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The Importance Of Iron In Pathophysiologic Conditions Work-Life Balance: Essential or Ephemeral? Dual Role of Microglia in Health and Disease: Pushing the Balance Towards Repair Reduction of Environmental Distraction to Facilitate Cognitive Performance Biomaterials and Bioactive Molecules to Drive Differentiation in Striated Muscle Tissue Engineering LuxR Solos Are Becoming Major Players in Cell-Cell Communication in Bacteria Yearbook on Space Policy 2014 Multisensory and sensorimotor interactions in speech perception ULSI Process Integration 9 Fiber-Wireless Convergence in Next-Generation Communication Networks Madness and Creativity: Yes, No or Maybe? The Major Discoveries of Cajal and His Disciples: Consolidated Milestones for the Neuroscience of the XXIst Century Progress in Nanophotonics 5 Proceedings of The 7th MAC 2016 Phenotypic screening in the 21st century Interdisciplinary Approaches to Multilingualism Currents of Archival Thinking Systems biology and ecology of microbial mat communities Advances in Seed Biology The role of viable but non-infectious developmental forms in chlamydial biology Edeo & Legoo Mandarin Publications List 2022 March Issue Vol. 11 Plant polyamines in stress and development Neuromodulation of Executive Circuits Elastic Optical Networks Balloon and Stent for Ischemic and Hemorrhagic Stroke: A New Trend for Stroke Prevention and Management Organic Coatings Circular Economy and the Nordic Swan Ecolabel Labour Law and Social Progress Smart Cities, Green Technologies and Intelligent Transport Systems Harnessing Oncolytic Virus-mediated Antitumor Immunity Invisible, but how? The depth of unconscious processing as inferred from different suppression techniques. Undersea Fiber Communication Systems Plant cell wall in pathogenesis, parasitism and symbiosis The Ischemic Penumbra: Still the Target for Stroke Therapies? The Uşaklı Höyük Survey Project (2008-2012) Immune Interactions during the Reproductive Cycle Fifty Years at the US Environmental Protection Agency How Salmonella infection can inform on mechanisms of immune function and homeostasis Oral and Maxillofacial Surgery - Inklings Enhanced E-Book

**The Importance Of Iron In Pathophysiologic Conditions** 2015-06-09 the iron element Fe is strictly required for the survival of most forms of life including bacteria plants and humans fine tuned regulatory mechanisms for Fe absorption mobilization and recycling operate to maintain Fe homeostasis the disruption of which leads to Fe overload or Fe depletion whereas the deleterious effect of Fe deficiency relies on reduced oxygen transport and diminished activity of Fe dependent enzymes the cytotoxicity induced by Fe overload is due to the ability of this metal to act as a pro oxidant and catalyze the formation of highly reactive hydroxyl radicals via the fenton chemistry this results in unfettered oxidative stress generation that by inducing protein lipid and dna oxidation leads to Fe mediated programmed cell death and organ dysfunction major and systemic Fe overloads occurring in hemochromatosis and Fe loading anemias have been extensively studied however localized tissue Fe overload was recently associated to a variety of pathologies such as infection inflammation cancer cardiovascular and neurodegenerative disorders in keeping with the existence of cross regulatory interactions between Fe homeostasis and the pathophysiology of these diseases further investigations on the mechanisms that provide cellular and systemic adaptation to tissue Fe overload are instrumental for future therapeutic approaches thus we encourage our colleagues to submit original research papers reviews perspectives methods and technology reports to contribute their findings to a current state of the art on a comprehensive overview of the importance of iron metabolism in pathophysiologic conditions

**Work-Life Balance: Essential or Ephemeral?** 2017-09-28 burn out and suicide rates among physicians and scientists in academic medicine are at an all time high and jeopardize the future of our entire profession in the last 4 years alone burn out rates among physicians have increased by 25 in a recent 2017 medscape publication burn out rates in critical care physicians ranked in 9th place and pediatricians ranked 13th among 27 subspecialties astonishingly over 50 of the participants reported burn out symptoms with clear race and gender disparities while men generally report higher burn out rates than women it is important to emphasize that response rates from women in these surveys were notoriously low and may not represent the complete picture these numbers are even more dismal for tenured academic faculty at research extensive universities in this group emotional exhaustion i.e high burn out is reported at 35 with a clear association with age and lower burn out levels in the older tenured faculty while no gender or racial ethnic differences were found in this particular group higher levels of burn out were identified in individuals with financial responsibilities beyond a spouse and child while it is comforting to note the increasing public interest and research activities in this field successful approaches to ameliorate the burden and consequences of physician burn out are still inadequately developed academic centers increasingly offer some type of work life balance program to their employees but unfortunately these programs are frequently adopted from corporate business models and remain largely ineffective in the academic environment it should be evident to most administrators that the stressors of academic clinicians and scientists substantially differ from those of corporate employees based on these observations and over 75 years of combined experience in academic medicine amongst the three editors of this research topic we collected 26 manuscripts from 22 authors at different career stages and different genders ethnicities marital status and subspecialties to identify and stratify common and specific stressors and therapeutic approaches to ameliorate burn out and achieve work life balance in academic medicine we are confident that each reader will identify with at least one if not several of the authors opinions experiences and approaches to attain greater work life balance and thereby avoid the consequences of burn out in modern academic medicine

