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Nota di contenuto	Preliminary Material / Sommer Ralf J. -- Why <i>Caenorhabditis elegans</i> is great and <i>Pristionchus pacificus</i> might be better / Paul W. Sternberg -- Integrative evolutionary biology and mechanistic approaches in comparative biology / Ralf J. Sommer -- Diplogastrid systematics and phylogeny / Natsumi Kanzaki and Robin M. Giblin-Davis -- Taxonomy and natural history: the genus <i>Pristionchus</i> / Erik J. Ragsdale , Natsumi Kanzaki and Matthias Herrmann -- The laboratory model: genetics, genetic mapping and transgenics / Laura Aurilio and Jagan Srinivasan -- Comparative and functional genomics / Christian Rödelisperger and Christoph Dieterich -- Small-molecule signalling: encoding biological information in chemical structures / Frank C. Schroeder -- Population genetics and the La Réunion case study / Angela McGaughan and Katy Morgan -- Evo-devo and developmental systems drift: an evolving paradigm in organ formation and tissue coordination, vulva and gonad development in <i>Pristionchus pacificus</i> / David Rudel -- Dauer formation and dauer-specific behaviours in <i>Pristionchus pacificus</i> / Akira Ogawa and Federico Brown -- Mouth dimorphism and the evolution of novelty and diversity / Erik J. Ragsdale -- <i>Pristionchus pacificus</i> olfaction / Ray L. Hong -- Anatomy and connectivity in the pharyngeal nervous system / Dan Bumbarger and Metta Riebesell -- Bacterial interactions and the innate immune system / Amit Sinha and Robbie Rae -- Index of genes and proteins / Sommer Ralf J. -- Index of

Sommario/riassunto

This edited volume on the nematode model *Pristionchus pacificus* describes an integrative approach to evolutionary biology. It aims for a merger of evolutionary and comparative biology with mechanistic approaches based on genetics and molecular biology. Insight into the function of biological systems obtained from laboratory studies when complemented with ecology, natural variation and natural history of an organism, can provide detailed knowledge of the proximate and ultimate causations of species. Ralf J. Sommer developed *P. pacificus* as model system for integrative evolutionary biology with case studies in evo-devo and population genetics on La Réunion Island. Similarly, ecological interactions with scarab beetles revealed examples for the evolution of novelty at the morphological and behavioural level and their underlying molecular mechanisms. Contributors include Paul W. Sternberg, Ralf J. Sommer, Jagan Srinivasan, Christian Rödelisperger, Frank C. Schroeder, Robin M. Giblin-Davis, Natsumi Kanzaki, Matthias Herrmann, Angela McGaughran, Katy Morgan, Akira Ogawa, Federico D. Brown, Ray E. Hong, Robbie Rae, Amit Sinha, David Rudel, and Erik J. Ragsdale.
