

# Preface

For the tenth year, we have published a book on evolutionary biology concept and application.

We tried catch the evolution and progress of this field, and to achieve this goal we were helped by the Evolutionary Biology Meeting in Marseilles. The goal of this annual meeting is to allow the scientists of different disciplines, who share a deep interest in evolutionary biology concepts, knowledge and applications, to meet, exchange and enhance the interdisciplinary collaborations. The Evolutionary Biology Meeting in Marseilles is now recognised internationally as an important exchange platform and a booster for the use of evolutionary-based approaches in biology and in other scientific areas.

The book chapters have been selected from the meeting presentations and from propositions, conceived by the interaction of the meeting participants.

The reader of the evolutionary biology books as well as the meeting participants would like us to witness regularly during the different meetings and book editions, a shift in the evolutionary biology concepts. The fact that the chapters of the book are selected from a meeting enables, the quick diffusion of the novelties.

Also, we would like to underline that the ten books are complementary to one another and should be considered as tomes.

The articles are organised in the following categories

**Self/Nonself Evolution** (Chapters “[A New View of How MHC Class I Molecules Fight Disease: Generalists and Specialists](#)”–“[The Life History of Domesticated Genes Illuminates the Evolution of Novel Mammalian Genes](#)”).

**Species Evolution and Evolution of Complex Traits** (Chapters “[Evolution of Complex Traits in Human Populations](#)”–“[Modelling the Evolution of Dynamic Regulatory Networks: Some Critical Insights](#)”).

**Methods and Concepts** (Chapters “**Mechanistic Models of Protein Evolution**”–“**Case Studies of Seven Gene Families with Unusual High Retention Rate Since the Vertebrate and Teleost Whole-Genome Duplications**”).

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