**Dual Role of Microglia in Health and Disease: Pushing the Balance Towards Repair** 2015-07-23 microglial cells play a vital role in the innate immune response occurring in the central nervous system CNS under physiologic conditions microglia dynamically patrol the brain parenchyma and participate in the remodeling of active neuronal circuits accordingly microglia can boost synaptic plasticity by removing apoptotic cells and by phagocytizing axon terminals and dendritic spines that form inappropriate neural connections upon brain and spinal cord injury or infection microglia act as the first line of immune defense by promoting the clearance of damaged cells or infectious agents and by releasing neurotrophins and or proneurogenic factors that support neuronal survival and regeneration recently two main pathways were suggested for microglia activation upon stimuli classical activation is induced by toll like receptor agonists and Th1 cytokines and polarizes cells to an M1 state mainly leading to the release of TNF alpha IL 6 and nitric oxide and to grave neural damage alternative activation is mediated by Th2 cytokines and polarizes cells to an M2a state inducing the release of antiinflammatory factors these findings have further fueled the discussion on whether microglia has a detrimental or beneficial action M1 or M2 associated phenotypes respectively in the diseased or injured CNS and more importantly on whether we can shift the balance to a positive outcome although microglia and macrophages share several common features upon M1 and M2 polarizing conditions they are believed to develop distinct phenotypic and functional properties which translate into different patterns of activity moreover microglia macrophages seem to have developed a tightly organized system of maintenance of CNS homeostasis since cells found in different structures have different morphology and specific function e.g meningeal macrophages perivascular macrophages choroid plexus macrophages nevertheless though substantial work has been devoted to microglia function consensus around their exact origin their role during development as well as the exact nature of their interaction with other cells of the CNS has not been met this issue discusses how microglial cells sustain neuronal activity and plasticity in the healthy CNS as well as the cellular and molecular

mechanisms developed by microglia in response to injury and disease understanding the mechanisms involved in microglia actions will enforce the development of new strategies to promote an efficient CNS repair by committing microglia towards neuronal survival and regeneration

Reduction of Environmental Distraction to Facilitate Cognitive Performance 2015-03-26 when faced with a difficult task people often look at the sky or close their eyes this behavior is functional the reduction of distractions in the environment can improve performance on cognitive tasks including memory retrieval reduction of visual distractions can be operationalized through eye closure gaze aversion or by comparing exposure to simple and complex visual displays respectively reduction of auditory distractions is typically examined by comparing performance under quiet and noisy conditions theoretical reasoning regarding this phenomenon draws on various psychological principles including embodied cognition cognitive load and modality specific interference practical applications of the research topic are diverse for example the findings could be used to improve performance in forensic settings e.g. eyewitness testimony educational settings e.g. exam performance occupational settings e.g. employee productivity or medical settings e.g. medical history reporting this research topic welcomes articles from all areas of psychology relating to the reduction of distractions to improve task performance articles can address but are not limited to new empirical findings comprehensive reviews theoretical frameworks opinion pieces or discussions of practical applications

**Biomaterials and Bioactive Molecules to Drive Differentiation in Striated Muscle Tissue Engineering** 2016-05-18 tissue engineering is an innovative multidisciplinary approach which combines bio materials cells and growth factors with the aim to obtain neo organogenesis to repair or replenish damaged tissues and organs the generation of engineered tissues and organs e.g. skin and bladder has entered into the clinical practice in response to the chronic lack of organ donors in particular for the skeletal and cardiac muscles the translational potential of tissue engineering approaches has clearly been shown even though the construction of this tissue lags behind others given the hierarchical highly organized architecture of striated muscles cardiovascular disease is the leading cause of death in the developed world where the yearly incidence of acute MI is approx 2 million cases in Europe recovery from MI and reperfusion is still less than ideal stem cell therapy may represent a valid treatment however delivery of stem cells alone to infarcted myocardium provides no structural support while the myocardium heals and the injected stem cells do not properly integrate into the myocardium because they are not subjected to the mechanical forces that are known to drive myocardial cellular physiology on the other hand there are many clinical cases where the loss of skeletal muscle due to a traumatic injury an aggressive tumour or prolonged denervation may be cured by the regeneration of this tissue in vivo stem or progenitor cells are sheltered in a specialized microenvironment niche which regulates their survival proliferation and differentiation the goal of this research topic is to highlight the available knowledge on biomaterials and bioactive molecules or a combination of them which can be used successfully to differentiate stem or progenitor cells into beating cardiomyocytes or organized skeletal muscle in vivo innovations compared to the on going trials may be 1 the successful delivery of stem cells using sutural scaffolds instead of intracoronary or intramuscular injections 2 protocols to use a limited number of autologous or allogeneic stem cells 3 methods to drive their differentiation by modifying the chemical physical properties of scaffolds or biomaterials incorporating small molecules i.e. miRNA or growth factors 4 methods to tailor the scaffolds to the elastic properties of the muscle 5 studies which suggest how to realize scaffolds that optimize tissue functional integration through the combination of the most up to date manufacturing technologies and use of bio polymers with customized degradation properties

