

Natural Products Analysis

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Editorial

Natural Products Analysis—A New Journal That Promotes Innovations and Sustainability in the Analysis of Natural Products

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Natural products (NPs), defined as substances produced by living organisms, not only come from plant sources but also are produced by animals, microorganisms, and marine organisms [1,2]. More precisely, natural products can be defined as organic compounds produced by the primary or secondary metabolic pathways in living organisms, but most often, natural products mean secondary metabolites. NPs have long been used as dietary supplements, foods, medicines, and cosmetics; and they play a vital role in modern drug discovery [3–5]. Hence, their analysis involving collection and storage, extraction, isolation, identification, quantification, bioactivity assessment, formulation, delivery, and quality control is essential. It is equally important to apply analytical techniques, e.g., analysis with radioisotopes, to understand the biosynthetic pathways, of natural products, governed by various enzymes [6,7]. Natural product metabolomics is another contemporary avenue of research that applies various analytical techniques, e.g., hyphenated techniques like LC-MS [8,9].

Over the years, there have been significant advances in extraction technology, from a humble beginning with simple maceration to the most advanced extraction techniques like accelerated solvent extraction, supercritical fluid extraction, microwave extraction, and many more [1]. Similarly, remarkable progress in separation technology, e.g., ultra-performance liquid chromatography (UPLC), the introduction of ultra-sensitive bioassays, and most recently the emergence of computational methods [9,10] and artificial intelligence have revolutionized the field of analysis of natural products. Innovations in analytical techniques have enhanced the sustainability of research in this area and made the operation more environmentally friendly, e.g., green extraction techniques [11]. The prediction and optimization ability of computational methods and modelling (*in silico*) has significantly improved the precision, efficiency, and quality of natural products analysis [9].

The new journal *Natural Products Analysis (NPA)*, published by Scilight and supported by a fantastic editorial advisory team comprising members who are active natural products researchers, will provide a unique and comprehensive platform for the dissemination of information on innovations and progress as well as the current trends in analytical methods applicable to natural products analysis. Thus, NPA will help advance research in the analysis of natural products and their impact on food, medicine, and cosmetic industries, as well as the health and well-being of the global population. Among the editorial advisory board members, there are members with extensive experience and a strong track record as editors or editorial board members, but at the same time, NPA has included several members who are early career researchers with dedication, passion for natural products research, and immense potential. This new journal will publish review articles and original research papers by adopting a fair, equitable, and transparent peer-review and decision-making process aiming at supporting the authors all the way from the submission to the publication of their articles. With the contributions from all potential authors and the editorial advisory board members, this journal is expected to grow fast and become one of the leading journals in natural products research.



Conflict of Interest

The author declares no conflict of interest.

References

- 1. Sarker, S.D.; Nahar, L. Natural Products Isolation, 3rd ed.; Humana Press-Springer-Verlag: Totowa, Nj, USA, 2012.
- 2. Nahar, L.; Sarker, S.D. *Chemistry for Pharmacy Students: General, Organic and Natural Product Chemistry*, 2nd ed.; John Wiley & Sons: Chichester, UK, **2019**.
- 3. Pye, C.R.; Bertin, M.J.; Lokey, R.S.; et al. Retrospective analysis of natural products provides insights for future discovery trends. *Proc. Natl. Acad. Sci. USA* **2017**, *114*, 5601–5606.
- 4. Sarker, S.D.; Nahar, L. Medicinal Natural Products—A Disease-Focused Approach; Elsevier: London, UK, 2020.
- 5. Xiao, J.; Sarker, S.D.; Asakawa, Y. A Handbook of Dietary Phytochemicals; Nature-Springer: New York, NY, USA, 2021.
- 6. Nair, S.K.; Jez, J.M. Natural product biosynthesis: What's next? An introduction to the JBC reviews thematic series. *J. Biol. Chem.* **2019**, 295, 335–336.
- 7. Walsh, C.T.; Tang, Y. *Natural Product Biosynthesis: Chemical Logic and Enzymatic Machinery*, 2nd ed.; Royal Society of Chemistry: London, UK, **2022**.
- 8. Demarque, D.P.; Dusi, R.G.; de Sousa, F.D.M.; et al. Mass-spectrometry-based metabolomics approach in the isolation of bioactive natural products. *Sci. Rep.* **2020**, *10*, 1051.
- 9. Sarker, S.D.; Nahar, L. Computational Phytochemistry, 2nd ed.; Elsevier: London, UK, 2024.
- 10. Vervoort, N.; Goossens, K.; Baeten, M.; Chen, Q. Recent advances in analytical techniques for high throughput experimentation. *Anal. Sci. Adv.* **2021**, *2*, 109–127.
- 11. Chemat, F.; Vian, M.A.; Cravotto, G. Green extraction of natural products: Concept and principles. *Int. J. Mol. Sci.* **2012**, *13*, 8615–8627.