



toxins

IMPACT
FACTOR
4.0

Indexed in:
PubMed

CITESCORE
8.2

Special Issue Reprint

Novel Approaches in Mycotoxins Research

www.mdpi.com/books/reprint/11068

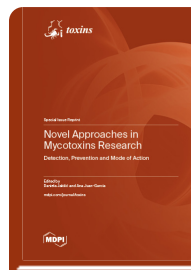
Edited by

Daniela Jakšić

Ana Juan-García

ISBN 978-3-7258-4233-9 (Hardback)

ISBN 978-3-7258-4234-6 (PDF)



Mycotoxins—harmful compounds produced by fungi—pose serious threats to food safety and public health. This Special Issue compiles research addressing their detection, toxic effects, and mitigation. Studies have revealed that *Fusarium verticillioides* resists fumonisins through ceramide synthase overexpression (FUM18), and a new HPLC-FLD method now allows precise OTA measurement in mouse brain and intestine tissues. In the past, Mycotoxin contamination in hops used for brewing was widespread, though controlled storage limited some risks. Since then, machine learning models have emerged as promising tools for rapid detection, albeit with reproducibility challenges. Protective agents like quercetin, fermented whey, and plant polyphenols (e.g., catechin, epicatechin) have also demonstrated the ability to counteract mycotoxin toxicity, and research has shown that mycotoxins' stability in food varies over time and that co-ingestion factors like milk can alter absorption. The combined toxicity of mycotoxins with compounds like acrylamide may increase neurological risks, highlighting the need for deeper investigation. Despite progress, significant gaps remain in assessing human exposure, developing validated biomarkers, and using advanced human-relevant models, emphasizing the need for interdisciplinary efforts to improve risk assessment and mitigation.



Order Your Print Copy

You can order print copies at

www.mdpi.com/books/reprint/11068

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.