LuxR Solos Are Becoming Major Players in Cell-Cell Communication in Bacteria 2016-08-11 the most common quorum sensing QS system in Gram negative bacteria occurs via N-acyl homoserine lactone AHLs signals an archetypical system consists of a LuxI family protein synthesizing the AHL signal which binds at quorum concentrations to the cognate LuxR family transcription factors which then control gene expression by binding to specific sequences in target gene promoters QS LuxR family proteins are approximately 250 amino acids long and made up of two domains at the N-terminus there is an autoinducer binding domain whereas the C-terminus contains a DNA binding helix turn helix HTH domain QS LuxRs display surprisingly low similarities 18-25% even if they respond to structurally similar AHLs 95% of LuxRs share 9 highly conserved amino acid residues six of these are hydrophobic or aromatic and form the cavity of the AHL binding domain and the remaining three are in the HTH domain with only very few exceptions the LuxI cognate genes of AHL QS systems are located adjacent to each other the sequencing of many bacterial genomes has revealed that many proteobacteria also possess LuxRs that do not have a cognate LuxI protein associated with them these LuxRs have been called orphans and more recently solos LuxR solos are widespread in proteobacterial species that possess a canonical complete AHL QS system as well as in species that do not in many cases more than one LuxR solo is present in a bacterial genome scientists are beginning to investigate these solos are solos responding to AHL signals if present in a bacterium which possesses a canonical AHL QS system are solos an integral part of the regulatory circuit are LuxR solos eavesdropping on AHLs produced by neighboring bacteria have they evolved to respond to different signals instead of AHLs and are these signals endogenously produced or exogenously provided are they involved in interkingdom signaling by responding to eukaryotic signals recent studies have revealed that LuxR solos are involved in several mechanisms of cell-cell communication in bacteria implicating them in bacterial intraspecies and interspecies communication as well as in interkingdom signaling by responding to molecules produced by

eukaryotes luxR solos are likely to become major players in signaling since they are widespread among proteobacterial genomes and because initial studies highlight their different roles in bacterial communication this research topic allows scientists studying or interested in luxR solos to report their data and or express their hypotheses and thoughts on this important and currently understudied family of signaling proteins

Yearbook on Space Policy 2014 2015-12-24 the yearbook on space policy edited by the european space policy institute espi is the reference publication analysing space policy developments each year it presents issues and trends in space policy and the space sector as a whole its scope is global and its perspective is european the yearbook also links space policy with other policy areas it highlights specific events and issues and provides useful insights data and information on space activities the first part of the yearbook sets out a comprehensive overview of the economic political technological and institutional trends that have affected space activities the second part of the yearbook offers a more analytical perspective on the yearly espi theme and consists of external contributions written by professionals with diverse backgrounds and areas of expertise the third part of the yearbook carries forward the character of the yearbook as an archive of space activities the yearbook is designed for government decision makers and agencies industry professionals as well as the service sectors researchers and scientists and the interested public

*Multisensory and sensorimotor interactions in speech perception* 2015-06-26 speech is multisensory since it is perceived through several senses audition is the most important one as speech is mostly heard the role of vision has long been acknowledged since many articulatory gestures can be seen on the talker's face sometimes speech can even be felt by touching the face the best known multisensory illusion is the mcgurk effect where incongruent visual articulation changes the auditory percept the interest in the mcgurk effect arises from a major general question in multisensory research how is information from different senses combined despite decades of research a conclusive explanation for the illusion remains elusive this is a good demonstration of the challenges in the study of multisensory integration speech is special in many ways it is the main means of human communication and a manifestation of a unique language system it is a signal with which all humans have a lot of experience we are exposed to it from birth and learn it through development in face to face contact with others it is a signal that we can both perceive and produce the role of the motor system in speech perception has been debated for a long time despite very active current research it is still unclear to which extent and in which role the motor system is involved in speech perception recent evidence shows that brain areas involved in speech production are activated during listening to speech and watching a talker's articulatory gestures speaking involves coordination of articulatory movements and monitoring their auditory and somatosensory consequences how do auditory visual somatosensory and motor brain areas interact during speech perception how do these sensorimotor interactions contribute to speech perception it is surprising that despite a vast amount of research the secrets of speech perception have not yet been solved the multisensory and sensorimotor approaches provide new opportunities in solving them contributions to the research topic are encouraged for a wide spectrum of research on speech perception in multisensory and sensorimotor contexts including novel experimental findings ranging from psychophysics to brain imaging theories and models reviews and opinions

ULSI Process Integration 9 2015 this book investigates new enabling technologies for fi wi convergence the editors discuss fi wi technologies at the three major network levels involved in the path towards convergence system level network architecture level and network management level the main topics will be a at system level radio over fiber digitalized vs analogic standardization e band and beyond and 5g wireless technologies b network architecture level ngpon wdm pon bbu hotelling cloud radio access networks c rans hetnets c network management level sdn for convergence next generation point of presence wi fi lte handover cooperative multipoint

