

*Pharmacovigilance for Herbal and Traditional Medicines: Advances, Challenges and International Perspectives* by Joanne Barnes, ed. Cham, Switzerland: Springer Nature Switzerland; 2022. ISBN: 978-3-031-07273-4. Hardcover, 409 pages. \$129.99.

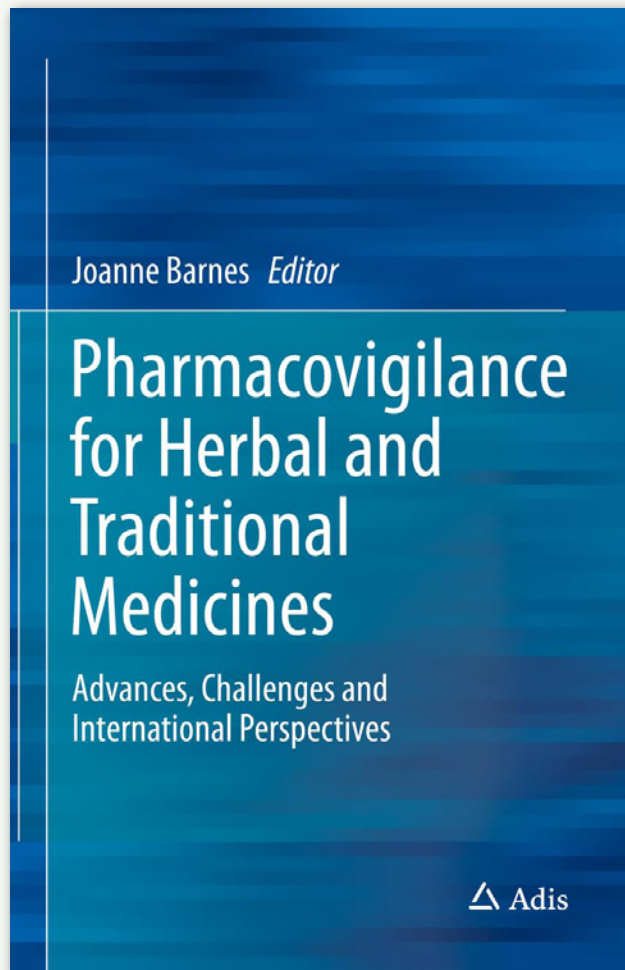
By **Thomas Brendler, PhD**

The increasing worldwide popularity of herbal products both as medicine and supplements creates an urgent need to monitor their side effects and adverse reactions. Pharmacovigilance is the science and process relating to the detection, assessment, understanding, and prevention of adverse events or adverse drug reactions (ADRs), or any other medicine-related problem.<sup>1</sup> The concept of pharmacovigilance, as well as activities and tools associated with it, was originally developed for conventional medicines. Applying the concept to the safety monitoring of herbal medicines and supplements creates unique challenges linked to their nature, use, and regulation.

Joanne Barnes, PhD, the editor and co-author of this volume, is an associate professor of herbal medicines in the School of Pharmacy at the University of Auckland, New Zealand. She has been a trailblazer for the awareness, regulatory incorporation, and application and development of a pharmacovigilance toolkit for herbal products since the early 2000s.<sup>2</sup> In 2006, I had the opportunity to attend the “Pharmacovigilance of Herbal Medicines: Current Status and Future Directions” symposium organized by Barnes in London. At that time, we discussed how to report and classify herbal products and related ADRs and organize and integrate an international signaling system to disseminate correct information about the risks and benefits of herbal products.<sup>3</sup> By 2023, interest in the term pharmacovigilance had increased by 25%, according to Google Trends, driven by Central and South America, Africa, and India.<sup>4</sup> The academic output related to pharmacovigilance is even more impressive: It doubled every five years, from approximately 800 publications for 2003–2007 to approximately 6,300 for 2018–2023.<sup>5</sup>

