

science signaling impact factor 2023

Science Signaling Impact Factor 2023: What It Means for Researchers and the Scientific Community

science signaling impact factor 2023 is a term that has been circulating widely among researchers, academics, and institutions eager to gauge the evolving prestige of this influential journal. As one of the leading publications in the realm of cell biology and molecular signaling pathways, Science Signaling plays a crucial role in disseminating cutting-edge research. Understanding its impact factor for 2023 not only helps authors decide where to publish but also reflects the journal's influence in shaping contemporary scientific thought.

Understanding the Science Signaling Impact Factor 2023

In the world of academic publishing, the impact factor serves as a metric indicating the average number of citations to recent articles published in a journal. The science signaling impact factor 2023 reveals how frequently papers from this journal have been referenced in other scholarly works over the past two years. This figure is often used as a proxy for the journal's relevance, quality, and prestige within the scientific community.

What Does the Impact Factor Represent?

The impact factor is calculated by dividing the total number of citations in a given year (in this case, 2023) to articles published in the previous two years by the total number of articles published during those years. For Science Signaling, well-regarded for its focus on cellular communication mechanisms and signaling pathways, this metric highlights how influential its published research remains.

Why the 2023 Impact Factor Matters

The 2023 impact factor is particularly significant because it reflects recent trends in scientific discovery and publication. As the landscape of molecular and cellular biology evolves rapidly, journals like Science Signaling must maintain high standards to stay relevant. A strong impact factor signals to researchers that this journal continues to publish novel findings that resonate throughout the scientific community.

Factors Influencing the Science Signaling Impact

Factor 2023

Several elements contribute to changes in the impact factor from year to year. Understanding these can provide valuable insights for authors considering submission and for readers assessing the journal's authority.

High-Quality, Innovative Research

One of the primary drivers behind Science Signaling's impact factor is its commitment to publishing pioneering studies. Research that uncovers new signaling pathways or offers breakthroughs in understanding cellular interactions tends to attract significant citations.

Collaborations and Interdisciplinary Studies

The integration of diverse scientific disciplines often leads to broader interest and citations. Science Signaling has increasingly embraced interdisciplinary work, combining fields like biochemistry, genetics, and computational biology, which contributes to its growing impact factor.

Timely Topics and Emerging Fields

Journals that publish on trending subjects—such as cancer signaling, immune response pathways, or neurobiology—tend to see higher citation rates. Science Signaling's focus on these hot topics can boost its citation numbers and, consequently, its impact factor.

Interpreting the Science Signaling Impact Factor 2023 for Researchers

As an author or academic, the impact factor of a journal can influence where you choose to submit your manuscript. But it's important to interpret the 2023 figure thoughtfully.

Beyond the Number: What to Consider

While a high impact factor is attractive, it doesn't guarantee that your research will receive widespread attention. Factors such as the journal's scope, audience, and editorial standards also play critical roles. For instance, Science Signaling's readership includes specialists in molecular signaling, so your work should align closely with these interests to maximize visibility.

Impact Factor vs. Article-Level Metrics

Increasingly, the scientific community recognizes that journal-level metrics like impact factor don't tell the whole story. Article-level metrics—such as citations, downloads, and social media mentions—provide a more nuanced view of an individual paper's influence. However, the science signaling impact factor 2023 remains a useful benchmark for overall journal prestige.

How the Science Signaling Impact Factor 2023 Reflects Broader Publishing Trends

Looking at the impact factor within the context of broader trends in scientific publishing highlights some important considerations.

Open Access and Citation Rates

Open access publications tend to receive more citations due to wider accessibility. Although Science Signaling primarily operates under a subscription model, its hybrid open access options may contribute to increased citations and thus affect the 2023 impact factor.

Preprints and Early Sharing

The rise of preprint servers allows researchers to share findings before formal peer review. While this can accelerate knowledge dissemination, it may also shift citation patterns, influencing traditional impact metrics like those calculated for 2023.

Increasing Importance of Reproducibility

Journals emphasizing rigorous methodology and reproducible results often attract higher citations. Science Signaling's editorial policies that encourage transparency and reproducibility likely support its sustained impact factor.

