

1. Record Nr.	UNINA9910830693403321
Titolo	Tinkering [[electronic resource]] : the microevolution of development / / [editors: Gregory Bock and Jamie Goode]
Pubbl/distr/stampa	Chichester ; ; Hoboken, NJ, : John Wiley & Sons, 2007
ISBN	1-280-90082-2 9786610900824 0-470-31939-9 0-470-31940-2
Descrizione fisica	1 online resource (301 p.)
Collana	Novartis Foundation symposium ; ; 284
Altri autori (Persone)	BockGregory GoodeJamie
Disciplina	572.8
Soggetti	Molecular biology Molecular evolution
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Tinkering: The Microevolution of Development; Contents; The evolutionary developmental biology of tinkering: an introduction to the challenge; Tinkering: a conceptual and historical evaluation; DISCUSSION; Tinkering: new embryos from old-rapidly and cheaply; DISCUSSION; The relationship between development and evolution through heritable variation; DISCUSSION; Genetic networks as transmitting and amplifying devices for natural genetic tinkering; DISCUSSION; Butterfly eyespot patterns and how evolutionary tinkering yields diversity; DISCUSSION; GENERAL DISCUSSION I Tinkering with transcription factor proteins: the role of transcription factor adaptation in developmental evolutionDISCUSSION; Tinkering with constraints in the evolution of the vertebrate limb anterior-posterior polarity; DISCUSSION; Affecting tooth morphology and renewal by fine-tuning the signals mediating cell and tissue interactions; DISCUSSION; GENERAL DISCUSSION II; Evolution of covariance in the mammalian skull; DISCUSSION; The developmental genetics of microevolution; DISCUSSION; The economy of tinkering mammalian teeth; DISCUSSION

Pelvic skeleton reduction and Pitx1 expression in threespine stickleback populations; DISCUSSION; Using patterns of fin and limb phylogeny to test developmental- evolutionary scenarios; DISCUSSION; Craniofacial variation and developmental divergence in primate and human evolution; DISCUSSION; Contributor Index; Subject Index

Sommario/riassunto

Much recent research in evolutionary developmental biology has focused on the origin of new body plans. However, most evolutionary change at the population and species level consists of tinkering: small-scale alterations in developmental pathways within a single body plan. Such microevolutionary events have been well studied on a population genetic level and from the perspective of adaptive phenotypic evolution, but their developmental mechanisms remain poorly studied. This book explores both theoretical and practical issues of tinkering. It features a wide range of perspectives to address
