Meet Dr. Kishor L. Handore, Thieme Chemistry Journals Awardee 2026!



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Dr. Kishor L. Handore *received his MSc from Savitribai Phule Pune University (India) in 2007, then worked as a research chemist at TCG Lifesciences, Pune (2007–2010) prior to pursuing his PhD at CSIR–National Chemical Laboratory (NCL), Pune (2012–2017). Following his PhD studies, Dr. Handore moved to the University of Toronto (Canada) as a postdoctoral fellow (2017–2020), then returned to India to become a team leader in Process R&D at BASF India (2020–2023). He is currently a Senior Scientist at CSIR–NCL, Pune, and an Assistant Professor at Academy of Scientific and Innovative Research (AcSIR), India.*

Thieme: Which field of organic chemistry are you interested in the most and why?

Dr. Handore: My research program focuses on the development and mechanistic understanding of new chemical reactions, especially in the context of natural product total synthesis and bioactive molecules. Natural products have long been valued both as therapeutic agents and as sources of inspiration for advances in synthetic organic chemistry. Their structural complexity marked by intricate architectures, diverse functional groups, and precise stereochemistry makes them excellent platforms for innovating reaction design. Through total synthesis, we seek to tackle the challenges posed by these molecules, enabling the development of more selective and efficient synthetic methods. This work not only advances the boundaries of organic chemistry but also contributes to related fields such as catalysis, medicinal chemistry, and chemical biology.

Thieme: Following that, what is the focus of your current research activity?

Dr. Handore: Our research focuses on designing, understanding, and applying metal catalysts for the synthesis of valuable organic molecules. We develop catalytic and radical-based methodologies to access biologically active natural products and complex bioactive compounds. A central goal is the stereoselective construction of architecturally complex molecules through the discovery of new reactivity in novel chemical systems. A key contribution from our group is an iron-catalyzed hydrogen atom transfer (HAT)-initiated Dowd–Beckwith rearrangement (Figure 1). This method enables the efficient synthesis of cyclic and spirocyclic quaternary carbon centers from readily available β-keto esters and cyclic diketones in high yields. The reaction proceeds with excellent stereocontrol, affording cyclic ketones bearing contiguous stereocenters, including quaternary centers, and offers a new bond-disconnection strategy for ring contraction. This approach has also been applied to a concise formal synthesis of perhydrohistrionicotoxin and shows strong potential for multi-functionalization of natural products. In addition, we have developed a palladium-catalyzed annulation strategy to

