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EDITORIAL

A new beginning

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Nature has endowed humanity with a vast, diverse, and renewable resource in the form of the biological diversity – plants (terrestrial and aquatic), microbes (bacteria, algae, fungi, etc.), insects, marine, invertebrates, and vertebrate species. This species diversity is also packed with a rich chemical and genetic diversity, for example, from the 5% of the species studied so far have led to the identification[1] of over 400,000 molecules (referred to as natural products (NPs)) in the last 150 years. A large majority of this biodiversity and its chemistry is waiting[2] to be discovered, characterized, and utilized. Keeping in view their structural complexity and properties, the best scientific minds worldwide have been attracted to this fertile field[3] of NPs– isolation, structure, synthesis, biosynthesis, and biological properties - leading to nearly 60 Nobel Prizes in Chemistry and Physiology or Medicine. The fundamental scientific questions related to the structure, biosynthesis, and function of naturally occurring small molecules in biological systems also resulted in the flourishing of multiple sub-disciplines at the interface of chemistry, biology, and medicine, such as natural-products chemistry (isolation, structure, and synthesis), medicinal chemistry (structure-activity relationship), pharmacology, chemical biology, chemical ecology, and synthetic biology. From the early phase of NPs chemistry - the isolation of morphine from the opium poppy 222 years ago - natural resources have continued to provide first-in-class solutions[4] to human needs (food, nutrition, medicines, etc.). In addition, the NPs-driven industries today (pharma, biopharma, agrochemicals, food, nutrition, materials, etc.) are some of the largest both in terms of value and size, producing therapeutic drugs and their key intermediates, fine chemicals, agrochemicals (insecticides & pesticides), cosmetics/ aromatics, micronutrients, colours/pigments, preservatives, and materials.

In the field of medicine and pharmaceuticals, biodiversity has remained a consistent source of compounds with unique pharmacological properties (nanomolar engagement with protein targets), providing most of the "first-in-class" drugs and pharmacophores for chronic and acute diseases; for example, over 50% of currently used anti-cancer and 75% of anti-infective therapies (antibiotics) owe their origin to NPs. In addition, several life-saving drugs (opiates, statins, artemisinin, macrolides, and antibody-drug-conjugates) are either NPs (isolated or synthetic), derived, or inspired. In the last 10 years alone, over 60 new NPs, NP-derived drugs, and 13 Antibody-NP-drug-Conjugates (ADCs) have been approved by the US FDA. So much so, during the last10-years, a single NP (phlorizin), discovered 191 years ago, provided 13 new drugs (the flozin class - SGLT-2 inhibitors) for major diseases such as chronic kidney disease, type-2 diabetes, and cardiovascular disorders. Besides being a rich source of pharmaceutical drugs and agrochemicals, NPs have also contributed significantly to major advances in biology (immunology and cell biology) and synthetic chemistry, including cytochalasins, monensin, brefeldin, rapamycin, FK-506, forskolin, cannabinoids, strigolactone, and many others. New advances in isolation technologies (hyphenated dereplication methods), structure-elucidation (dynamic imaging mass spectrometry), organic synthesis (scaffold-editing and remote-

functionalization), synthetic-biology[5] (cryptic gene-clusters, heterologous gene-transfer and expression), biodiversity mapping and chemical ecology, isoform selectivity[6] in pharmacology, and many other breakthroughs in biology are opening up new and exciting opportunities for the discovery[7] of next-generation therapeutics from NPs. This remarkable trajectory of new discoveries from NPs will continue and, in fact accelerate[8] due to AI inputs. These developments are expected to significantly broaden the scope and influence of research in NPs, resources, and biodiversity. In this rapidly evolving environment, the *Indian Journal of Natural Products and Resources* (IJNPR) aims to make a significant contribution.

IJNPR is published by the CSIR-National Institute of Science Communication and Policy Research, a constituent laboratory of the Council of Scientific and Industrial Research—one of India's largest scientific research organizations. IJNPR is dedicated to publishing original research across all areas of NPs, resources and biodiversity. Established in 2002 as "*Natural Product Radiance*," the journal adopted its present name in 2010 to better reflect its broadened scope and focus. In accordance with the requirements of the Press Registrar General of India, the new title began with volume 1. IJNPR is a Diamond open-access, quarterly publication, with issues released in March, June, September, and December, in both print and online formats.

The journal now embarks on a new chapter with the new Editorial Board, whose tenure begins with the September 2026 issue and will extend over the next three years. Starting with the Sept 2026 issue, we are launching an Editorial/Guest Editorial section designed to keep readers abreast of emerging trends, recent advancements, and evolving research areas in NPs and allied fields. We anticipate that this new section will foster scholarly reflection and stimulate critical discussions within the research community.

To further enrich the journal, we will introduce three new sections beginning with the December 2026 issue: (a) **Molecule in Spotlight** will trace the path from the discovery to the development of a significant NP molecule, its research trajectory and impact (b) **Highlights from the Scientific Literature** showcasing notable work published in other journals within IJNPR's subject domain, (c) **Patents in Focus** providing the summaries of recently filed patents in the field of NPs. These additions aim to provide broader perspectives and valuable insights for our readers.

We are also broadening the journal's scope to encompass emerging research domains such as chemical biology, chemical ecology, and synthetic biology, and actively encourage researchers to submit high-quality contributions. IJNPR remains steadfast in its commitment to being a trusted platform for sharing meaningful research.

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