Tips for Leveraging the Science Signaling Impact Factor 2023 in Your Research Strategy

If you're aiming to publish in Science Signaling or use its articles for your work, here are some practical tips:

- **Align Your Research Focus:** Ensure your study fits within the journal's core topics of cellular signaling and molecular biology.
- **Highlight Novelty and Impact:** Emphasize how your findings advance understanding of signaling pathways or cellular communication.
- **Engage with Current Literature:** Cite recent Science Signaling articles, which may improve your manuscript's relevance and help position your work within ongoing conversations.
- **Consider Open Access Options:** If feasible, opt for open access to increase visibility and potential citations.
- **Use Article-Level Metrics:** Track how your published work performs beyond the impact factor to understand its broader scientific influence.

The Road Ahead: What Future Impact Factors Might Reveal

As scientific publishing evolves, so too will the metrics used to evaluate journals. The science signaling impact factor 2023 is a snapshot of current influence, but future indicators may incorporate alternative metrics and broader measures of societal impact.

For journals like Science Signaling, maintaining relevance will involve balancing rigorous peer review with openness to innovative research and new publishing models. Researchers and institutions will continue to watch these developments closely, using impact factors as one of several tools to navigate the complex world of scientific literature.

The ongoing dialogue about impact factors encourages the community to refine how success and influence are measured, ensuring that significant scientific contributions receive the recognition they deserve—whether in Science Signaling or beyond.

Frequently Asked Questions

What is the Science Signaling impact factor for 2023?

The Science Signaling impact factor for 2023 is approximately 9.5, reflecting its strong influence in the field of cellular signaling research.

How has the Science Signaling impact factor changed in 2023 compared to previous years?

In 2023, the impact factor of Science Signaling has seen a slight increase compared to

2022, indicating growing recognition and citation of its published articles.

What factors contribute to the Science Signaling impact factor in 2023?

The impact factor is influenced by the number of citations received by articles published in the journal during the previous two years, the quality of research, and relevance to the scientific community.

How does Science Signaling's 2023 impact factor compare to other journals in the signaling field?

Science Signaling's 2023 impact factor remains competitive and ranks among the top journals specializing in cellular and molecular signaling research.

Where can I find the official Science Signaling impact factor for 2023?

The official 2023 impact factor for Science Signaling can be found on the Journal Citation Reports website or the publisher's official site, typically released mid-year by Clarivate Analytics.

Why is the Science Signaling impact factor important for researchers?

The impact factor helps researchers assess the journal's reputation and influence, guiding decisions about where to submit their work for maximum visibility and impact.

Additional Resources

Science Signaling Impact Factor 2023: A Detailed Examination of Its Influence in the Scientific Community

science signaling impact factor 2023 remains a critical metric for researchers, institutions, and publishers who track the journal's prominence and influence within the fields of cell biology, molecular signaling, and systems biology. As one of the leading journals dedicated to understanding cellular communication and signal transduction pathways, Science Signaling has consistently maintained a reputation for publishing high-quality, impactful research. The 2023 impact factor offers fresh insights into how this publication is shaping contemporary scientific discourse and guiding future research trajectories.

Understanding the Significance of the Science

Signaling Impact Factor 2023

Journal impact factors are often viewed as a quantitative measure of a journal's prestige and influence, reflecting the average number of citations to recent articles published within that journal. For Science Signaling, the 2023 impact factor encapsulates the latest citation trends and scholarly engagement, serving as a barometer of its relevance in an increasingly competitive publishing landscape.

In 2023, Science Signaling's impact factor has experienced nuanced shifts that reflect broader trends in scientific publishing and research priorities. The journal's ability to attract cutting-edge studies on cellular pathways, signaling cascades, and molecular mechanisms plays a pivotal role in sustaining its citation performance. Researchers look to this journal not only for comprehensive reviews and experimental results but also for innovative theoretical models that advance understanding of complex biological systems.

Comparative Analysis: Science Signaling Versus Peer Journals

When placed alongside peer journals such as Cell Signaling, Journal of Cell Biology, and Molecular Cell, Science Signaling's 2023 impact factor highlights its competitive standing in the realm of molecular and cellular biology. While some journals boast higher raw impact factors due to broader scopes or larger readerships, Science Signaling's focused thematic concentration on signaling pathways often results in highly cited, specialized content.

This focus on signaling mechanisms ensures that the journal maintains a dedicated readership among specialists, which can translate into sustained citation rates over time. However, compared to multidisciplinary journals, the impact factor may appear relatively moderate, reflecting the journal's niche rather than a lack of quality or influence.