A follow-up meeting in April 2023, once again organized by Barnes, looked back on two decades’ worth of advances but also highlighted the persistent challenges in identifying, assessing, monitoring, and managing safety concerns. So does the volume presented here. As such, it is the first book solely dedicated to the topic of pharmacovigilance for herbal and traditional medicines, providing current knowledge, innovations, and an analysis of international case reports. In her preface, Barnes describes her aspirations as “a desire to draw together current knowledge and practices with respect to pharmacovigilance for herbal medicinal products, as well as to identify, showcase and celebrate advances and innovation in monitoring the safety of this unique and complex category of products and preparations” and for the book to be “informative, interesting and inspiring.” I

\* VigiBase is the World Health Organization’s global database of Individual Case Safety Reports.



wholeheartedly concur with her that the “vision for this book has been realized, and with such excellent contributions from an outstanding, diverse set of authors.”

Indeed, in two parts, the text covers the current status of pharmacovigilance for herbal products and provides international perspectives on how pharmacovigilance of herbal products has become anchored in national regulations of countries as diverse as Canada, China, and Iraq. Chapters 1–15 in Part I: Advances and Challenges in Pharmacovigilance for Herbal Medicines focus on a broad range of topics, from specific botanical toxins like pyrrolizidine alkaloids and the safety of herbal products in pregnancy, methods, and techniques such as causality assessment and coding reports, all the way to the significance of botanical nomenclature and communication with the consumer.

Part II: International Perspectives in Pharmacovigilance for Herbal Medicines, comprising chapters 16–27, introduces means and methods of both global (VigiBase\*) and national ADR reporting from Europe, the Middle East, North and South America, India, Asia, and North Africa. Additional perspectives from the more populous and regulatorily advanced nations in other regions of Africa would have been desirable to complete the picture. However, this



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should not be misconstrued as a deficit; rather, it reflects the ongoing challenge to create a truly global vigilance system, the ultimate value of which lies in everybody's participation.

For the time being, it is safe to say that Barnes' efforts have paid off: This volume at once provides an almost inclusive state-of-affairs perspective as well as the foundation for the next decade of efforts to firmly establish pharmacovigilance of herbal products on a global scale. It is hoped that this publication will further enhance awareness and participation from both industry and the medical community, as these are key stakeholders in providing safe herbal products to the consumer. I highly recommended this book. HG

*Thomas Brendler, PhD, is the founder of botanical consulting firm PlantaPhile and principal scientist, research and development, at Traditional Medicinals, Inc.*

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*Psychonauts: Drugs and the Making of the Modern Mind* by Mike Jay. New Haven, CT: Yale University Press; 2023. Hardcover, 384 pages. ISBN: 9780300257946. \$32.50.

By Mark Plotkin, PhD, LHD

Mike Jay occupies a special niche in the ever-expanding universe of psychedelic literature: He consistently produces well-written, incisive, and accurate histories and analyses of human interaction with mind-expanding plants, fungi, and even animals. Along the way, he also has penned pieces on the history of asylums, anatomy, and books bound in human skin.

In his newest book, *Psychonauts*, he casts his net still wider, endeavoring to explain how experimentation with psychoactive drugs by a wide and diverse array of Westerners directly contributed to the birth of psychology and helped expand the frontiers of art, medicine, music, and science. In these pages, one encounters Honoré de Balzac, Charles Baudelaire, Samuel Taylor Coleridge, Wade Davis, Humphry Davy, Thomas De Quincey, Benjamin Franklin, Sigmund Freud, Johann Wolfgang von Goethe, Robert Hooke, Alexander von Humboldt, Thomas Huxley, Immanuel Kant, Isaac Newton, Joseph Priestley, Henry Rusby, Joe Rogan, Mike Tyson, and Andrew Weil — all before the second chapter.

The author's central thesis is that self-experimentation with entheogens — outside of the Indigenous societies that first discovered them — did not begin in the 1960s with Timothy Leary, PhD, and the Beatles, but rather had a long

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