Fiber-Wireless Convergence in Next-Generation Communication Networks 2017-01-05 the pervasive idea that madness and creativity are intricately linked is one that holds tremendous fascination for both scientists and the general public alike although this view was at first largely driven by anecdotal evidence showcasing the manifestation of mental illness in individuals who exhibited extraordinary levels of creativity in various spheres of life it initiated a strong impetus to empirically investigate the association between mental health and creativity a variety of approaches and combinations of approaches have been adopted to address this association including clinical personality psychometric behavioral cognitive historiometric and neuroscientific despite the ever accumulating body of evidence over the past six decades investigating this link what is lacking is a comprehensive overview of the disparate findings from these different approaches that will enable us to address the question of whether there is an empirically founded relationship between creativity and mental illness and if such a link does exist what is the nature of this association the purpose of this research topic was to motivate theorists and researchers to answer this question or at least attempt to do so given the available evidence thus far the themes of interest that were open to exploration in view of this topic included a which mental disorders are positively associated with creativity b which mental disorders are negatively associated with creativity c the dynamics of information processing biases positive versus negative associated with psychiatric and high risk populations d theories regarding the madness creativity link e personality based studies on creativity f creativity mental illness and the brain g genes and creativity h how can studies on neurological populations inform this debate i what are the areas of impact with regard to real world applications



requires rethinking of diseases and drug discovery approaches from a network and systems biology perspective since returning to the pre genomics era of screening drug candidates in laborious animal models is not a feasible solution the industry needs to evolve a new paradigm of phenotypic drug discovery within the context of systems biology such a paradigm must combine physiologically and disease relevant biological substrates with sufficient throughput operational simplicity and statistical vigour biomarker strategies for translational medicine as well as preclinical safety and selectivity assessments would also need to be revised to adapt to the target agnostic style this focused issue aims to discuss strategies key concepts and technologies related to systems based approaches in drug development design and implementation of innovative biological assays featuring multiple target strategies and rational drug design in the absence of target knowledge during the early drug discovery are illustrated with examples specific topics include the need for systems based approaches in drug development phenotypic screening strategies compound libraries natural product inspired compound collections target deconvolution and identification target agnostic lead discovery and optimization multi target approaches and decoding the phenotype understanding biological interactions and multiscale systems modelling translational aspects early evaluation of selectivity and safety in a target agnostic manner

Phenotypic screening in the 21st century 2015-04-21 this research topic stems from the interdisciplinary approaches to multilingualism conference which was hosted by the language research centre at the university of calgary it was the first conference of its kind which brought together the work of researchers educators and policy makers in the areas of first and second language acquisition from psycholinguistic and pedagogical perspectives the goal was to provide an opportunity for participants to engage with the implications of multilingualism from a range of perspectives including the effects of being bilingual from infancy to adulthood the process and benefits of learning multiple languages and the impact of multilingualism on society

*Interdisciplinary Approaches to Multilingualism* 2015-07-16 with new technologies and additional goals driving their institutions archives are changing drastically this book shows how the foundations of archival practice can be brought forward to adapt to new environments while adhering to the key principles of preservation and access archives of all types are experiencing a resurgence evolving to meet new environments digital and physical and new priorities to meet those changes professional archivist education programs now one of the more active segments of lis schools are proliferating as well this book identifies core archival theories and approaches and how those interact with major issues and trends in the field the essays explore the progression of archival thinking today discussing the nature of archives in light of present day roles for archivists and archival institutions in the preservation of documentary heritage examining new conceptualizations and emerging frameworks through the lenses of core archival practice and theory the book covers core foundational topics such as the nature of archives the ruling concept of provenance and the principal functions of archivists discussing each in the context of current and future environments and priorities several new essays on topics of central importance not treated in the first edition are included such as digital preservation and the influence of new technologies on institutional programs that facilitate archival access advocacy and outreach the changing legal context of archives and archival work and the archival collections of private persons and organizations readers will also learn how communities of various kinds intersect with the archival mission and how other disciplines perspectives on archives can open new avenues

*Currents of Archival Thinking* 2017-01-09 microbial mat communities consist of dense populations of microorganisms embedded in exopolymers and or biomineralized solid phases and are often found in mm cm thick assemblages which can be stratified due to environmental gradients such as light oxygen or sulfide microbial mat communities are commonly observed under extreme environmental conditions deriving energy primarily from light and or reduced chemicals to drive autotrophic fixation of carbon dioxide microbial mat ecosystems are regarded as living analogues of primordial systems on earth and they often form perennial structures with conspicuous stratifications of microbial populations that can be studied in situ under stable conditions for many years consequently microbial mat communities are ideal natural laboratories and represent excellent model systems for studying microbial community structure and function microbial dynamics and interactions and discovery of new microorganisms with novel metabolic pathways potentially useful in future industrial and or medical applications due to their relative simplicity and organization microbial mat communities are often excellent testing grounds for new technologies in microbiology including micro sensor analysis stable isotope methodology and modern genomics integrative studies of microbial mat communities that combine modern biogeochemical and molecular biological methods with traditional microbiology macro ecological approaches and community network modeling will provide new and detailed insights regarding the systems biology of microbial mats and the complex interplay among individual populations and their physicochemical environment these processes ultimately control the biogeochemical cycling of energy and or nutrients in microbial systems similarities in microbial community function across different types of communities from highly disparate environments may provide a deeper basis for understanding microbial community dynamics and the ecological role of specific microbial populations approaches and concepts developed in highly constrained relatively stable natural communities may also provide insights useful for studying and understanding more complex microbial communities

