

Contents

1 Introduction	1
2 General Morphology	3
3 Taxonomy	5
4 Dissemination and Economic, Veterinary and Medical Importance	9
Origin and Distribution	9
Economic Importance	12
Veterinary Importance	13
Medical Importance	14
5 Developmental Cycle of Fleas	17
Eggs	18
Larvae	20
Pupae	25
Preemerged Adults	27
Adults	29
6 Flea Epidemiology	35

7 Flea-Related Dermatitis	39
Flea Bite Dermatitis	39
Flea Allergy Dermatitis (FAD)	40
Clinical Signs	41
Differential Diagnosis of FAD	45
Histopathological Findings	46
Immunopathogenesis of FAD	47
Diagnosis of FAD and Flea Bite Dermatitis	51
Treatment of Flea-Related Skin Diseases	54
Adjunctive Medical Therapy	55
Hyposensitization	55
Treatment of the Premises	56
Indoor Treatment	56
Outdoor Treatment	58
8 Resistance	59
9 Imidacloprid	63
History of Imidacloprid	63
Chemical Properties of Imidacloprid	64
Biological Profile, Mode of Action and Direct Insecticidal Activity	67
Biological Profile	67
Mode of Action and Direct Insecticidal Activity	68
Indirect Insecticidal Effects	76
Resistance of Sucking Pests Against Imidacloprid	78
Toxicology and Pharmacology of Imidacloprid	81
Symptomatology of Insects	81
Pharmacology of Imidacloprid	82
Pharmacokinetics and Metabolism of Imidacloprid	83
Toxicology of Imidacloprid	85
Toxicology of Imidacloprid 10% Spot-on	87
Tolerability of Imidacloprid 10% Spot-on in Dogs and Cats	88
Ecological Effects and Ecotoxicological Studies	92
Safety Assessment for Humans	94

Imidacloprid as a Veterinary Product for Flea Control	98
Clinical Efficacy of Imidacloprid (Advantage®) in Dogs and Cats.....	106
<i>Laboratory Studies in Dogs</i>	108
<i>Field Studies in Dogs</i>	113
<i>Laboratory Studies in Cats</i>	120
<i>Field Studies in Cats</i>	125
Comparative Studies (Between Imidacloprid and Other Compounds for Flea Control)	127
<i>Laboratory Studies</i>	127
<i>Field Studies</i>	136
Larvicidal Effect of Imidacloprid and Efficacy Enhancement (with PBO)	141
<i>Larvicidal Effect</i>	141
<i>Efficacy Enhancement</i>	148
Environmental and Habitual Factors	
Influencing Imidacloprid Treatment.....	149
<i>Effects of Shampooing and Repeated Water Exposure</i>	149
‘Umbrella Effect’	153
Small Domestic Animals	154
<i>Rabbits</i>	154
<i>Ferrets</i>	157
<i>Rodents and Other Small Animals</i>	159
Ectoparasitic Spectrum of Activity	160
<i>Louse Infestation</i>	160
<i>Sheep Ked Infestation</i>	161
References	163
Subject Index	185



<http://www.springer.com/978-3-540-41776-7>

Flea Biology and Control

The Biology of the Cat Flea Control and Prevention with
Imidacloprid in Small Animals

Krämer, F.; Mencke, N.

2001, XIII, 192 p. 8 illus. With CD-ROM., Hardcover

ISBN: 978-3-540-41776-7