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Special Issue Reprint

RNAi in Insect Physiology

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The advent of RNA interference (RNAi) in 1998, marked by the discovery of gene silencing triggered by double-stranded RNA (dsRNA) in nematodes, opened a transformative chapter in molecular biology. Today, RNAi has matured into an indispensable tool for elucidating gene function, while its potential as a targeted, eco-friendly pest control strategy is reshaping entomological research and agricultural practices. This Special Issue of *Insects*, dedicated to “RNAi in Insect Physiology”, stands as a testament to the dynamic progress of RNAi research, bridging fundamental insights into insect physiology with innovative applications in pest management. This Special Issue was conceived to capture the full spectrum of RNAi research in insects with a dual focus: advancing our understanding of gene function in insect physiology and accelerating the translation of RNAi into practical pest control solutions. This Special Issue brings together twelve cutting-edge research articles and two insightful review articles, collectively providing a comprehensive overview of RNAi’s potential, elucidating the molecular underpinnings of insect development, reproduction, and stress adaptation, while simultaneously demonstrating its viability as a next-generation pest management tool.

