

CONTENTS

Part I—Peptides

1. Distribution of Endothelin, a Putative Growth Promoting Peptide, Using Modern Microscopical Imaging Methods 3
Julia M. Polak and Giorgio Terenghi
2. Vasoactive Intestinal Peptide: From Molecular Genetics to Neurotropism 15
Illana Gozes and Douglas E. Brenneman
3. Design and Structure/Conformation-Activity Studies of a Prototypic Corticotropin-Releasing Factor (CRF) Antagonist: Multiple Alanine Substitutions of CRF₁₂₋₄₁ 21
Tomi K. Sawyer, Douglas J. Staples, Carol A. Bannow, John H. Kinner, Linda L. Maggiora, Dawna Evans, Mark Prairie, William Krueger, and Robert A. Lahti
4. Retinoic Acid Regulates preproVIP Expression in the Human Neuroblastoma Cell Line NB-1 29
Birgitte Georg, Birgitte S. Wulff, and Jan Fahrenkrug
5. Structure-Dependent Inhibitory Effect of Galanin on Insulin, Gastric Acid and Pancreatic Amylase Secretion in Rat 37
Wojciech J. Rossowski and David H. Coy
6. Amphibian Opioids: Novel Dermorphin-like Peptides 51
Lucia Negri
7. Proteases for Neuropeptide Precursor Processing in Bovine Adrenal Medullary Chromaffin Granules 61
Vivian Y.H. Hook, Anahit V. Azaryan, and Timothy J. Krieger
8. Amylin and Neuromedin U: Two Novel Regulatory Peptides of the Gastroenteropancreatic System 71
S.R. Bloom

Part II—Growth Factors

9. Gene Transfer into the Central Nervous System: Neurotrophic Factors 83
David M. Frim, Julie K. Anderson, James M. Schumacher, M. Priscilla Short, Ole Isacson, and Xandra Breakefield

10. The Structural and Biological Properties of Heparin-Binding EGF-like Growth Factor	93
Shigeki Higashiyama and Michael Klagsbrun	
11. Structural Organization of the Multiple Transforming Growth Factor β Genes	101
Sonia B. Jakowlew	
12. Dexamethasone Modulates the Response of Rat Stromal Bone Marrow Derived Bone-like Cells to bFGF and IGF-I	115
Naphtali Savion, Anat Beit-Or, Shlomo Kotev-Emeth, and Sandu Pitaru	
13. Behavioral, Hormonal and Neurochemical Alterations in Transgenic Mice Overexpressing Transforming Growth Factor α	127
Leena Hilakivi-Clarke, Richard Goldberg, and Robert B. Dickson	
14. Growth Factors and Brain Injury	137
David J. Berlove and Seth P. Finklestein	
15. The Basic Fibroblast Growth Factor Isoforms: Endogenous and Exogenous Behavior	147
Natalina Quarto, Gérard Bouche, Béatrix Bugler, Catherine Chailleux, Hervé Prats, Anne-Catherine Prats, Ana-Maria Roman, Isabelle Truchet, and François Amalric	
Part III—Peptide Receptors	
16. Structural Analysis of Ligand Binding Characteristics for the Bombesin/Gastrin Releasing Peptide Receptor	161
David H. Coy and Robert T. Jensen	
17. Identification of Zeta Opioid Receptor Binding Polypeptides in Rat Cerebellum	171
Ian S. Zagon and Patricia J. McLaughlin	
18. Identification and Characterization of Somatostatin, Gastrin Releasing Peptide, and Neuromedin B Receptors on Established Tumors and Tumor Cell Lines	181
John E. Taylor	
19. Neuropeptide Receptor Sub-types: Neuropeptide Y and Calcitonin-Gene Related Peptides as New Examples	189
Rémi Quirion, Denise van Rossum, and Yvan Dumont	
20. Vasoactive Intestinal Peptide and Astrocyte Mitogenesis: In Vitro and In Vivo Studies	199
Joanna M. Hill and Douglas E. Brenneman	
21. Synthesis and Biological Activity of Cholecystokinin Antagonists	211
Martha Knight, Kazuyuki Takahashi, Terrence R. Burke, Jr., J. Desiree Pineda, Vitaly A. Fishbeyn, Robert T. Jensen, and Terry W. Moody	

22. Peptide-Neuromedin B Receptor Interactions: Comparison with Gastrin Releasing Peptide Receptor Interactions 225
Robert T. Jensen, Li-Hua Wang, Jaw-Town Lin, Richard V. Benya,
John E. Mrozinski, Jr., and David H. Coy

