis will be on the known (or speculated) biological role of the targets and not on the issues associated with pharmaceutical development. The objective is to provide just enough information to be informative and prompt further searches, while keeping the amount of text for each of the many entries to a minimum. Human Drug Targets will prove invaluable to those drug discovery professionals, in both industry and academia, who need to make some sense of the bewildering array of online information sources on current and potential human drug targets. As well as creating order out of a complex target landscape, the book will act as an ideas generator for potentially novel targets that might form the basis of future discovery projects.

A Handbook

Immune Interactions during the Reproductive Cycle

Oceanography and Marine Biology

The Politics of Pesticides

An Annual Review, Volume 58

Human Drug Targets

Enamel Research: Mechanisms and Characterization

"We are being poisoned, and this book is sounding a well-informed alarm. Read it. Get educated and then join the thousands rising up against those who care more for profit than the health of our bodies and our earth."–Eve Ensler, New York Times bestselling authorChemical poisons have infiltrated all facets of our lives – housing, agriculture, work places, sidewalks, subways, schools, parks, even the air we breathe. More than half a century since Rachel Carson issued Silent Spring – her call-to-arms against the poisoning of our drinking water, food, animals, air, and the natural environment – The Fight Against Monsanto's Roundup takes a fresh look at the politics underlying the mass use of pesticides and the challenges people around the world are making against the purveyors of poison and the governments that enable them.The scientists and activists contributing to The Fight Against Monsanto's Roundup, edited by long-time Green activist Mitchel Cohen, explore not only the dangers of glyphosate – better known as "Roundup" – but the campaign resulting in glyphosate being declared as a probable cancer-causing agent. In an age where banned pesticides are simply replaced with newer and more deadly ones, and where corporations such as Monsanto, Bayer, Dow and DuPont scuttle attempts to regulate the products they manufacture, what is the effective, practical, and philosophical framework for banning glyphosate and other pesticides?The Fight Against Monsanto's Roundup: The Politics of Pesticides takes lessons from activists who have come before and offers a radical approach that is essential for defending life on this planet and creating for our kids, and for ourselves, a future worth living in.

Atherosclerosis is the most significant cause of cardiovascular disease worldwide. Vascular biology is the key to understanding how atherosclerosis arises and operates. The ESC Textbook of Vascular Biology is a rich and clearly laid-out guide by leading European scientists providing comprehensive information on vascular physiology, disease, and research. The textbook covers molecular findings and novel targets within the speciality while also providing the basics of vascular biology and disease pathophysiology. It also covers the major changes in the diagnosis, prevention and treatment of atherosclerosis that have occurred in recent years, developments and recent breakthroughs in the field are specifically highlighted. The official publication of the ESC Working Group on Arthrosclerosis and Vascular Biology, this print edition comes with access to the online version on Oxford Medicine Online, for as long as the edition is published by Oxford University Press. By activating your unique access code, you can read and annotate the full text online, follow links from the references to primary research materials, and view, enlarge and download all the figures and tables. The textbook is also linked to the ESC's online learning platform (ESCel) and their core specialist training curriculum (ESC Core Curriculum). The textbook particularly appeals to vascular biologists, cardiologists, and other practising clinicians.

Given the growing urgency to develop global responses to a changing climate, The Carbon Fix examines the social and equity dimensions of putting the world's forests—and, necessarily, the rural people who manage and depend on them—at the center of climate policy efforts such as REDD+, intended to slow global warming. The book assesses the implications of international policy approaches that focus on forests as carbon and especially, forest carbon offsets, for rights, justice, and climate governance. Contributions from leading anthropologists and geographers analyze a growing trend towards market principles and financialization of nature in environmental governance, placing it into conceptual, critical, and historical context. The book then challenges perceptions of forest carbon initiatives through in-depth, field-based case studies assessing projects, policies, and procedures at various scales, from informed consent to international carbon auditing. While providing a mixed assessment of the potential for forest carbon initiatives to balance carbon with social goals, the authors present compelling evidence

for the complexities of the carbon offset enterprise, fraught with competing interests and interpretations at multiple scales, and having unanticipated and often deleterious effects on the resources and rights of the world's poorest peoples—especially indigenous and rural peoples. The Carbon Fix provides nuanced insights into political, economic, and ethical issues associated with climate change policy. Its case approach and fresh perspective are critical to environmental professionals, development planners, and project managers; and to students in upper level undergraduate and graduate courses in environmental anthropology and geography, environmental and policy studies, international development, and indigenous studies.