Factors Influencing Science Signaling's Impact Factor in 2023

Several key drivers affect the impact factor for Science Signaling in 2023:

- **High-Quality Research Articles:** The journal's commitment to rigorous peer review ensures that only scientifically robust and novel studies are published, increasing their citation potential.
- **Timeliness and Relevance:** Publications addressing emerging topics such as signal transduction in cancer, neurobiology, or immune signaling have garnered significant attention, boosting citation counts.
- **Review Articles and Perspectives:** Invited reviews and commentaries often attract

more citations than original research, contributing positively to the impact factor.

- **Collaborations and Interdisciplinary Research:** Papers that bridge molecular signaling with computational biology or systems medicine tend to reach a wider audience, enhancing citation metrics.

These factors combined illustrate why Science Signaling's impact factor serves as a reflection of both the journal's editorial strategy and the evolving interests of the scientific community.

Implications of the 2023 Impact Factor on Researchers and Institutions

The science signaling impact factor 2023 is more than a mere statistic; it influences decisions at multiple levels within academia and industry. For researchers, publishing in journals with a high or stable impact factor can enhance their visibility, increase funding opportunities, and support career advancement. Science Signaling's impact factor, in particular, signals to prospective authors that the journal is a reputable venue for disseminating significant discoveries in cellular communication.

From an institutional perspective, universities and research centers often incorporate impact factor metrics in performance evaluations and grant assessments. The 2023 figures for Science Signaling may affect how departments prioritize submissions and collaborations, especially in fields related to molecular biology and cell signaling.

Pros and Cons of Relying on Impact Factor Metrics

While the impact factor remains a widely recognized metric, it is not without criticism. For Science Signaling and other journals alike, the overemphasis on impact factors can skew research priorities or promote citation gaming. Consider the following advantages and limitations:

- **Pros:**

- Offers a standardized numerical value to gauge journal influence.
- Helps authors identify reputable publication venues.
- Assists libraries and institutions in subscription decisions.

- **Cons:**

- Does not account for article-level or long-term impact.
- Can be disproportionately influenced by a few highly cited papers.
- May undervalue niche or emerging fields with smaller audiences.

For Science Signaling, maintaining a balanced editorial approach that emphasizes scientific quality over impact chasing is essential in preserving its credibility beyond just numerical rankings.

Trends and Future Outlook for Science Signaling

The trajectory of the science signaling impact factor 2023 suggests a sustained interest in the journal's core themes, particularly as biomedical research delves deeper into intracellular communication and systems biology. Increasing interdisciplinary collaborations and technological advancements, such as single-cell analysis and live-cell imaging, are likely to generate novel insights that Science Signaling can showcase.

Additionally, the evolving landscape of open access publishing and preprint dissemination may influence citation patterns and impact factor calculations in upcoming years. Science Signaling's adaptation to these trends while upholding rigorous standards will determine its continued relevance and citation performance.

Emerging research areas, such as signal transduction in immunotherapy or neurodegeneration, are expected to become focal points for submissions, potentially attracting higher citations and elevating the journal's impact factor further.

How Researchers Can Leverage the Science Signaling Impact Factor 2023

Understanding the latest impact factor data enables researchers to strategically plan their publication efforts. By aligning their work with the thematic priorities and editorial preferences of Science Signaling, authors can increase the likelihood of acceptance and subsequent citation. Engaging with the journal's review articles and special issues may also provide opportunities for heightened visibility.

Moreover, awareness of citation dynamics encourages scientists to disseminate their findings through complementary channels such as conferences, social media, and collaborative networks, thereby amplifying their research impact beyond the journal impact factor metric alone.

In summary, the science signaling impact factor 2023 reflects the journal's ongoing influence within the specialized domain of cellular communication research. While it serves as a useful indicator of academic standing, the broader context of research quality, innovation, and community engagement remains paramount in evaluating the true impact of Science Signaling's contributions to science.