Part IV—Growth Factor Receptors

23. Neurotrophins in the Adult Brain: Effects on Hippocampal Cholinergic Function Following Deafferentation and Regulation of Their Expression by Pharmacological Agents and Lesions 241
Paul A. Lapchak, Dalia M. Araujo, Timothy L. Denton,
Millicent M. Dugich Djordjevic, and Franz Hefti
24. Angiosuppressive and Antiproliferative Actions of Suramin: A Growth Factor Antagonist 255
Shingo Takano, Stephen Gately, Herbert Engelhard,
Ana Maria C. Tsanaclis, Janet L. Gross, William F. Herblin,
Kristi Eidsvoog, Mary Neville, and Steven Brem
25. [¹²⁵I]IGF-I, [¹²⁵I]IGF-II, and [¹²⁵I]Insulin Receptor Binding Sites in the Rat Hippocampal Formation: Topographic Distribution and Response to Entorhinal Ablation 265
S.R. Kar, R. Quirion, A. Baccichet, and J. Poirier
26. Estrogen Regulation of the Pituitary Insulin-like Growth Factor System 279
Kathleen M. Michels, Wei-Hua Lee, Mark A. Bach, Alicia Seltzer,
Juan M. Saavedra, and Carolyn A. Bondy
27. Effects of Radiofrequency Radiation on Growth Factor Receptors 289
A. Makheja, E. Albert, Q. Balzano, L. Cygan, and T.W. Moody
28. Structure-Function Analysis of Fibroblast Growth Factor-1 (Acidic Fibroblast Growth Factor) 297
William H. Burgess

Part V—Second Messengers

29. MDGF-1: A New Tyrosine Kinase-Associated Growth Factor 311
Junichi Kurebayashi, Mozeena Bano, Barbara Ziff, Michael D. Johnson,
William R. Kidwell, Francis G. Kern, and Robert B. Dickson
30. Interleukin-11 Mediated Signal Transduction Pathways: Comparison with Those of Interleukin-6 323
Tinggui Yin and Yu-Chung Yang
31. Regulation of a Membrane Tyrosine Phosphatase by Somatostatin 335
Jean Pierre Esteve, El Mostapha Zeggari, Chantal Cambillau, Isabelle Raully,
Louis Buscail, François Thomas, Nicole Vaysse, and Christiane Susini
32. Cycloheximide Has Differing Effects on Immediate Early Gene Expression in IL-3 or M-CSF Stimulated Human Monocytes 341
Padmini Rao and R. Allan Mufson

33. Regulation of Gastrin Releasing Peptide Gene Expression 347
Muriel Draoui, James Battey, Michael Birrer, and Terry W. Moody

Part VI—Proliferation

34. TGF α Induced Proliferative Changes in Transgenic Mice 355
Hitoshi Takagi, Chamelli Jhappan, Richard Sharp, Hisashi Takayama,
Gilbert H. Smith, and Glenn Merlino
35. Somatostatin and Human Gastrointestinal Cancer 367
Shaun R. Preston, Glenn V. Miller, Linda F. Woodhouse,
Susan M. Farmery, and John N. Primrose
36. Inhibition by GnRH Antagonists of Breast and Endometrial Cancer Cell
Growth Induced by Estrogen and Insulin-like Growth Factors 381
Yaov Sharoni and Joseph Levy
37. β -Endorphin Is Metabolized *in Vitro* by Human Small Cell Lung Cancer
to τ -Endorphin Which Stimulates Clonal Growth 389
Thomas P. Davis and Susan L. Crowell
38. The Role of EGF and Its Receptors in the Growth of Human Gastric
Carcinoma Cell Line (MGC80): Evidence for an Autocrine
Mechanism 401
Yuan-Fang Chen, Zuo-Liang Xiao, Guo-Jun Lu, Hui-Xin Wang,
and Liang-Wan Cai
39. The Single-Chain Immunotoxins BR96 sFv-PE40 and BR96 sFv-PE38:
Potent Anti-tumor Agents for the Treatment of Human Cancer 409
Paula N. Friedman, Dana F. Chace, Susan L. Gawlak, and Clay B. Siegall

Part VII—Clinical Correlations

40. Hematopoietic Cytokines to Support Repeated Doses of Dose-Intensive
Chemotherapy with Cyclophosphamide, Etoposide,
and Cisplatin (DICEP) 417
James Neidhart
41. Interleukin-2 (IL-2) Augments the Expression of Transforming Growth
Factor Beta in Patients with Disseminated Cancer 425
Pauli Puolakkainen, Paolo Alberto Paciucci, Jane E. Ranchalis,
Leslie Oleksowicz, and Daniel R. Twardzik
42. Peptide Signals for Satiety 435
James Gibbs, Nori Geary, and Gerard P. Smith
43. The Role of Somatostatin Receptors in the Diagnosis and Therapy of Cancer 445
J.C. Reubi, E. Krenning, and S.W. Lamberts

- Index 461