This book sets out the conditions under which the need for a new approach to the production of architecture in the twenty-first century is established, where our homes and cities are facing increasing pressures from environmental challenges that are compromising our lives and well being. Vibrant architecture embodies a new kind of architectural design practice that explores how lively materials, or 'vibrant matter', may be incorporated into our buildings to confer on them some of the properties of living things, such as movement, growth, sensitivity and self-repair. The theoretical and practical implications of how this may occur are explored through the application of a new group of materials. Characteristically, these substances possess some of the properties of living systems but may not have the full status of being truly alive. They include forms of chemical artificial life such as 'dynamic droplets' or synthetically produced soils. As complex systems, they are able to communicate directly with the natural world using a shared language of chemistry and so, negotiate their continued survival in a restless world. Vibrant architecture may create new opportunities for architectural design practice that venture beyond top-down form-finding programs, by enabling architects to co-design in partnership with human and nonhuman collectives, which result from the production of post natural landscapes. Ultimately, vibrant architecture may operate as an ecological platform for human development that augments the liveliness of our planet, rather than diminishes it.

Role of Lipids in Virus Assembly

Therapeutic Ultrasound
Samuel Butler against the Professionals
Stem Cells in Regenerative Medicine
The Science IA
Ambivalences of Creating Life

Concepts of Biology is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives. Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons, Concepts of Biology is grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at hand.We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Enamel Research: Mechanisms and CharacterizationFrontiers Media SA

This book highlights advances and prospects of a highly versatile and dynamic research field: Therapeutic ultrasound. Leading experts in the field describe a wide range of topics related to the development of therapeutic ultrasound (i.e., high intensity focused ultrasound, microbubble-assisted ultrasound drug delivery, low intensity pulsed ultrasound, ultrasound-sensitive nanocarriers), ranging from the biophysical concepts (i.e., tissue ablation, drug and gene delivery, neuromodulation) to therapeutic applications (i.e., chemotherapy, sonodynamic therapy, sonothrombolysis, immunotherapy, lithotripsy, vaccination). This book is an indispensable source of information for students, researchers and clinicians dealing with non-invasive image-guided ultrasound-based therapeutic interventions in the fields of oncology, neurology, cardiology and nephrology.

In the wake of the 2009 Darwin bicentenary, Samuel Butler (1835-1902) is becoming as well known for his public attack on Darwin's character and the basis of his scientific authority as for his novels Erewhon and The Way of All Flesh. In the first monograph devoted to Butler's ideas for over twenty years, David Gillott offers a much-needed reappraisal of Butler's work and shows how Lamarckian ideas pervaded the whole of Butler's wide-ranging ouevre, and not merely his evolutionary theory. In particular, he argues that Lamarckism was the foundation on which Butler's attempt to undermine professional authority in a variety of disciplines was based. Samuel Butler against the Professionals provides new insight into a fascinating but often misunderstood writer, and on the surprisingly broad application of Lamarckian ideas in the decades following publication of the Origin of Species.

Vibrant Architecture
Why Science and Faith Need Each Other
Psyche on the Skin
A Compendium for Pharmaceutical Discovery
Effective ways to reach all learners
Interim Report
Forest Carbon, Social Justice, and Environmental Governance