Systems biology and ecology of microbial mat communities 2016-04-11 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

*Advances in Seed Biology* 2015-11-11 the chlamydiae are gram negative obligate intracellular bacteria with a complex developmental cycle comprising a metabolically less active infectious stage the elementary body eb and a metabolically more active stage the reticulate body rb they are responsible for many acute and chronic diseases in humans and animals in order to play a causative role in chronic diseases chlamydiae would need to persist and to re activate within infected cells tissues for extended periods of time persistence in vitro is defined as viable but non cultivable chlamydiae involving morphologically enlarged aberrant and nondividing rbs termed aberrant bodies ab in vitro alterations of the normal developmental cycle of chlamydiae can be induced by the addition of interferon ifn tumor necrosis factor a tnf a and penicillin g exposure as well as amino acid or iron deprivation monocyte infection and co infection with viruses in vivo key questions include whether or not abs occur in infected patients and animals and whether such abs can contribute to prolonged chronic inflammation fibrosis and scarring through continuing stimulation of the host immune system known from diseases such as trachoma pelvic inflammatory disease reactive arthritis and atherosclerosis to date the direct causal role in the pathogenesis of chlamydial infection and persistence in vivo has been questioned since there was no tractable animal model of chlamydial persistence so far a very recent study was able to establish an experimental animal model of in vivo persistence when c muridarum vaginally infected mice were gavaged with amoxicillin amoxicillin treatment induced c muridarum to enter the persistent state in vivo recent in vivo data from patients indicate that viable but non infectious developmental stages are present in the genital tract of chronically infected women and that the gastrointestinal tract might be a reservoir for persistent chlamydial infections at other sites

The role of viable but non-infectious developmental forms in chlamydial biology 2014-11-04 this a full list of our latest courses and publications at best price for my students please check and enjoy your study we provide contents online system and live teaching online edeo educational video online courses is one of the pioneering online courses creators we systematically design legoo mandarin including ppt pdf and videos materials covering from kindergarten yct youth chinese test hsk chinese proficiency test igcse chinese a1 a2 chinese ib chinese sat chinese ap chinese ib chinese etc this is our past 25 years painstaking efforts based on our firsthand experience to teach foreigners share with you what we know best is our slogan we start with legoo mandarin and now expand the system into other topics bahasa malaysia it ecommerce accounting and finance tai chi fitness and qi gong you can learn anytime anywhere in addition to be a contents creator we also provide online systems which can be easily integrated with your school or company online system or use separately we are using udemy and other more than 10 similar platforms for video courses marketing the amazon kdp google books and apple ibooks are platforms we publishing our textbooks in addition to our own platform we provide consultancy service to save your time and give you the best tips on how to leverage your efforts using all these amazing platforms please contact us for quotations very reasonable price we can assign our trained teachers to conduct live lesson through webinar skype and youtube facebook at reasonable price

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polyamines are small aliphatic polycations which have been involved in key stress and developmental processes in plants in the recent years compelling genetic and molecular evidences point to polyamines as essential metabolites required for resistance to drought freezing salinity oxidative stress among other type of abiotic and biotic stresses in addition to their role as stress protective compounds polyamines participate in key developmental processes mediated by specific signaling pathways or in cross regulation with other plant hormones our research topic aims to integrate the multiple stress and developmental regulatory functions of polyamines in plants under a genetic molecular and evolutionary perspective with special focus on signaling networks mechanisms of action and metabolism regulation

Plant polyamines in stress and development 2016-01-21 high order executive tasks involve the interplay between frontal cortex and other cortical and subcortical brain regions in particular the frontal cortex striatum and thalamus interact via parallel fronto striatal loops that are crucial for the executive control of behavior in all of these brain regions neuromodulatory inputs e g serotonergic dopaminergic cholinergic adrenergic and

peptidergic afferents regulate neuronal activity and synaptic transmission to optimize circuit performance for specific cognitive demands indeed dysregulation of neuromodulatory input to fronto striatal circuits is implicated in a number of neuropsychiatric disorders such as schizophrenia depression and parkinson s disease however despite decades of intense investigation how neuromodulators influence the activity of fronto striatal circuits to generate the precise activity patterns required for sophisticated cognitive tasks remains unknown in part this reflects the complexity of the cellular microcircuits in these brain regions i e heterogeneity of neuron subtypes and connectivity cell type specific expression patterns for the numerous receptor subtypes mediating neuromodulatory signals and the potential interaction of multiple signaling cascades in individual neurons this research topic includes 10 original research articles and seven review articles addressing the role of neuromodulation in executive function at multiple levels of analysis ranging from the activity of single voltage dependent ion channels to computational models of network interactions in cortex striatum thalamus systems

