

Contents

| | |
|---|------|
| Preface | vii |
| Acknowledgments | xi |
| Contributors | xvii |
| | |
| Chapter 1 The Central Auditory System: A Functional Analysis | 1 |
| JEFFERY A. WINER AND CHRISTOPH E. SCHREINER | |
| | |
| Chapter 2 Neuronal Organization in the Inferior Colliculus | 69 |
| DOUGLAS L. OLIVER | |
| | |
| Chapter 3 Projections from the Cochlear Nuclear Complex to the Inferior Colliculus | 115 |
| NELL BEATTY CANT | |
| | |
| Chapter 4 Superior Olivary Complex and Lateral Lemniscal Connections of the Auditory Midbrain | 132 |
| BRETT R. SCHOFIELD | |
| | |
| Chapter 5 Intrinsic and Commissural Connections of the Inferior Colliculus | 155 |
| ENRIQUE SALDAÑA AND MIGUEL A. MERCHÁN | |
| | |
| Chapter 6 Descending Connections of the Auditory Midbrain | 182 |
| ANN M. THOMPSON | |
| | |
| Chapter 7 The Tectothalamic System | 200 |
| JEFFREY J. WENSTRUP | |
| | |
| Chapter 8 Three Systems of Descending Projections to the Inferior Colliculus | 231 |
| JEFFERY A. WINER | |

| | | |
|------------|--|-----|
| Chapter 9 | Pharmacology of the Inferior Colliculus | 248 |
| | JACK B. KELLY AND DONALD M. CASPARY | |
| Chapter 10 | Biophysical Properties of Inferior Colliculus Neurons | 282 |
| | SHU HUI WU | |
| Chapter 11 | Spectral and Intensity Coding in the Auditory Midbrain | 312 |
| | GÜNTER EHRET AND CHRISTOPH E. SCHREINER | |
| Chapter 12 | Temporal Coding in the Auditory Midbrain | 346 |
| | ADRIAN REES AND GERALD LANGNER | |
| Chapter 13 | Binaural and Spatial Coding in the Inferior Colliculus | 377 |
| | ALAN R. PALMER AND SHIGEYUKI KUWADA | |
| Chapter 14 | Coding of Communication Sounds in the Inferior Colliculus | 411 |
| | CHRISTINE V. PORTFORS AND DONAL G. SINEX | |
| Chapter 15 | Acoustic Behavior and Midbrain Function | 426 |
| | TOM C.T. YIN AND BRADFORD J. MAY | |
| Chapter 16 | Auditory Midbrain of Fish, Amphibians, and Reptiles: Model Systems for Understanding Auditory Function | 459 |
| | ANDREW H. BASS, GARY J. ROSE, AND MICHAEL B. PRITZ | |
| Chapter 17 | The Auditory Midbrain in Bats and Birds | 493 |
| | ELLEN COVEY AND CATHERINE E. CARR | |
| Chapter 18 | Development of Auditory Afferents to the Central Nucleus of the Inferior Colliculus | 537 |
| | JUDY K. BRUNSO-BECHTOLD AND CRAIG K. HENKEL | |
| Chapter 19 | Inferior Colliculus: Aging and Plasticity | 559 |
| | ROBERT D. FRISINA AND RAMESH RAJAN | |
| Chapter 20 | Hearing Loss and the Inferior Colliculus | 585 |
| | JAMES F. WILLOTT | |
| Chapter 21 | The Midbrain and Audiogenic Seizures | 603 |
| | CARL L. FAINGOLD | |

| | |
|---|-----|
| Chapter 22 The Inferior Colliculus: Past, Present, and Future | 626 |
| JOHN H. CASSEDAY, CHRISTOPH E. SCHREINER, AND | |
| JEFFERY A. WINER | |
| Subject Index | 641 |
| Author Index | 675 |