4th Refuting the Myth of Evolutionism and Exposing the Folly of Clergy Letters The Darwinian theory of evolution begins with facts (science of microevolution) and ends with fiction (myths of macroevolution). The myths are part of our experience, no transitional organisms in the living world, and part of our discoveries, no transitional fossils in such deposits at the Burgess Shale and Chengjiang sites, where various kinds of organisms appear together in large

collection. In his fourth book, Refuting the Myth of Evolutionism and Exposing the Folly of Clergy Letters, author, Michael Ebifegha, stresses that real science is timeless and based on events that are directly or indirectly observable, testable, and repeatable. Challenging evolutionists and their clerical allies who are banning the teaching of creationism in public schools, Ebifegha insists that evolutionism is also outside sciences purview and, therefore, should be banned as well. He reprimands clerics for capitalizing on human knowledge but failing to recognize the validity of Gods personal claim in speech before an audience and in print on stone tablets for having created the world. These interventions, he asserts, fulfills the worlds standard legal requirement for inventors. Ebifegha argues that the inconsistency of imposing evolutionism as scientific truth on the public and banning creationism violates (1) the academic rights of accomplished scientists who disagree with evolutionism on scientific grounds; (2) the US Supreme Courts 1992 declaration, At the heart of liberty is the right to define ones own concept of existence, of meaning, of the universe, and of the mystery of human life; and (3) Gods historical claim to ownership of the universe. Instead of separation of church and state, Ebifegha recommends separation of worldviews and state.

Great Salt Lake is an enormous terminal lake in the western United States. It is a highly productive ecosystem, which has global significance for millions of migrating birds who rely on this critical feeding station on their journey through the American west. For the human population in the adjacent metropolitan area, this body of water provides a significant economic resource as industries, such as brine shrimp harvesting and mineral extraction, generate jobs and income for the state of Utah. In addition, the lake provides the local population with ecosystem services, especially the creation of mountain snowpack that generates water supply, and the prevention of dust that may impair air quality. As a result of climate change and water diversions for consumptive uses, terminal lakes are shrinking worldwide, and this edited volume is written in this urgent context. This is the first book ever centered on Great Salt Lake biology. Current and novel data presented here paint a comprehensive picture, building on our past understanding and adding complexity. Together, the authors explore this saline lake from the microbial diversity to the invertebrates and the birds who eat them, along a dynamic salinity gradient with unique geochemistry. Some unusual perspectives are included, including the impact of tar seeps on the lake biology and why Great Salt Lake may help us search for life on Mars. Also, we consider the role of human perceptions and our effect on the biology of the lake. The editors made an effort to involve a diversity of experts on the Great Salt Lake system, but also to include unheard voices such as scientists at state agencies or non-profit advocacy organizations. This book is a timely discussion of a terminal lake that is significant, unique, and threatened.

The essential guide by one of America's leading doctors to how digital technology enables all of us to take charge of our health A trip to the doctor is almost a guarantee of misery. You'll make an appointment months in advance. You'll probably wait for several hours until you hear "the doctor will see you now"-but only for fifteen minutes! Then you'll wait even longer for lab tests, the results of which you'll likely never see, unless they indicate further (and more invasive) tests, most of which will probably prove unnecessary (much like physicals themselves). And your bill will be astronomical. In The Patient Will See You Now, Eric Topol, one of the nation's top physicians, shows why medicine does not have to be that way. Instead, you could use your smartphone to get rapid test results from one drop of blood, monitor your vital signs both day and night, and use an artificially intelligent algorithm to receive a diagnosis without having to see a doctor, all at a small fraction of the cost imposed by our modern healthcare system. The change is powered by what Topol calls medicine's "Gutenberg moment." Much as the printing press took learning out of the hands of a priestly class, the mobile internet is doing the same for medicine, giving us unprecedented control over our healthcare. With smartphones in hand, we are no longer beholden to an impersonal and paternalistic system in which "doctor knows best." Medicine has been digitized, Topol argues; now it will be democratized. Computers will replace physicians for many diagnostic tasks, citizen science will give rise to citizen medicine, and enormous data sets will give us new means to attack conditions that have long been incurable. Massive, open, online medicine, where diagnostics are done by Facebook-like comparisons of medical profiles, will enable real-time, real-world research on massive populations. There's no doubt the path forward will be complicated: the medical establishment will resist these changes, and digitized medicine inevitably raises serious issues surrounding privacy. Nevertheless, the result-better, cheaper, and more human health care-will be worth it. Provocative and engrossing, The Patient Will See You Now is essential reading for anyone who thinks they deserve better health care. That is, for all of us.