**Neuromodulation of Executive Circuits** 2016-06-13 this book presents advances in the field of optical networks specifically on research and applications in elastic optical networks eon the material reflects the authors extensive research and industrial activities and includes contributions from preeminent researchers and practitioners in optical networking the authors discuss the new research and applications that address the issue of increased bandwidth demand due to disruptive high bandwidth applications e g video and cloud applications the book also discusses issues with traffic not only increasing but becoming much more dynamic both in time and direction and posits immediate medium and long term solutions throughout the text the book is intended to provide a reference for network architecture and planning communication systems and control and management approaches that are expected to steer the evolution of eons

**Elastic Optical Networks** 2015-11-09 in recent years intracranial endovascular use of balloon and stent has grown significantly this issue will focus primarily on recent advances in the use of these methods today this discussion will also highlight our improvements in understanding the disease process and not only relying on devices to treat a patient wide necked intracranial aneurysms ia were originally thought to be either untreatable or at the very least significantly challenging to treat by endovascular means due to the risk of coil protrusion and possibly parent vessel occlusion however this view now outdated today and we will discuss the significant advancement in different flow diverters the treatment of post sub arachnoid hemorrhage vasospasm is mature now as this issue will highlight in addition intracranial atherosclerosis is still a prominent cause of stroke in various populations worldwide this issue will summarize the challenges of risk factor modification and secondary stroke prevention by defining optimal methods we will try to outline a new approach for intracranial angioplasty and stenting for stroke prevention finally despite recent impressive increase recanalization rates in acute ischemic stroke treatment the clinical improvement rate has remained relatively stable this article will discuss a new means of improving patient selections using the capillary index score cis the future of our specialty relies heavily on better devices and on a deeper understanding of the disease process the future is bright and we have already taken the first successful steps

**Balloon and Stent for Ischemic and Hemorrhagic Stroke: A New Trend for Stroke Prevention and Management** 2017-08-30 the definitive guide to organic coatings thoroughly revised and updated now with coverage of a range of topics not covered in previous editions organic coatings science and technology fourth edition offers unparalleled coverage of organic coatings technology and its many applications written by three leading industry experts including a new internationally recognized coatings scientist it presents a systematic survey of the field revises and updates the material from the previous edition and features new or additional treatment of such topics as superhydrophobic ice phobic antimicrobial and self healing coatings sustainability artist paints and exterior architectural primers making it even more relevant and useful for scientists and engineers in the field as well as for students in coatings courses the book incorporates up to date coverage of recent developments in the field with detailed discussions of the principles underlying the technology and their applications in the development production and uses of organic coatings all chapters in this new edition have been updated to assure consistency and to enable extensive cross referencing the material presented is also applicable to the related areas of printing inks and adhesives as well as areas within the plastics industry this new edition completely revises outdated chapters to ensure consistency and to enable extensive cross referencing correlates the empirical technology of coatings with the underlying science throughout provides expert troubleshooting guidance for coatings scientists and technologists features hundreds of illustrative figures and extensive references to the literature a new internationally recognized coatings scientist brings fresh perspective to the content providing a broad overview for beginners in the field of organic coatings and a handy reference for seasoned professionals organic coatings science and technology fourth edition gives you the information and answers you need when you need them

*Organic Coatings* 2017-09-20 the transition to circular economy necessitates right incentives for choosing products and services with lower environmental impacts in the form of price signals and sufficient environmental information an ecolabel indicates that the product is environmentally speaking among the best products available on the market and thus has the role to steer stepwise developments towards sustainability the swan criteria promote quality products with requirements on durability and the use of secondary raw materials to further align the criteria with circular economy future criteria development might focus more on aspects including upgradability reparability multi functionality component reuse and innovative forms of



consumption and production this report was prepared as part of a nordic project and the results could be useful in the development of the nordic ecolabel in the future

**Circular Economy and the Nordic Swan Ecolabel** 2016-04-22 for forty years the international watchword has been deregulation of labour law and of social security now however the rise in unemployment and lack of employment security the dizzying inequality gulf and the environmental disasters and mass migrations caused by this deregulation are generating an impetus that defines social justice no longer merely in terms of the equitable distribution of resources but also and often primarily in terms of the just recognition of persons this collection of incisive essays recognizes that the growing interdependence of all of the people of the earth demands that labour rights are understood as an aspect of human rights and thus envisaged at the international level contributions by twenty outstanding labour law scholars from a range of countries worldwide provide in depth analysis of such aspects of the debate as the following collective action in the interests of market effectiveness as well as fair outcomes for workers right to strike resilience of trade unions and collective bargaining as mechanisms of labour market regulation importance of national policy despite the influence of global market forces in shaping national outcomes work as the locus of the relationship between humans and nature search for a legal foundation for corporate social responsibility litigation as an alternative to collective bargaining the role of collective labour relations for immigrants and disabled people lessons that developed countries could learn from mechanisms pioneered in developing countries in coping with conditions of austerity and the trap of soft law and of declarations of intent that weigh lightly in the face of the power of the interests at play in international trade the essays take stock of the dimensions of the current situation and also explore paths leading to a better achievement of social justice in labour law these essays recognize that economic development and the pursuit of social justice are interwoven in a quest for social progress that includes mechanisms designed to eliminate unjustifiable inequality for lawyers and other parties committed to the emerging political will to not only respect fundamental rights but more broadly improve labour and environmental protection this book opens abundant avenues that can be pursued in practice and in policy the volume is based on a selection of papers presented at the 21st world congress of the international society for labour and social security law in cape town in 2015