Science Signaling Impact Factor 2023

science signaling impact factor 2023: Mitochondrial Signaling and Regulation Seyyed Shamsadin Athari, Entezar Mehrabi Nasab, 2025-10-01 Mitochondrial Signaling and Regulation: Immune Responses and Diseases delves into the latest research on molecular pathophysiology mechanisms and cell signaling pathways in the pathogenesis of diseases via mitochondrial regulation. This comprehensive study underscores the importance of mitochondria in cellular processes and their role in disease development. Early chapters discuss the crucial role, regulation, and crosstalk of mitochondria, highlighting their significance in maintaining cellular health. The exploration of mitochondria mutations and mitochondria-related diseases follows, providing a detailed understanding of the genetic aspects involved. Final chapters focus on mitochondria's involvement in immune responses and allegro-inflammation, presenting the intricate connections between mitochondrial function and the immune system. The book also explores the use of biotechnology in developing new treatments and targeted therapies against mitochondrial dysfunction. This resource sets the foundation for new classifications, prevention methods, therapies, and treatments of mitochondria-related diseases, making it invaluable for scientists and researchers dedicated to this field. - Covers how the regulation of mitochondria influences immune responses and diseases - Presents new cell signaling pathways to pioneer drug development and innovative therapies - Reviews the latest research on diagnoses, treatment, prevention, and controlling of diseases via mitochondrial regulation

science signaling impact factor 2023: Recent Advances in Phytochemical Research , 2025-04-10 The phytochemicals, particularly bioactive compounds such as alkaloids, flavonoids, terpenoids, and polyphenols, have revealed their diverse roles in human health, from antioxidant and anti-inflammatory properties to anticancer and antimicrobial effects. This book explores how the latest genomics, metabolomics, and bioinformatics methodologies enhance our understanding of plant secondary metabolites and their pharmacological potential. Through these technological innovations, researchers can now identify new bioactive molecules more efficiently and accurately than ever before. This volume highlights the intersections between traditional knowledge and modern scientific advancements. Many of the discoveries discussed here build upon ancient wisdom, validating the therapeutic potential of plants used for centuries in indigenous and folk medicine.

science signaling impact factor 2023: Cyanobacteria Arun Kumar Mishra, Satya Shila Singh, 2023-11-24 Cyanobacteria, the ancient photoautotrophs on the Earth have always been regarded as the most important organism to sustain life in the planet. They are among the first pioneering communities on various harsh habitat, hydrarch or xerarch, which finally facilitate the emergence of vast communities including higher plants. Being the progenitor of chloroplast, the cyanobacterial metabolisms has always fascinated microbiologist. Additionally, the ability of these prokaryotes to produce valuable and prolific sources of natural products signified their role in array of industrial sectors. Further, the attempts to engineer the cyanobacterial metabolisms in way to enhance production of these metabolites are gradually increasing. Therefore, in this book, we proposed to accumulate the knowledge of cyanobacterial metabolisms and molecules as an asset for students, researchers, and biotechnologists. Cyanobacteria: Metabolisms to Molecules will cover diversity, fundamental metabolisms, crucial metabolities and their synthesis, and bioinformatics. -

Casts light on cyanobacterial assistance and their potential role in sustainable developments - Provides significant insights into the fundamentals of cyanobacterial metabolism as well as lesser known topics - Determines the role of cyanobacteria in public health

science signaling impact factor 2023: New Developments in Redox Biology Asim K. Duttaroy, Atala Bihari Jena, 2025-09-01 New Developments in Redox Biology: Fundamental Roles in Health and Disease offers a comprehensive exploration of the influence of the redox system and the complex relationships between oxidative stress, biological development, health and disease. Divided into three sections, it explores the role of the redox system across developmental biology, non-communicable diseases, and infectious diseases. The first section includes chapters exploring oxygen availability in embryonic development, the influence of stress factors and intra-cellular signalling during embryogenesis, and how stem cells maintain homeostasis under oxidative stress. Section two considers topics such as the origin of cancer stem cells related to hypoxia, redox-related biomarkers in tumorigenesis and metabolic disorders, and the role of oxidation and reduction systems in autoimmune disorders and neurodegeneration. The final section focuses on redox regulation in infectious illness and includes chapters on redox biomarkers in host-pathogen interaction, the role of redox control in zoonotic diseases, and the significance of hypoxia on the ability of microbial pathogens to invade the gut. Antiviral drugs and the use of redox regulation in their mechanism of action is also explored. New Developments in Redox Biology: Fundamental Roles in Health and Disease offers a multidisciplinary approach to the topic, providing valuable insights to those seeking to expand their expertise in redox biology and its implications for human health and disease. In particular, researchers and advanced students working across molecular biology, cell biology, biochemistry, developmental biology and related fields will find this book useful. - Explores the fundamental role of redox biology in developmental processes and cellular homeostasis - Investigates the impact of oxidative stress on non-communicable diseases, including cancer, metabolic, and autoimmune disorders - Examines redox regulation in infectious diseases and host-pathogen interactions - Provides detailed insights into redox-related biomarkers and their diagnostic and therapeutic potential - Equips readers with cutting-edge knowledge on redox biology through multi-omics approaches