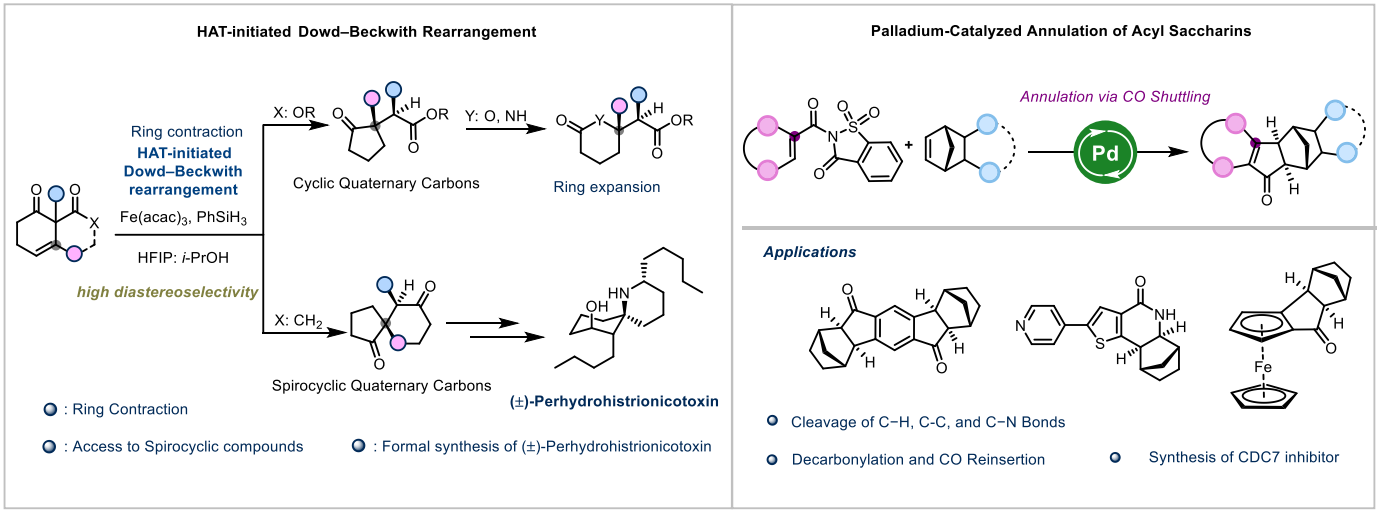


Figure 1 Iron-catalyzed HAT-initiated Dowd–Beckwith rearrangement and palladium-catalyzed annulation of acyl saccharins

synthesize indanones from *N*-acyl saccharins and bicyclic alkenes. This process involves C–H, C–C, and C–N bond cleavage, along with carbonyl rearrangement via CO shuttling. The method has been successfully applied to the synthesis of CDC7 inhibitors and ferrocene-derived indanones.

Thieme: What do you think about the modern role and prospects of organic chemistry?

Dr. Handore: Many aspects of modern life depend on organic chemistry, from pharmaceuticals and fuels to plastics, cosmetics, and food additives. It plays a key role in explaining biological systems and in creating essential, life-saving medications. Everyday items like detergents, soaps, and synthetic fibers originate from organic processes, contributing to better health, comfort, and living standards. Given its importance, continued progress in natural product synthesis, medicinal chemistry and the development of innovative synthetic methods is vital. However, it is equally important to consider environmental and societal concerns, especially when scaling up chemical processes. In this regard, newer areas such as flow chemistry, photochemistry, mechanochemistry, and electrochemistry hold strong promise for driving more sustainable and impactful advancements.

Thieme: Which difficulties are there for young upcoming chemists in your field? Do you have any tips?

Dr. Handore: Young chemists entering organic chemistry often face several challenges. One major difficulty is mastering the vast amount of knowledge required, from reaction mechanisms to modern synthetic techniques. Keeping up with rapidly evolving research and new methodologies can also be overwhelming. Additionally, limited funding, access to advanced instrumentation, and the pressure to publish high-quality work can create stress. Scaling laboratory results to practical or industrial levels is another significant hurdle. To navigate these challenges, it is important to build a strong foundation in fundamentals while staying curious and open to learning new techniques. Developing problem-solving skills and resilience is essential, as research often involves setbacks. Gaining hands-on experience in the lab and learning from mentors can be highly valuable. It is also helpful to stay up to date with current literature, collaborate with others, and explore interdisciplinary areas like green chemistry or electrochemistry. Finally, maintaining patience, consistency, and a genuine passion for the subject will go a long way in building a successful career.

Thieme: What is your most important scientific achievement to date and why?

Dr. Handore: I believe that meaningful scientific achievement is a collective effort, made possible by strong teamwork and effective mentorship. Recently, I was particularly pleased with our work on developing new synthetic methods for the diastereoselective construction of cyclic and spirocyclic quaternary carbons via iron-catalyzed ring contraction of cyclic ketones, including a formal synthesis of perhydrohistrionicotoxin. We also reported a palladium-catalyzed annulation of acyl saccharins with norbornene via CO shuttling. These accomplishments were published in *Organic Letters* and were especially rewarding as they validated my initial research hypotheses.

Thieme: Could you tell us something about yourself outside the lab, such as your hobbies or extra-work interests?

Dr. Handore: Outside of work, I stay quite busy with my two children, who keep me both engaged and entertained. In my free time, I enjoy gardening, cleaning, and reading. I'm particularly fond of traveling to scenic natural destinations like forests and mountains, and I love spending quality time outdoors with my family. I also enjoy listening to music during my leisure time.