Labour Law and Social Progress 2019-07-29 this book constitutes the thoroughly refereed post conference proceedings of the 7th international conference on smart cities and green ict systems smartgreens 2018 and the 4th international conference on vehicle technology and intelligent transport systems vehits 2018 held in funchal madeira portugal in march 2018 the 18 full papers presented during smartgreens 2018 and vehits 2018 were carefully reviewed and selected from numerous submissions the papers reflect topics such as smart cities and green ict systems vehicle technology and intelligent transport systems

**Smart Cities, Green Technologies and Intelligent Transport Systems** 2015-03-02 oncolytic viruses ovs have emerged as a promising anticancer treatment ovs selectively infect replicate in and kill tumor cells oncolytic viral therapy occurs in two phases an initial phase where the virus mediates direct oncolysis of tumor cells and a second phase where an induced post oncolytic immune response continues to mediate tumor destruction and retards progression of the disease for a long time the therapeutic efficacy was thought to depend mainly on the direct viral oncolysis based on their tumor selective replication and killing activities but the post oncolytic anti tumor activity induced by the ov therapy is also a key factor for an efficient therapeutic activity the topic addresses various strategies how to optimize ovs anti tumor activity

*Harnessing Oncolytic Virus-mediated Antitumor Immunity* 2015-02-09 to what level are invisible stimuli processed by the brain in the absence of conscious awareness it is widely accepted that simple visual properties of invisible stimuli are processed however the existence of higher level unconscious processing e g involving semantic or executive functions remains a matter of debate several methodological factors may underlie the discrepancies found in the literature such as different levels of conservativeness in the definition of unconscious or different dependent measures of unconscious processing in this research topic we are particularly interested in yet another factor inherent differences in the amount of information let through by different suppression techniques in the same conditions of well controlled conservatively established invisibility can we show that some of the techniques in the psychophysical magic arsenal e g masking but also visual crowding attentional blink etc reliably lead to higher level unconscious processing than others e g interocular suppression some authors have started investigating this question using multiple techniques in similar settings we argue that this approach should be extended and refined indeed in order to delineate the frontiers of the unconscious mind using a contrastive method one has to disentangle the limits attributable to unawareness itself and those attributable to the technique inducing unawareness the scope of this research topic is to provide a platform for scientists to contribute insights and further experiments addressing this fundamental question

**Invisible, but how? The depth of unconscious processing as inferred from different suppression techniques.** 2015-11-26 since publication of the 1st edition in 2002 there has been a deep evolution of the global communication network with the entry of submarine cables in the terabit era thanks to optical technologies the transmission on a single fiber can achieve 1 billion simultaneous phone calls across the ocean modern submarine optical cables are fueling the global internet backbone surpassing by far all alternative techniques this new edition of undersea fiber communication systems provides a detailed explanation of all technical aspects of undersea communications systems with an emphasis on the most recent breakthroughs of

optical submarine cable technologies this fully updated new edition is the best resource for demystifying enabling optical technologies equipment operations up to marine installations and is an essential reference for those in contact with this field each chapter of the book is written by key experts of their domain the book assembles in a complementary way the contributions of authors from key suppliers acting in the domain such as alcatel lucent cienate subcom xtera from consultant and operators such as axiom osi orange and from university and organization references such as telecomparistech and suboptic this has ensured that the overall topics of submarine telecommunications is treated in a quite ecumenical complete and unbiased approach features new content on ultra long haul submarine transmission technologies for telecommunications alternative submarine cable applications such as scientific or oil and gas addresses the development of high speed networks for multiplying internet and broadband services with coherent optical technology for 100gbit/s channels or above wet plant optical networking and configurability provides a full overview of the evolution of the field conveys the strategic importance of large undersea projects with technical and organizational life cycle of a submarine network upgrades of amplified submarine cables by coherent technology