Building on an increasingly sophisticated understanding of naturally occurring biological processes, researchers have developed technologies to predictably modify or create organisms or biological components. This research, known collectively as synthetic biology, is being pursued for a variety of purposes, from reducing the burden of disease to improving agricultural yields to remediating pollution. While synthetic biology is being pursued primarily for beneficial and legitimate purposes, it is possible to imagine malicious uses that could threaten human health or military readiness and performance. Making informed decisions about how to address such concerns requires a comprehensive, realistic assessment. To this end, the U.S. Department of Defense, working with other agencies involved in biodefense, asked the National Academies of Sciences, Engineering, and Medicine to develop a framework to guide an assessment of the security concerns related to advances in synthetic biology, to assess the level of concern warranted for various advances and identify areas of vulnerability, and to prioritize options to address these vulnerabilities. This interim report proposes a framework for identifying and prioritizing potential areas of concern associated with synthetic biologyâ€"a tool to aid the consideration of concerns related to synthetic biology. The framework describes categories of synthetic biology technologies and applicationsâ€"such as genome editing, directed evolution, and automated biological designâ€"and provides a set of initial questions to guide the assessment of concern related to these technologies and applications.

News from the past: Progress in African archaeobotany

How Enlightened Leaders Transform Culture in the Workplace

Societal and Philosophical Dimensions of Synthetic Biology
Matter as a CoDesigner of Living Structures
Eight Shared Values That Move Us beyond Fear
A Terminal Lake in a Time of Change
Integrated Approaches to Infertility, IVF and Recurrent Miscarriage

Choice. Power. Speed. Today's leaders continually face these forces. But with too many choices, too much power, and too much speed, leaders often make decisions in a heightened state of emotion (and drama). Hasty decisions are often poor ones and in this climate there is no place to hide. Privacy is a thing of the past; the days of covering up or ignoring a problem are over. In today's transparent culture, the decision making of leaders is more vulnerable then ever-and it is more critical than ever to get it right. Marlene Chism's No-Drama Leadership introduces just the model the corporate world needs. Using case studies, checklists, and examples from various levels of hierarchy in leadership and from a variety of industries, Chism introduces the mindset shifts and practical skills needed to develop enlightened leaders, whose decision making flows from a much more grounded and aligned place. You will learn how to: Identify the signs of misalignment Increase your leadership effectiveness Use four quadrants of change as a catalyst for leadership growth Increase employee engagement Tap into the gifts and talents of your employees Communicate strategically Create a culture of accountability Increase innovation and productivity through empowerment Today's leader needs more than position, power, or business acumen. Today's leader needs more than self-management, communication skills, or emotional intelligence. We need leaders who are aligned, aware, and accountable, who balance choice and power with wisdom and responsibility-leaders who embrace and embody both the inner game of leadership growth with the outer game of business results, modeling both the mindsets and actions that transform the cultures they lead.

With a growing world population and increasing reliance on farmed fish as a source of food, this document identifies key research areas to improve the aquaculture sector's capacity to adapt to climate change.

Mammalian pregnancy represents a unique immunological riddle in that the mother does not reject her allogeneic fetus. In part this is largely due to a general sequestration or diminution of T cell activity, and an increased involvement of the innate immune system. The field of immunology is concerned primarily with how innate and adaptive mechanisms collaborate to protect vertebrates from infection. Although many cellular and molecular actors have evidently important roles, antibodies and lymphocytes are considered to be the principal players. Yet despite their importance, it would be definitely simplistic to conclude that they are solely essential for immunity overall. A major distinction between adaptive and innate immunity is the spontaneity of the innate immune response, which utilizes an already pre-existing but limited repertoire of responding modules. The slower onset of adaptive immunity compensates by its ability to recognize a much broader repertory of foreign substances, and also by its power to constantly improve during a response, whereas innate immunity remains relatively unaffected. The interactions between the reproductive system and the immune system are of particular interest, since the reproductive system is unique in that its primary role is to assure the continuity of the species, while the immune system provides internal protection and thus facilitates continued health and survival. The modus operandi of these two morphologically diffuse systems involves widely distributed chemical signals in response to environmental input, and both systems must interact for the normal functioning of each. Furthermore, dysregulation of normal physiological interactions between the reproductive and immune systems can lead to severe pregnancy-related disorders or complications. On the other hand, by ameliorating auto-inflammatory conditions such as MS and RA, pregnancy may provide a unique insight into novel immune modulatory strategies. The scientific focus on reproductive–immune research has historically provided substantial insight into the interface between these two physiological systems. A translational research approach would involve a tight interaction between diverse scientific and clinical disciplines including immunology, obstetrics, haematology, haemostasis and endocrinology. With so much recent progress in the field, we believe that it is valuable and well-timed to review the broad variety of the relevant physiologic and pathologic aspects – from menstruation to fertilization and implantation, and from placentation and pregnancy per se to the post partum condition - in which the immune system takes part. We are looking forward to a wide and vivid discussion of these and related issues, and we sincerely expect that our readers profoundly benefit from new exciting insights and fruitful collaborations.