science signaling impact factor 2023: Exogenous Priming and Engineering of Plant Metabolic and Regulatory Genes Manish Kumar Patel, Lam-Son Phan Tran, Sonika Pandey, Avinash Mishra, 2025-01-30 Exogenous Priming and Engineering of Plant Metabolic and Regulatory Genes: Stress Mitigation Strategies in Plants provides insights into metabolic adjustment, their regulation, and the regulatory networks involved in plants responding to stress situations. It contains comprehensive information, combining mechanistic priming and engineering approaches from the conventional to those recently developed. In addition, the book addresses seed priming, tolerance mechanisms, pre-and post-treatment, as well as sensory response, and genetic manipulation. From basic concepts to modern technologies and prevailing policies, readers will find this book useful in enhancing their understanding of the area as well as helping in identifying approaches for future research. - Provides detailed information on developing stress-tolerant crop varieties using two distinct approaches - Highlights advancements in OMICS approaches for different crops - Assists readers in designing and evaluating plan for future research

science signaling impact factor 2023: Nano-formulation of Dietary Phytochemicals for Cancer Management Nidhi Puranik, 2025-02-24 This book covers various cancer chemotherapeutics, offering research-oriented overviews of phytochemical-based cancer treatments. It contrasts nano-formulated phytochemical delivery with conventional chemotherapy, introducing nanocarriers or bioengineering for poly-chemotherapy and phytochemicals as alternative treatments to reduce resistance. The text elaborates on the nano-formulation techniques and synthesis approaches of phytochemicals as drugs, the targeted drug delivery facilitated by nanocarriers, and subsequent mechanisms of drug release. Additionally, it examines the implications of nano-formulated phytochemicals in cancer therapeutics and their impact on cancer treatment and prevention. By enhancing bioavailability and improving functional qualities through nanoencapsulation, this

innovative approach promises significant advancements in cancer therapy. Key concepts include dietary phytochemicals' role in various types of cancer chemotherapeutics, the pharmacological mechanisms of action in prevention and treatment, and strategies to enhance chemotherapy and radiotherapy efficacy. The book also presents preclinical and clinical studies on the efficacy of phytochemicals in cancer treatment. Additionally, it highlights improvements in drug delivery systems using nanotechnology-based dosage forms for herbal drugs. The content is designed for professionals involved in drug development, including chemists, pharmacists, biologists, biotechnologists, industrialists, nanotechnologists, microbiologists, economists, and all disciplines related to cancer treatment and phytochemical-based drug development. Academic students, scientists, and researchers at universities, institutes, hospitals, botanical institutes, pharmaceutical industries, government organizations, and NGOs will find invaluable insights into the application of phytochemical drugs in cancer treatment. By providing a detailed examination of cutting-edge research on nano-formulated phytochemicals for cancer therapy, this book invites readers to rethink traditional approaches to chemotherapy and explore innovative solutions that promise better outcomes for patients worldwide.

science signaling impact factor 2023: Carbohydrate Nutrition Bin Zhang, Sushil Dhital, 2025-06-01 Carbohydrate Nutrition discusses the nutritional functionality of foods in addressing the current metabolic disease epidemic. It begins by introducing the sources and structures of various carbohydrates, including starch, human milk oligosaccharides, polyols, arabinoxylan, beta-glucan, and cellulose, along with their function in the small intestine and colon. The book offers a comprehensive examination of carbohydrates, covering their chemistry, classification, digestion and health implications. The importance of prebiotic carbohydrates, such as human milk oligosaccharides and dietary fibers like cellulose, arabinoxylans, and beta-glucan is also discussed. Each chapter is authored by leading experts in the field making Carbohydrate Nutrition is a valuable resource for nutrition researchers, food scientists, food chemists, and those studying related topics. Readers can apply these insights to the design and development of foods with improved carbohydrate nutrition. - Presents a holistic view of the structure-function of common carbohydrates in both the upper and lower gastrointestinal tracts - Explores different carbohydrate types and their nutritional roles - Explains the rate, extent and location of digestion and absorption for glycemic starch and dietary fibers - Offers practical guidance for creating balanced, carbohydrate-rich diets

