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Titolo	Structure–Activity Relationships for Development of Neurokinin-3 Receptor Antagonists [[electronic resource]] : Reducing Environmental Impact // by Koki Yamamoto
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Nota di contenuto	1. Introduction -- 2. Development of NK3R Antagonists with a Labile Functional Group in the Natural Environment -- 3. Development of NK3R Antagonists with a Degradable Scaffold in the Natural Environment: Synthesis and Application of Fused Piperazine Derivatives for Investigation of Degradable Core Motifs -- 4. Development of NK3R Antagonists with a Degradable Scaffold in the Natural Environment: Identification of NK3R Antagonists with a Decomposable Core Structure by Scaffold Hopping -- 5. Conclusion.
Sommario/riassunto	This book explores the possible development of neurokinin-3 receptor (NK3R) antagonists with reduced environmental impact. Pharmaceuticals are used to cure diseases and to alleviate symptoms in humans and animals. However, the stable, bioactive substances excreted by patients have unfavorable effects on non-target species. To overcome these disadvantages of these highly stable, potent substances, drug design to turn off bioactivity after release into the environment is needed. The book describes the development of eco-

friendly NK3R antagonists by introducing a labile functional moiety and substituting a scaffold. This resulted in a novel NK3R antagonist that oxidized into its inactive form when exposed to air. Further, the book presents an efficient and easily achievable synthetic method of creating triazolopiperazine scaffolds, as well as a structure–activity relationship study involving scaffold hopping for decomposable motifs, which led to a novel photodegradable NK3R antagonist. Demonstrating that it is possible to develop compounds that convert into their inactive forms under environmental conditions, this book is useful for anyone interested in therapeutic agents with reduced environmental impact.