The book focuses on smart computing for crowdfunding usage, looking at the crowdfunding landscape, e.g., reward-, donation-, equity-, P2P-based and the crowdfunding ecosystem, e.g., regulator, asker, backer, investor, and operator. The increased complexity of fund raising scenario, driven by the broad economic environment as well as the need for using alternative funding sources, has sparked research in smart computing techniques. Covering a wide range of detailed topics, the authors of this book offer an outstanding overview of the current state of the art; providing deep insights into smart computing methods, tools, and their applications in crowdfunding; exploring the importance of smart analysis, prediction, and decision-making within the fintech industry. This book is intended to be an authoritative and valuable resource for professional practitioners and researchers alike, as well as finance engineering, and computer science students who are interested in crowdfunding and other emerging fintech topics.

The Patient Will See You Now
Great Salt Lake Biology
A Festschrift from Theoretical Chemistry Accounts
Diversities in Education
Proceedings of the 7th International Workshop on African Archaeobotany in Vienna, 2 – 5 July 2012
System Biology Methods and Tools for Integrating Omics Data
Mapping and the Citizen Sensor

In this Festschrift dedicated to the 60th birthday of Gregory S. Ezra, selected researchers in theoretical chemistry present research highlights on major developments in the field. Originally published in the journal Theoretical Chemistry Accounts, these outstanding contributions are now available in a hardcover print format, as well as a special electronic edition. This volume provides valuable content for all researchers in theoretical chemistry and will especially benefit those research groups and libraries with limited access to the journal.

Oceanography and Marine Biology: An Annual Review remains one of the most cited sources in marine science and oceanography. The ever-increasing interest in work in oceanography and marine biology and its relevance to global environmental issues, especially global climate change and its impacts, creates a demand for authoritative refereed reviews summarizing and synthesizing the results of recent research. For more than 50 years, OMBAR has been an essential reference for research workers and students in all fields of marine science. This volume considers such diverse topics as optimal design for ecosystem-level ocean observatories, the oceanography and ecology of Ningaloo, human pressures and the emergence of novel marine ecosystems and

priority species to support the functional integrity of coral reefs. Six of the nine peer-reviewed contributions in Volume 58 are available to read Open Access via the links on the Routledge.com webpage. An international Editorial Board ensures global relevance and expert peer review, with editors from Australia, Canada, Hong Kong, Ireland, Singapore, South Africa and the United Kingdom. The series volumes find a place in the libraries of not only marine laboratories and oceanographic institutes, but also universities worldwide. Chapters 1, 2, 3, 4, 5, 7 and 8 of this book are freely available as a downloadable Open Access PDF under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 license. The links can be found on the book's Routledge web page at https://www.routledge.com/9780367367947

This all-encompassing encyclopedia provides a broad perspective on U.S. politics, culture, and society, but also goes beyond the facts to consider the myths, ideals, and values that help shape and define the nation. • Offers approximately 225 entries covering U.S. politics, culture, society, and beliefs • Includes an introductory overview of the forces that have shaped and continue to shape American political culture and a concluding essay that gathers key thematic threads and looks toward the future • Covers the myriad ways in which American political culture influences other aspects of American society • Examines how cultural symbols and beliefs are manipulated to advance political interests and establish government authority • Connects new issues such as social media and sexual politics with the political culture

This book is a unique guide to emerging stem cell technologies and the opportunities for their commercialisation. It provides in-depth analyses of the science, business, legal, and financing fundamentals of stem cell technologies, offering a holistic assessment of this emerging and dynamic segment of the field of regenerative medicine. • Reviews the very latest advances in the technology and business of stem cells used for therapy, research, and diagnostics • Identifies key challenges to the commercialisation of stem cell technology and avenues to overcome problems in the pipeline • Written by an expert team with extensive experience in the business, basic and applied science of stem cell research This comprehensive volume is essential reading for researchers in cell biology, biotechnology, regenerative medicine, and tissue engineering, including scientists and professionals, looking to enter commercial biotechnology fields.