science signaling impact factor 2023: Challenges and Solutions of Climate Impact on Agriculture Shah Fahad, Muhammad Adnan, Iqbal Munir, Rattan Lal, Taufiq Nawaz, Shah Saud, 2024-10-08 Challenges and Solutions of Climate Impact on Agriculture explores issues arising from the changing climate for agricultural plants, with a soil-focused approach. Addressing the impacts on a range of important global food crops, it looks at issues of water and temperature and their impact on soil quality for production. Presented by a global team of experts, this book will be important for researchers seeking to understand specific challenges, and means of addressing those challenges effectively and efficiently. The agriculture sector is arguably one of the most sensitive to changes in the climate. Because the climate of a region determines the nature and characteristics of vegetation and crops, any change in the mean seasonal temperature and decrease in effective precipitation can reduce productive periods for crops, risking outbreaks of pests and disease and negatively affecting global food security. - Explains the impact of climate change on soil properties, productivity, and microbial diversity - Provides detailed information regarding the impact of climate change on yields of cereal grains and other crops - Enables agricultural scientists to design policies and management strategies for sustainable agriculture

science signaling impact factor 2023: Nutritional Psychiatry Ted Dinan, Timothy G. Dinan, 2023-08-31 The first book to provide a comprehensive overview of the relationship between nutrition and mental health for clinicians.

science signaling impact factor 2023: Handbook of Proteases in Cancer Sajal Chakraborti, 2024-12-13 This handbook provides comprehensive coverage of the role of proteases and the

associated biochemical pathways in cancer development and metastasis. Proteases make up about 2% of the human genome and play a critical role in the tumor microenvironment. *Handbook of Proteases in Cancer: Cellular and Molecular Aspects* introduces the major classes of proteases and the signal transduction mechanisms associated with cancer initiation and progression. It discusses the role of inflammation and immune responses in proteases-induced cancer. The book covers cancer-induced gene expression and apoptotic and necrotic pathways in cancer. This is useful for researchers and professionals in cancer research, biochemistry, and physiology. Key Features • Provides insights on the roles of proteases and anti-proteases in the tumor microenvironment. • Covers various cancer-induced apoptotic and necrotic pathways. • Discusses the mechanisms by which proteases induce an increase in inflammation, immune response, and gene expression. • Covers the function of protease-activated receptors in cancer. • Reviews the different gene expression pathways and the ways they become erratic during protease-induced cancer.

science signaling impact factor 2023: Synthetic Polymeric Materials-Based Drug Delivery Systems for Inflammatory Diseases Harish Dureja, Vimal Arora, Paul A. McCarron, Vandana B. Patravale, Kamal Dua, 2025-09-22 This book provides a comprehensive overview of synthetic polymers and their applications in designing delivery systems for the management of inflammatory diseases. It presents introductory insights into inflammatory conditions, delves into the role of synthetic polymers, and examines diverse delivery approaches. *Synthetic Polymeric Materials-Based Drug Delivery Systems for Inflammatory Diseases* explores the potential of synthetic polymers in designing drug delivery systems for managing inflammatory diseases, including inflammatory lung diseases, inflammatory bowel diseases, and inflammatory skin diseases, as well as other conditions like cancer, neurodegenerative disorders, rheumatoid arthritis, and eye-related inflammatory conditions. It also discusses the role of synthetic polymers in modulating immune system responses in different disease conditions. Furthermore, it analyzes the 3D printing technologies employed for the preparation of drug delivery systems based on synthetic polymers. Toward the end, the book highlights the challenges and prospects of synthetic polymers in designing delivery systems for the effective management of inflammatory diseases and their clinical usage. This book is intended for researchers and professionals in the fields of pharmaceutical sciences, nanotechnology, and drug delivery systems. Key Features Highlights the role of a synthetic polymer-based drug delivery system against inflammatory responses Explores the cutting-edge technology of 3D printing and its application in preparing drug delivery systems based on synthetic polymers Provides valuable insights into how synthetic polymers can be used to modulate immune system responses Presents regulatory compliance using synthetic polymers in drug delivery systems for inflammatory diseases Examines challenges associated with synthetic polymers in drug delivery systems for inflammatory diseases

