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Titolo	Spectrum of Sex : The Molecular Bases that Induce Various Sexual Phenotypes / / edited by Minoru Tanaka, Makoto Tachibana
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Nota di contenuto	Chapter 1. Spectrum of sex in a horn of the Japaneserhinoceros beetle -- Chapter 2. Sexual differentiation in dragonflies and damselflies -- Chapter 3. Dimorphic female-limited Batesian mimicry in two Papilio butterflies -- Chapter 4. Spectrum of sex chromosomes in mammals -- Chapter 5. The evolutionary aspects of the mammalian sex-determining gene SRY -- Chapter 6. Revisiting the role of steroid hormones in gonadal fate determination -- Chapter 7. Sex steroid regulation of male- and female-typical mating behaviors in teleost fish -- Chapter 8. Comparative Perspectives on the Function of Oxytocin in Fish and Mammals -- Chapter 9. Orchestration of the synthesis of sex hormones and their roles in establishing sex differences in mammals -- Chapter 10. The role of sex spectrum differences in reproductive strategies and the endocrine mechanisms underlying it -- Chapter 11.

Symbiont-induced sexual and reproductive manipulation in insects -- Chapter 12. The mechanism for establishing the binarysex with environmental signals in the crustacean Daphnia magna -- Chapter 13. Starvation is a new component of sex reversal in medaka (Oryzias latipes)—significance of metabolism in sex regulation. .

Sommario/riassunto

This book introduces cutting-edge studies on the spectrum of sex. The sex spectrum can be understood as an interwoven mechanism sustaining graded phenotypes between the two sexes. The book overviews three elements that develop the sex spectrum: genetics, the endocrine system, and the environment. Part I discusses the genetic regulation during sex determination, which often results in a mixture of two sexes or sex reversal. The evolutionary aspects of the genetic determinants are also discussed. Part II presents the involvement of endocrine regulation in the sex spectrum, which covers a broad range of phenotypic events, including sexual behavior and metabolism. Interestingly, sex hormones can also act as sex determinants. Finally, Part III shows that intrinsic factors, such as sex-determining genes and sex hormones, are not the only factors in sex development. The environment surrounding organisms, such as symbiosis and metabolism, act on the sex as critical factors, generating the sex spectrum. Determination and development of the two sexes have been a topic of great interest and a long-standing issue in biology. The book updates the conventional view that biological sex is fixed after birth and sets new perspectives for understanding sex as a spectrum manifested in multiple phenomena. Each chapter contributed by leading experts explains the sex spectrum in various organisms and their underlying mechanisms from the latest ongoing studies. The book provides a valuable resource for not only experts in developmental biology, physiology, and medical science, but also non-scientists and anyone interested in the topic.