Undersea Fiber Communication Systems 2015-03-13 the cell wall is a complex structure mainly composed of cellulose microfibrils embedded in a cohesive hemicellulose and pectin matrix cell wall structural proteins enzymes and their inhibitors are also essential components of plant cell walls they are involved in the cross link of cell wall polysaccharides wall structure and the perception and signaling of defense related elicitors at the cell surface in the outer part of the epidermal cells the polysaccharides are coated by the cuticle consisting of hydrophobic cutin suberin and wax layers lignin a macromolecule composed of highly cross linked phenolic molecules is a major component of the secondary cell wall the cell wall is the first cell structure on which interactions between plants and a wide range of other organisms including insects nematodes pathogenic or symbiotic micro organisms take place it not only represents a barrier that limits access to the cellular contents that provide a rich nutrient source for pathogens but serves as a source of elicitors of plant defense responses released upon partial enzymatic degradation of wall polysaccharides during infection modification of the plant cell wall can also occur at the level of plasmodesmata during virus infection as well as during abiotic stresses the fine structure and composition of the plant cell wall as well as the regulation of its biosynthesis can thus strongly influence resistance and susceptibility to pathogens this research topic provides novel insights and detailed overviews on the dynamics of the plant cell wall in plant defence parasitism and symbiosis and describes experimental approaches to study plant cell wall modifications occurring during interaction of plants with different organisms

**Plant cell wall in pathogenesis, parasitism and symbiosis** 2015-07-23 the ischemic penumbra was initially defined by symon lassen and colleagues in the 1970s as an area of brain tissue with inadequate blood flow to maintain electric activity of neurons but adequate blood flow to preserve the function of the ion channels this area of tissue receiving enough blood to survive but not enough to function often surrounds or abuts the irreversibly damaged core in ischemic stroke it was shown that if blood flow could be restored to this area of marginal perfusion the tissue could survive and function again and growth of the core could be prevented based on seminal pet studies penumbra or penumbral tissue eventually took on a subtly different meaning the area of brain that is destined to progress to infarct unless blood flow is restored within a particular time window the penumbra thus became the target for all acute stroke interventions to preserve viability of the tissue and restore function new imaging techniques including diffusion and perfusion mri and ct perfusion were developed to rapidly identify individuals with penumbra who were thought to be the best candidates for aggressive interventions to restore blood flow particularly beyond the licensed time window for iv thrombolysis however most clinical trials have failed to establish the usefulness of identifying candidates for treatment in this way using pre specified protocols and primary endpoints these trials have used different and sometimes unvalidated thresholds of hypoperfusion as well as irreversible infarct and various definitions of significant penumbra or mismatch between irreversible infarct and hypoperfused but salvageable tissue and reanalysis of their data using more refined image processing showed post hoc positivity they have also evaluated outcome in a variety of ways with few studies measuring the direct effect of restoring blood flow on the function of the penumbral tissue therefore important remaining questions include how to define characterize and image the penumbra in acute stroke to achieve the greatest reliability and validity for what we want to measure and whether this concept so defined provides an optimal target for stroke therapy using state of the art trial design

**The Ischemic Penumbra: Still the Target for Stroke Therapies?** 2015 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 repertoire 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 Uşaklı Höyük Survey Project (2008-2012)* 2015-07-03 in conjunction with the 50th anniversary of the creation of the environmental protection agency this book brings together leading scholars and epa veterans to provide a comprehensive assessment of the agency's key decisions and actions in the various areas of its responsibility themes across all chapters include the role of rulemaking negotiation compromise partisan polarization judicial impacts relations with the white house and congress public opinion interest group pressures environmental enforcement environmental justice risk assessment and interagency conflict as no other book on the market currently discusses epa with this focus or scope the authors have set out to provide a comprehensive analysis of the agency's rich 50 year history for academics students professional and the environmental community

**Immune Interactions during the Reproductive Cycle** 2021-02-15 the use of model antigens such as haptens and ovalbumin has provided enormous insights into how immune responses develop particularly to vaccine antigens furthermore these studies are overwhelmingly performed in animals housed in clean facilities and are not known to have experienced overt clinical signs caused by infectious agents therefore this is unlikely to reflect the impact more complex host pathogen interactions can have on the host nor the diversity in how immunity is regulated humans develop immune responses in the context of the periodic exposure to multiple pathogens and vaccines over a life time these are likely to have a long lasting effect on who and what we are and how we respond to further antigen challenge therefore studies on how infection influences immune homeostasis and how the development of responses to a pathogen reflects what is known on immune regulation will be informative on how we can translate findings from our standard models into treatments usable in humans br br one organism allows us to do just this bacteria of the genus salmonella are devastating human pathogens nevertheless many aspects of the diseases they cause can be successfully modelled in murine systems so that the infection is either resolving or non resolving this has the advantage of allowing the long term impact of infection on immune function to be assessed we propose to welcome key workers to write about their research that examine the consequence of salmonella infection on the host and the elements of the bacterium that contribute to this

**Fifty Years at the US Environmental Protection Agency** 2016-04-12 this trusted three volume resource covers the full scope of oral and maxillofacial surgery with up to date evidence based coverage of surgical procedures performed today new full color design provides a more vivid depiction of pathologies concepts and procedures new expert consult website includes all of the chapters from the print text plus classic online only chapters and an expanded image collection references linked to pubmed and periodic content updates new thoroughly revised and reorganized content reflects current information and advances in oms new new chapters on implants and orthognathic surgery cover the two areas where oral and maxillofacial surgeons have been expanding their practice new digital formats are offered in addition to the traditional print text and provide on the go access via mobile tablets and smart phones

**How Salmonella infection can inform on mechanisms of immune function and homeostasis**

2017-03-08

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