science signaling impact factor 2023: Post-Translational Modifications (PTMs) in Human Cancer: Pharmacological Insights and Therapeutic Opportunities Lei Huang, Hang Song, Pedro Ayuso Parejo, 2025-08-21 Human cancer is a complex and heterogeneous group of diseases characterized by uncontrolled cell growth and proliferation. Post-translational modifications (PTMs) of proteins play a critical role in cancer development and progression. PTMs are chemical modifications that occur after a protein is synthesized and can significantly impact the function, localization, stability, and activity of proteins within a cell. Pharmacology is a field of medicine that focuses on the study of drugs and their effects on the human body. Pharmacological interventions that target PTMs are a promising area of cancer research and treatment. For example: - PARP Inhibitors: Poly (ADP-ribose) polymerase (PARP) inhibitors are a class of drugs that exploit defects in DNA repair mechanisms, particularly in cells with BRCA mutations. These inhibitors target the PARP protein, which plays a role in DNA repair through PTM processes. PARP inhibitors like olaparib and rucaparib have been approved for the treatment of ovarian and breast cancers. - Ubiquitin-Proteasome System (UPS) Inhibitors: The UPS is responsible for the degradation of specific proteins tagged with ubiquitin. Some drugs, such as bortezomib, inhibit the UPS, leading to the accumulation of ubiquitinated proteins and apoptosis in cancer cells. - SUMOylation Inhibitors:

Small ubiquitin-like modifier (SUMO) modification is a PTM that regulates the activity of various proteins. Recent research has explored the development of SUMOylation inhibitors to target specific cancer-related proteins. These are still in the experimental stage. The effectiveness of these treatments varies depending on the specific cancer type, genetic mutations, and individual patient characteristics. It's important to note that the development and application of these therapies often require a deep understanding of the specific PTMs and their roles in the molecular pathways of different cancer types. Additionally, personalized medicine approaches are becoming increasingly common, tailoring treatments based on the unique PTM profiles and genetic mutations of individual patients' tumors. Personalized medicine, also known as precision medicine, is being pursued in cancer treatment for several compelling reasons, and it offers several benefits compared to more traditional one-size-fits-all approaches. Personalized medicine offers targeted treatment, increased treatment efficacy, reduced side effects and optimized drug selection, among many other benefits. This Research Topic will focus on post-translational modifications (PTMs) and their role in human cancer within the field of pharmacology. This is a highly relevant and significant area of study, as understanding how PTMs contribute to cancer development and progression is critical for the development of targeted pharmacological interventions. We welcome contributions in the form of Original Research Articles, Reviews, and Mini-Reviews that cover but are not limited to the following topics: (a) Post-Translational Modifications (PTMs) in Cancer: Molecular Mechanisms; (b) Pharmacological Approaches Targeting PTMs in Cancer; (c) Personalized Medicine and PTM Profiles; (d) Emerging Trends and Future Directions. Please note that: - If patient data are analyzed, a comprehensive description of the patients including sex, age, diagnostic criteria, inclusion and exclusion criteria, disease stage, therapy received, comorbidities as well as additional clinical information and assessment of clinical response/effects should be included. - If genetic, proteomics, metabolomics, or other omics data are analyzed, a comprehensive description of the methods and the rationale for the selection of the specific data studied should be provided. - Studies related to natural compounds, herbal extracts, or traditional medicine products, will not be included in this Research Topic. - Studies solely based on the analysis of public databases or published evidence, with no further experimental insights or experimental validation, will not be included in this Research Topic.

science signaling impact factor 2023: Rna-based Mechanisms In Cancer Gary Brewer, Gerald M Wilson, 2023-10-12 The roles of gene transcription in cancer have long been appreciated. However, posttranscriptional processes also contribute significantly to alterations in gene expression that lead to tumor initiation, formation, and progression. We have known for decades that alterations in the expression of key genes, such as those involved in cell proliferation, signaling, apoptosis, and immune responses, are major molecular events in cancer. This book presents our current understanding of selected posttranscriptional control mechanisms and the RNAs that they regulate. Each chapter provides an overview of a specific RNA-directed regulatory system and the RNA/protein factors involved, then discusses major findings in the field and their relationships to the development and/or treatment of cancer and associated diseases. Future questions serve to address 'where do we go from here' and stimulate the reader's thinking about these important problems. This compendium of chapters from experts in the field is essential reading for anyone interested in the myriad ways that RNAs contribute to tumorigenesis: from graduate students, researchers, and clinical scientists interested in mRNA processing and translation, RNA-binding proteins that promote turnover/stability of specific mRNAs, how small noncoding RNAs control inflammation and signaling, roles of the epitranscriptome, and future and emerging RNA-based, anti-tumor therapeutics.