Refuting the Myth of Evolutionism and Exposing the Folly of Clergy Letters

Earning Full Marks on HL or SL Science Lab Reports

CBM

American Political Culture: An Encyclopedia [3 volumes]

Smart Computing Applications in Crowdfunding

A History of Self-harm

The Fight Against Monsanto's Roundup

The seed plays a fundamental role in plant reproduction as well as a key source of energy, nutrients and raw materials for developing and sustaining humanity. With an expanding and generally more affluent world population projected to reach nine billion by mid-century, coupled to diminishing availability of inputs, agriculture is facing increasing challenges to ensure sufficient grain production. A deeper understanding of seed development, evolution and physiology will undoubtedly provide a fundamental basis to improve plant breeding practices and ultimately crop yields. Recent advances in genetic, biochemical, molecular and physiological research, mostly brought about by the deployment of novel high-throughput and high-sensitivity technologies, have begun to uncover and connect the molecular networks that control and integrate different aspects of seed development and help determine the economic value of grain crops with unprecedented details. The objective of this e-book is to provide a compilation of original research articles, reviews, hypotheses and perspectives that have recently been published in Frontiers in Plant Science, Plant Evolution and Development as part of the Research Topic entitled "Advances in Seed Biology". Editing this Research Topic has been an extremely interesting, educational and rewarding experience, and we sincerely thank all authors who contributed their expertise and in-depth knowledge of the different topics discussed. We hope that the information presented here will help to establish the state of the art of this field and will convey how exciting and important studying seeds is and hopefully will stimulate a new crop of scientists devoted to investigating the biology of seeds.

RNA enveloped viruses comprise several families belonging to plus and minus strand RNA viruses, such as retroviruses, flavoviruses and orthomyxoviruses. Viruses utilize cellular lipids during critical steps of replication like entry, assembly and egress. Growing evidence indicate important roles for lipids and lipid nanodomains in virus assembly. This special topic covers key aspects of virus-membrane interactions during assembly and egress, especially those of retroviruses and Ebola virus (EBOV). Virus assembly and release involve specific and nonspecific interactions between viral proteins and membrane compartments. Retroviral Gag proteins assemble predominantly on the PM. Despite the great progress in identifying the factors that modulate retroviral Gag assembly on the PM, there are still gaps in our understanding of precise mechanisms of Gag-membrane interactions. Studies over the last two decades have focused on the mechanisms by which other retroviral Gag proteins interact with membranes during assembly. These include human immunodeficiency virus (HIV), Rous sarcoma virus (RSV), equine infectious anemia virus (EIAV), Mason-Pfizer monkey virus (M-PMV), murine leukemia virus (MLV), and human T-lymphotropic virus type (HTLV-1). Additionally, assembly of filoviruses such as EBOV also occurs on the inner leaflet of the PM. The articles published under this special topic highlight the latest understanding of the role of membrane lipids during virus assembly, egress and release.

This book explores the specifically human dimensions of the problem posed by a new generation of invasive pests and pathogens to tree health worldwide. The growth in global trade and transportation in recent decades, along with climate change, is allowing invasive pests and pathogens to establish in new environments, with profound consequences for the ecosystem services provided by trees and forests, and impacts on human wellbeing. The central theme of the book is to consider the role that social science can play in better understanding the social, economic and environmental impacts of such tree disease and pest outbreaks. Contributions include explorations of how pest outbreaks are socially constructed, drawing on the historical, cultural, social and situated contexts of outbreaks; the governance and economics of tree health for informing policy and decision-making; stakeholder engagement and communication tools; along with more philosophical approaches that draw on environmental ethics to consider 'non-human' perspectives. Taken together the book makes theoretical, methodological and applied contributions to our understanding of this important subject area and encourages researchers from across the social sciences and humanities to bring their own disciplinary perspectives and expertise to address the complexity that is the human dimensions of forest and tree health. Chapters 5 and 11 are open access under a CC BY 4.0 license via link.springer.com.

