
Contents

<i>Preface</i>	<i>v</i>
<i>Contributors</i>	<i>ix</i>
Part I Introduction	
1 Introduction to TRPs: A Quest for Novel Drug Targets	3
<i>Bernd Nilius</i>	
2 TRP-Mediated Cytoskeletal Reorganization: Implications for Disease and Drug Development	13
<i>Chandan Goswami</i>	
Part II TRP Channels, from A1 to V4	
3 TRPA1 in Drug Discovery	43
<i>Jun Chen, Steve McGaraughy, and Philip R. Kym</i>	
4 Canonical Transient Receptor Potential Channel Expression, Regulation, and Function in Vascular and Airway Diseases	61
<i>Brij B. Singh, Christina M. Pabelick, and Y.S. Prakash</i>	
5 TRPM2 Function and Potential as a Drug Target	89
<i>Barbara A. Miller</i>	
6 The Ca ²⁺ -Activated Monovalent Cation-Selective Channels TRPM4 and TRPM5	103
<i>Barbara Colson, Miklos Kecses, Koenraad Philippaert, Aurelie Menigoz, and Rudi Vennekens</i>	
7 The Emerging Role of TRPM7 in the Regulation of Magnesium Homeostasis	127
<i>Vladimir Chubakov, Jonathan T. Eggenschwiler, Lillia V. Ryazanova, Thomas Gudermann, and Alexey G. Ryazanov</i>	
8 TRPM8 Channels as Potential Therapeutic Targets for Pain, Analgesia, and Thermoregulation	141
<i>David D. McKemy</i>	
9 TRPML Channels in Function, Disease, and Prospective Therapies	159
<i>David A. Zeevi</i>	
10 The TRPP Signaling Module: TRPP2/Polycystin-1 and TRPP2/PKD1L1	193
<i>Alexis Hofherr</i>	
11 TRPV1 as a Polymodal Sensor: Potential to Discover TRPV1 Antagonists Selective for Specific Activating Modalities	221
<i>Olivier Radresa, Stephen Zicha, William Brown, and Jennifer M.A. Laird</i>	
12 Nociceptive and Nonnociceptive Roles of TRPV3 and Its “Druggability”	237
<i>Sungjae Yoo and Sun Wook Hwang</i>	

13	TRPV4 and Drug Discovery	257
	<i>Fabien Vincent and Matthew A.J. Duncton</i>	
Part III TRPs and Airways		
14	TRP Expression and Function in the Lung Airways.	273
	<i>Alexander Dietrich and Thomas Gudermann</i>	
15	Hypoxia-Dependent TRP Channel Function in Pulmonary Arterial Smooth Muscle Cells	283
	<i>Beate Fuchs, Hermann Kalwa, Norbert Weissmann, Thomas Gudermann, and Alexander Dietrich</i>	
16	Endotoxin-Induced Airway Inflammation and Asthma Models	301
	<i>Zsuzsanna Helyes and Zsófia Hajna</i>	
17	Enhanced Cough, Animal Models.	343
	<i>Raffaele Gatti, Pamela Pedretti, Romina Nassini, and Marcello Trevisani</i>	
18	Capsaicin Inhalation Test in Man	361
	<i>Eva Millqvist</i>	
Part IV TRPs and the Genitourinary (GU) Tract		
19	TRP Channels in the Genitourinary Tract.	373
	<i>Ana Charrua and Francisco Cruz</i>	
20	Animal Models of Cystitis	397
	<i>Célia D. Cruz and António Avelino</i>	
21	Overactive Bladder Models	411
	<i>Roberto Soler, Lysanne Campeau, Claudius Füllhase, and Karl-Erik Andersson</i>	
	<i>Concluding Remarks</i>	433
	<i>Index</i>	435

TRP Channels in Drug Discovery

Volume I

Szallasi, A.; Bíró, T. (Eds.)

2012, XI, 446 p., Hardcover

ISBN: 978-1-62703-076-2

A product of Humana Press