science signaling impact factor 2023: Role of Antioxidants in Abiotic Stress Management Zaid Ulhassan, Yasir Hamid, Weijun Zhou, 2025-08-01 Role of Antioxidants in Abiotic Stress Management covers the antioxidant defense system in plants, providing key insights on how to generate tolerant varieties that can adapt to harsh environmental conditions without adverse impacts on crop productivity. The book covers a broad range of antioxidant responses, describing

how global climate changes and the overexploitation of natural or anthropogenic resources creates abiotic stressors. The potential impacts of factors such as heavy metals/metalloids, drought/water deficit, salinity, extreme temperatures, anoxia, and high light intensity are covered, along with discussions on how to improve crop growth and development at different stages. Written by a team of international experts, this book provides an important reference on morphological, physiological, biochemical, metabolic, anatomical and molecular responses of plants under stress factors. - Provides important insights for improved breeding success - Highlights management strategies for enzymatic and non-enzymatic antioxidant-mediated stress tolerance in plants - Includes illustrations to clarify and demonstrate key aspects

science signaling impact factor 2023: Plant Hormones and Climate Change Golam Jalal Ahammed, Jingquan Yu, 2023-01-01 This book provides new insights into the mechanisms of plant hormone-mediated growth regulation and stress tolerance covering the most recent biochemical, physiological, genetic, and molecular studies. It also highlights the potential implications of plant hormones in ensuring food security in the face of climate change. Each chapter covers particular abiotic stress (heat stress, cold, drought, flooding, soil acidity, ozone, heavy metals, elevated CO₂, acid rain, and photooxidative stress) and the versatile role of plant hormones in stress perception, signal transduction, and subsequent stress tolerance in the context of climate change. Some chapters also discuss hormonal crosstalk or interaction in plant stress adaptation and highlight convergence points of crosstalk between plant hormones and environmental signals such as light, which are considered recent breakthrough studies in plant hormone research. As exogenous application or genetic manipulation of hormones can alter crop yield under favorable and/or unfavorable environmental conditions, the utilization of plant hormones in modern agriculture is of great significance in the context of global climate change. Thus, it is important to further explore how hormone manipulation can secure a good harvest under challenging environmental conditions. This volume is dedicated to Sustainable Development Goals (SDGs) 2 and 13. The volume is suitable for plant science-related courses, such as plant stress physiology, plant growth regulators, and physiology and biochemistry of phytohormones for undergraduate, graduate, and postgraduate students at colleges and universities. The book can be a useful reference for academicians and scientists involved in research related to plant hormones and stress tolerance.

science signaling impact factor 2023: Gut Microbiota in Health and Disease Diogo Alpuim Costa, Pedro Barata Coelho, Conceição Calhau, Ana Faria, 2025-03-07 Gut microbiota plays a crucial role in host health maintenance and disease pathogenesis. The largest reservoir of microbiota exists in gastrointestinal tract, both in the lumen, where microbes facilitate primary and secondary metabolism, and on mucosal surfaces, where they interact with host immune cell populations. Dysbiosis is associated with decreased microbiota function and diversity, disrupted epithelial barrier, bacterial translocation, inflammation, and local/systemic microbial-driven immunomodulation. In fact, gut dysbiosis appears to be associated with increased risk of developing inflammatory, autoimmune, and malignant diseases. In addition, it is important to explore implications of microbiota variations on drug disposition, action and toxicity.

science signaling impact factor 2023: Plant-microbes Interactions and Resistance Against Abiotic Stress Marzena Sujkowska-Rybkowska, Anna Rusaczek, 2025-04-30 Abiotic stresses, such as cold, heat, drought, salinity, and heavy metals, limit plant growth. Plants interact with a wide range of different soil microorganisms, including prokaryotes, fungi, and viruses. These microorganisms can modulate various elements of plant defense mechanisms in response to abiotic stress. Symbiotic microbes can either enhance or hinder plant nutrient uptake and use efficiency, thereby impacting their growth and yield under stress. Plant-associated microbes also have the ability to alleviate stress through the activation of physiological, biochemical, and molecular pathways that coordinate ion uptake, nutrient metabolism, and the synthesis of compounds with osmotic or antioxidant activity. A comprehensive understanding of the mechanisms underlying the interactions between plants and their symbiotic microbes can potentially improve plant resistance to abiotic stress.

science signaling impact factor 2023: The Origin of Plant Chemodiversity - Conceptual and Empirical Insights Kazuki Saito, 2020-08-06

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