The rodent incisor is a good model system to study the molecular and cellular events that are involved in enamel biomineralization. Incisors in rodents continuously erupt during their lifespan, thus allowing the study of all stages of enamel synthesis, deposition, mineralization and maturation in the same tissue section. This model system has provided invaluable insight into the specifics of enamel formation as a basis to understand human pathologies such as

amelogenesis imperfect. Furthermore, the rodent incisor allows exploration and understanding of some of the most fundamental mechanisms that govern biomineralization. Enamel is the most mineralized, hardest tissue in the body. It is formed within a unique organic matrix that, unlike other hard tissues such as bone and dentin, does not contain collagen. The formation of enamel can be divided into two main stages: the secretory and maturation stage. During the secretory stage, a highly ordered arrangement of hydroxyapatite crystals is formed under the influence of structural matrix proteins such as amelogenin, ameloblastin and enamelin. During the maturation stage, the organic matrix is removed and hydroxyapatite crystals expand to ultimately yield a functional hard structure consisting of over 96% mineral. Research efforts over the past decades have mainly focused on the secretory stage, providing novel insights into the concept of biomineralization. However, the events that occur during the maturation stage have not been yet explored in detail, likely because the physiological roles of the enamel-forming ameloblasts are more diverse and complex at this stage. Mature ameloblasts are involved in the regulation of calcium transport in large amounts, phosphate and protein fragments in and out of the maturing enamel and provide regulatory mechanisms for the control of the pH. In recent years, increased efforts have been dedicated towards defining the molecular events during enamel maturation. The development of an ever-increasing number of transgenic animal models has clearly demonstrated the essential roles of matrix and non-matrix proteins during enamel formation. Multiple traditional and modern analytical techniques are applied for the characterization of enamel in these animals. The need for this Research Topic therefore stems from new information that has been generated on molecular events during the enamel maturation stage and the development and application of highly advanced analytical techniques to characterize dental enamel. The benefits and limitations of these techniques need to be reviewed and their application standardized for valid comparative studies.

Rethinking Lamarckism 1860-1900

The Foundation of Precision Medicine: Integration of Electronic Health Records with Genomics Through Basic, Clinical, and Translational Research

Global Perspectives

4Th

The Future of Medicine Is in Your Hands

Advances in Seed Biology

Advances in Marine Biology

Maps are a fundamental resource in a diverse array of applications ranging from everyday activities, such as route planning through the legal demarcation of space to scientific studies, such as those seeking to understand biodiversity and inform the design of nature reserves for species conservation. For a map to have value, it should provide an accurate and timely representation of the phenomenon depicted and this can be a challenge in a dynamic world. Fortunately, mapping activities have benefitted greatly from recent advances in geoinformation technologies. Satellite remote sensing, for example, now offers unparalleled data acquisition and authoritative mapping agencies have developed systems for the routine production of maps in accordance with strict standards. Until recently, much mapping activity was in the exclusive realm of authoritative agencies but technological development has also allowed the rise of the amateur mapping community. The proliferation of inexpensive and highly mobile and location aware devices together with Web 2.0 technology have fostered the emergence of the citizen as a source of data. Mapping presently benefits from vast amounts of spatial data as well as people able to provide observations of geographic phenomena, which can inform map production, revision and evaluation. The great potential of these developments is, however, often limited by concerns. The latter span issues from the nature of the citizens through the way data are collected and shared to the quality and trustworthiness of the data. This book reports on some of the key issues connected with the use of citizen sensors in mapping. It arises from a European Co-operation in Science and Technology (COST) Action, which explored issues linked to topics ranging from citizen motivation, data acquisition, data quality and the use of citizen derived data in the production of maps that rival, and sometimes surpass, maps arising from authoritative agencies.

A Global Perspective